RELOKASI HIPOSENTER GEMPA DI PULAU JAWA BAGIAN BARAT MENGGUNAKAN HYPODD (*HYPOCENTER DOUBLE DIFFERENCE*) PERIODE 2010-2016

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MOTTO

“Sesungguhnya sesudah kesulitan itu ada kemudahan”

(QS. Al-insyirah:5)

‘”Aku tidak berusaha menjadi lebih baik dari orang lain, tetapi aku berusaha lebih baik dari diriku yang kemarin”

(Pidi Baiq)

“Satu – satunya hal yang bisa menjatuhkanmu adalah sikapmu sendiri”

(R.A. Kartini)

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KATA PENGANTAR

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Yogyakarta, Mei 2017

Rifki Hilman Fauzi

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RELOKASI HIPOSENTER GEMPA DI PULAU JAWA BAGIAN BARAT MENGGUNAKAN HYPODD (*HYPOCENTER DOUBLE DIFFERENCE*) PERIODE 2010-2016

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INTISARI

Penelitian tentang relokasi hiposenter gempa di Pulau Jawa bagian Barat dilakukan dengan metode *Double Difference* menggunakan program hypoDD yang bertujuan untuk merelokasi hiposenter gempa dan mempelajari struktur tektonik daerah penelitian. Algoritma *Double Difference* digunakan untuk menghitung akurasi lokasi hiposenter relatif dengan berusaha meminimalkan perbedaan waktu tempuh residual untuk pasangan gempa bumi pada stasiun yang sama sehingga didapatkan hasil relokasi yang bebas dari kesalahan waktu tempuh yang berkaitan dengan struktur kecepatan. Data yang digunakan mencakup koordinat 6^o LS s.d. 8^o LS dan 106^o BT s.d. $108{,}5^o$ BT dengan data interval 2010 s.d 2016 milik BMKG Yogyakarta dan menyertakan data lokasi stasiun sebanyak 213 stasiun, serta digunakan referensi model kecepatan Interpolasi Wegner dan Ak135. Jumlah kejadian gempa yang berhasil direlokasi adalah sebanyak 646 dari 679 kejadian dengan stasiun pencatat yang digunakan sebanyak 40 stasiun dari 213 stasiun. Berdasarkan histogram residual waktu tempuh, distribusi residual sebelum direlokasi merapat pada kisaran nilai -3 sampai 3 sekon dan distribusi residual setelah direlokasi merapat pada kisaran nilai -2 sampai 3 sekon dengan jumlah data residual yang lebih banyak dibanding sebelum relokasi. Ploting data gempa sebelum dan sesudah direlokasi pada kejadian gempa dengan kedalam 0 sampai 20 km, ada yang bergeser semakin dangkal yang dipicu oleh sesar - sesar aktif dan ada pula yang bergeser semakin dalam yang mendekati tunjaman subduksi. Pada gempa yang dalam sekitar 20 km sampai 180 km menunjukan pergeseran ke garis tunjaman subduksi dimana pada kedalaman tersebut diidentifikasikan sebagai zona Beniof dari tunjaman subduksi. Sudut dari pergeseran posisi gempa yang diperlihatkan oleh diagram *rose* rata - rata berada dikisaran 0.07^o sampai 13^o, namun sudut dari pergeseran yang lebih besar dialami oleh gempa - gempa dalam yang dipicu oleh tunjaman subduksi.

Kata kunci: Relokasi, hiposenter, *Double Difference*, program hypoDD, model kecepatan, histogram, diagram rose.

RELOCATION OF EARTHQUAKE HYPOCENTER IN WEST JAVA ISLAND USING HYPODD (HYPOCENTER DOUBLE DIFFERENCE) PERIOD 2010-2016

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ABSTRACT

Research on earthquake hypocenter relocation in West Java Island has done by Double Difference method using hypoDD program which aimed to relocate earthquake hypocenter and study the tectonic structure of research area. The Double Difference algorithm was used to calculate relocation accuracy of relative hypocenter by attempting to minimize the residual time difference for the pair of earthquakes at the same station to obtain relocation results that are free from travel time errors which has correlation to velocity structure. The data included coordinates of 6^o S up to 8^o S and 106^o E up to $108,5^o$ E with interval data of 2010-2016 of BMKG Yogyakarta and include location of station data as much as 213 station. It also used as reference model of velocity of Interpolation Wegner and Ak135. The number of earthquakes which were successfully relocated was about 646 of 679 incidents with the registering stations used by 40 stations from 213 stations. Based on the residual histogram of travel time, residual distributions prior to relocation are densed in the range of values of -3 to 3 seconds and residual distribution after being relocated within the range of values of -2 to 3 seconds with the amount of residual data more than before the relocation. Ploting of seismic data before and after being relocated to an earthquake occurring within 0 to 20 km, there was a shallower shift triggered by active fault and some were shifting deeper to near subduction depth. In a deep earthquake of about 20 km to 180 km indicates a shift to subduction line which was on that depth purely identified as the Beniof zone of the subduction rates. The angle of the earthquake position shift shown by the average rose diagram was in the range of 0.07^o to 13^o, but the angle of the larger shift wasoccured on a deep earthquakes that triggered by subduction rates.

***Keywords**: relocation, hypocenter, Double Difference, hypoDD program, histogram, velocity model, rose diagram.*

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BAB I

PENDAHULUAN

1. 1. Latar Belakang

Gempa bumi merupakan salah satu bencana alam yang dampaknya cukup besar, bahkan dapat memakan korban jiwa. Menurut KBBI (Kamus Besar Bahasa Indonesia) Gempa bumi adalah guncangan atau gerakan, sedangkan secara istilah peristiwa alam berupa getaran atau gerakan bergelombang pada kulit bumi yang ditimbulkan oleh tenaga asal dalam (endogen) (Departemen Pendidikan dan Kebudayaan, 1988). Perlepasan tenaga atau energi dari dalam bumi tersebut diakibatkan oleh aktifitas dibawah permukaan bumi, yang secara umum dapat berupa aktifitas pergeseran lempeng (tektonik) ataupun aktifitas magma dari gunung berapi (vulkanik).

Aktifitas pergeseran lempeng dan gunung berapi adalah salah satu tanda kekuasaan Allah Swt. Hal ini disebutkan dalam Al-Qur'an Surat An-Naml ayat 88:

وَتَرَى ٱلْجِبَالَ تَحْسَبُهَا جَامِدَةً وَهِىَ تَمُرُّ مَرَّ ٱلسَّحَابِ ۚ صُنْعَ ٱللَّهِ ٱلَّذِىٓ أَتْقَنَ كُلَّ شَىْءٍ ۚ إِنَّهُۥ خَبِيرٌۢ بِمَا تَفْعَلُونَ ﴿٨٨﴾

"Dan kamu lihat gunung - gunung itu, kamu sangka dia tetap di tempatnya, padahal ia berjalan sebagai jalannya awan. (Begitulah) perbuatan Allah

yang membuat dengan kokoh tiap-tiap sesuatu; sesungguhnya Allah Maha Mengetahui apa yang kamu kerjakan" (Q.S. An-Naml:88).

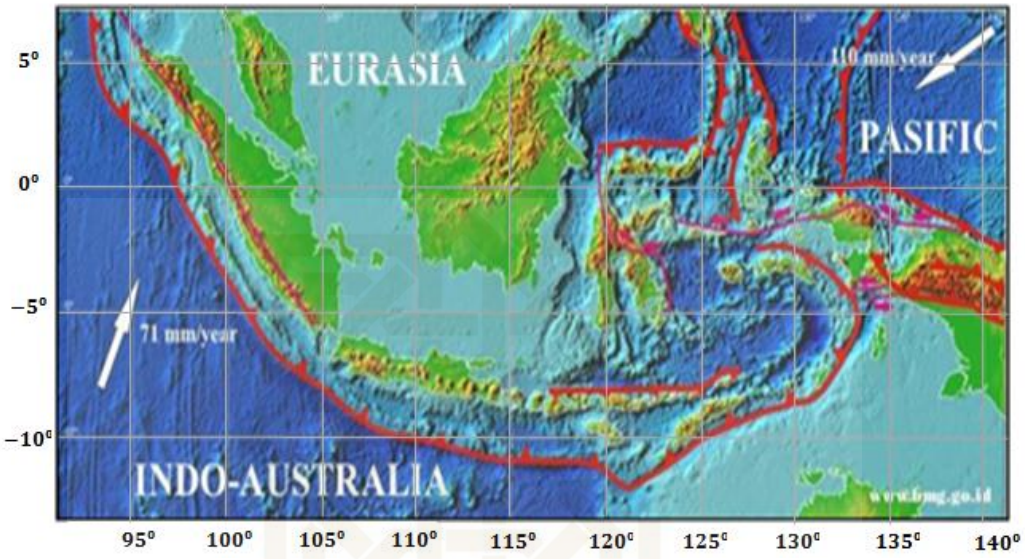
Ayat tersebut menerangkan bahwa dari sejarah evolusi, bumi dan terbentuknya kontinen - kontinen ini nyata bahwa gunung - gunung yang ada di pulau kontinen tidak diam, tetapi bergerak akibat pergeseran lempeng kerak bumi, meskipun pergeseran lempeng ini lambat sekitar 5 sampai 12 cm/tahun tetapi dalam kurun waktu sejuta tahun dapat memindahkan benua sejauh 50 hingga 120 km (Baiquni, 1997). Kebenaran tersebut dibuktikan pada "Teori Tektonik Lempeng" yang memunculkan pandangan bahwa benua dan samudra mengalami pergerakan. Kemudian Allah Swt menyatakan kejadian gempa dalam Al-Qur'an pada Surat Al-Zalzalah ayat 1-2:

إِذَا زُلۡزِلَتِ ٱلۡأَرۡضُ زِلۡزَالَهَا ۝١ وَأَخۡرَجَتِ ٱلۡأَرۡضُ أَثۡقَالَهَا ۝٢

"*Apabila bumi digoncangkan dengan goncangan (yang dahsyat), dan bumi telah mengeluarkan beban-beban berat (yang dikandung)nya"* (Q.S Al-Zalzalah:1-2).

Secara geografis, negara Indonesia sendiri terletak pada batas pertemuan tiga lempeng besar yaitu lempeng Indo-Australia dibagian Selatan, lempeng Eurasia dibagian Utara, dan lempeng Pasifik dibagian Timur. Hal ini mengakibatkan Indonesia berada pada zona aktifitas lempeng dan menjadi sebab Indonesia memiliki deretan gunung berapi yang aktif maupun yang telah dinyatakan non-aktif. Kondisi tersebut menyebabkan

Indonesia sering kali dan rentan mengalami kejadian atau bencana geologi, salah satunya peristiwa gempa bumi.



Gambar 1.1. Kondisi tektonik Indonesia (diakses dari https://inatews.bmkg.go.id/new/tentang_eq_en.php. 13 Desember 2016)

Pulau Jawa termasuk pulau yang berada pada kawasan konvergen yang terjadi akibat pertemuan Lempeng Indo-Australia dengan Lempeng Eurasia. Pertemuan kedua lempeng tersebut bersifat subduksi, peristiwa ini yang secara keseluruhan telah menghasilkan tatanan tektonik berupa palung, busur luar non volkanik, cekungan busur depan, busur gunung api dan cekungan belakang busur (Hilmi dan Haryanto, 2008). Selain menghasilkan tatanan tektonik tersebut, didataran Pulau Jawa terbentuknya sesar-sesar aktif yang juga dapat memicu terjadi gempa. Di Pulau Jawa bagian barat, sesar aktif yang sudah cukup dikenal adalah sesar Cimandiri, sesar Lembang, dan sesar Baribis.

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Hal tersebut mengindikasikan Pulau Jawa berada pada zona rawan gempa dan memiliki potensi gempa bumi. Kejadian gempa bumi di Pulau Jawa khusunya di bagian Barat, dengan kekuatan yang cukup besar dan memberi dampak kerusakan yang merugikan diantaranya yaitu gempa dan tsunami Pangandaran yang tejadi pada bulan Juli 2006 (Mw7.7) yang sumbernya adalah pelepasan energi regangan di zona subduksi Jawa (Natawidjaja, 2007) dan gempa bumi Tasikmalaya pada bulan September 2009 (Mw7.0) dengan sumber yang sama, yaitu akibat dari aktifitas subduksi (Sengara, dkk., 2009). Selain itu, gempa bumi juga terjadi dibeberapa sesar aktif Pulau Jawa, diantaranya gempa bumi bermekanisme sesar naik telah terjadi pada lajur Sesar Cimandiri pada peristiwa gempa bumi Gandasoli Sukabumi (1982) dan gempa bumi Cibadak Sukabumi (2000), serta gempa bumi Majalengka (1990) dan gempa bumi Kuningan (1875) bermekanisme sesar naik telah terjadi pada lajur sesar naik Baribis (Soehaimi, 2008).

Dalam Undang Undang Republik Indonesia Nomor 24 Tahun 2007 (diakses dari *bnpb.go.id/ppid/file/UU_24_2007.pdf*. 10 Januari 2017) yang berisi tentang "Penanggulangan Bencana" merupakan awal dari era baru dalam mitigasi bencana alam di Indonesia. Dimasa sebelumnya, usaha mitigasi bencana alam belum dilaksanakan sepenuhnya secara sistematis, terorganisir, dan bertanggungjawab. Sekarang mitigasi bencana alam bukan lagi sekadar anjuran dan himbauan, tapi sudah merupakan kewajiban untuk melaksanakannya.

Salah satu mitigasi bencana yang dapat dilakukan untuk bencana gempa bumi yaitu penentuan hiposenter dan episenter, dimana hiposenter adalah pusat atau sumber kejadian gempa yang letaknya didalam lapisan bumi, sedangkan episenter adalah titik dipermukaan bumi yang merupakan refleksi tegak lurus dari hiposenter, sehingga letak hiposenter dan episenter adalah parameter yang sangat menentukan dampak gempa (intensitas) pada suatu daerah. Semakin dekat letak episenter atau hiposenter yang dangkal dekat dengan daerah tersebut semakin besar juga dampak kerusakan di daerah tersebut, begitupun sebaliknya semakin jauh letak episenter atau hiposenter yang dalam jauh dengan daerah tersebut semakin kecil pula dampak yang terjadi di daerah tersebut. Pemetaan kerawanan gempa bumi berdasarkan hiposenter dan episenter yang telah ditentukan tersebut dapat menjadi upaya dalam usaha mitigasi bencana untuk bencana gempa bumi.

Tingkat ketelitian untuk penentuan parameter hiposenter, sangat bergantung pada kualitas model struktur kecepatan gelombang gempa, yang diasumsikan bahwa model kecepatan adalah besarnya kecepatan gelombang gempa yang merupakan fungsi dari kedalaman dan dinyatakan dalam model 1D (Puspito, 1996). Semakin sesuainya model kecepatan gelombang gempa di suatu daerah, maka semakin meningkatkan pula ketelitian dalam penentuan hiposenter di daerah tersebut (Puspito, 1996). Dalam sistem peringatan dini gempa bumi, model kecepatan gelombang gempa umumnya digunakan model kecepatan global sehingga penentuan dalam menghasilkan lokasi hiposenter mengurangi ketelitian dan keakuratan, maka perlu adanya

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perhitungan ulang dengan teknik relokasi hiposenter yang terus dikembangkan untuk memperbaiki ketelitian, ketepatan, dan akurasi yang lebih baik dalam penentuan posisi hiposenter.

Beberapa teknik untuk merelokasi hiposenter diantaranya adalah teknik algoritma *Double Difference* (DD) yang dapat merelokasi gempa meskipun dengan sejumlah data yang banyak sekalipun dan model kecepatan yang digunakan dapat disesuaikan. Teknik *Double Difference* didasarkan pada kenyataan bahwa jika terdapat perbedaan jarak antara dua hiposenter yang sangat kecil dibandingkan dengan jarak antara kedua hiposenter tersebut terhadap stasiun dan memiliki skala kecepatan heterogenitas yang bisa dikatakan sama, maka pola sinar gelombang (*raypath*) yang dihasilkan dapat dikatakan identik antara kedua hiposenter tersebut (Waldhauser dan Ellsworth, 2002). Berdasarkan asumsi tersebut, selisih waktu tempuh antara kedua gempa yang terekam pada satu stasiun yang sama dapat dianggap hanya sebagai fungsi jarak antara kedua hiposenter (Waldhauser dan Ellsworth, 2000).

1. 2. Rumusan Masalah

a. Bagaimana relokasi hiposenter gempa di Pulau Jawa bagian Barat dengan menggunakan metode *Double Difference*?
b. Bagaimana analisis perubahan posisi hiposenter gempa di Pulau Jawa bagian Barat antara sebelum dan sesudah direlokasi?

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1. 3. Tujuan Penelitian

a. Merelokasi hiposenter gempa di Pulau Jawa bagian Barat dengan menggunakan metode *Double Difference*.
b. Menganalisa perubahan posisi hiposenter gempa di Pulau Jawa bagian Barat sebelum dan sesudah direlokasi.

1. 4. Batasan Penelitian

a. Data yang digunakan adalah data katalog gempa di Pulau Jawa bagian Barat periode 2010-2016 dengan batas koordinat 6^o LS s.d. 8^o LS dan 106^o BT s.d. $108{,}5^o$ BT dari Badan Meteorologi, Klimatologi, dan Geofisika (BMKG) Yogyakarta.
b. Pengolahan data digunakan program HypoDD yang berjalan di *software* Cygwin.

1. 5. Manfaat Penelitian

Hasil dari penelitian diharapkan mampu memberikan informasi tentang posisi hiposenter yang lebih akurat kepada instansi pemerintah dan masyarakat untuk mitigasi bencana dalam pemetaan kerawanan gempa agar dapat meminimalisir kerusakan dan korban. Selain itu, juga diharapkan dapat menjadi referensi untuk penelitian lebih lanjut mengenai studi relokasi posisi hiposenter gempa.

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BAB V

KESIMPULAN DAN SARAN

5. 1. Kesimpulan

Berikut merupakan kesimpulan yang dapat diambil dari penelitian ini:

1. Jumlah kejadian gempa yang dapat direlokasi adalah sebanyak 646 dari 679 kejadian dengan stasiun pencatat yang digunakan sebanyak 40 stasiun dari 213 stasiun baik didalam maupun diluar Indonesia.
2. Berdasarkan histogram residual waktu tempuh, distribusi residual sebelum direlokasi merapat pada kisaran nilai -3 sampai 3 sekon dan distribusi residual setelah direlokasi merapat pada kisaran nilai -2 sampai 3 sekon dengan jumlah data residual yang lebih banyak dibanding sebelum relokasi, sedangkan berdasarkan ploting data gempa, pada gempa dangkal 0 sampai 20 km ada pergeseran gempa yang semakin dangkal yang dimungkinkan dipicu oleh sesar - sesar aktif di Pulau Jawa dan ada pula gempa dengan pergeseran yang semakin dalam yang lebih mendekati kearah tunjaman subduksi, serta pada gempa yang dalam sekitar 20 km sampai 180 km menunjukan pergeseran ke garis tunjaman subduksi dimana pada kedalaman tersebut diidentifikasikan sebagai zona Beniof dari tunjaman subduksi. Sudut dari pergeseran posisi gempa rata - rata berada dikisaran 0.07^{o} sampai 13^{o}, namun sudut dari pergeseran

yang lebih besar dialami oleh gempa - gempa dalam yang dipicu oleh tunjaman subduksi.

5. 2. Saran

Ada beberapa saran yang dapat dilakukan untuk melakukan penelitian selanjutnya terkait kajian relokasi hiposenter sebagai berikut:

1. Perlu adanya penambahan data baik dari interval periode data ataupun cakupan koordinatnya sehingga dapat melihat distribusi gempa yang semakin banyak dan memudahkan analisis untuk menganalisa struktur tektonik atau kejadian - kejadian gempa baik yang dipicu oleh sesar aktif maupun tunjaman subduksinya.
2. Perlu adanya penambahan data *cross corelation* (data korelasi) dan adanya referensi model kecepatan yang akurat dan sesuai dengan struktur geologi daerah penelitian untuk meningkatkan kekuratan hasil.
3. Perlu adanya relokasi hiposenter dengan menggunakan metode lainnya, sehingga hasil dari proses relokasi dapat dibandingkan dan dikorelasikan satu sama lain dalam analisa keakuratannya.

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http://digilib.itb.ac.id/files/disk1/622/jbptitbpp-gdl-teukumocha-31058-3-2008ta-2.pdf diakses pada 31 Des 2016 Pukul 12.28.

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LAMPIRAN 1

Data dan Hasil

1. 1. Contoh data katalog gempa BMKG:

Meteorological Climatological and Geophysical Agency, BMKG
Earthquake Database
==========
File Created: Tue Aug 09 2016 14:13:52 WIB
Earthquake Events = 47 Events
Date Range: 2010-01-01 - 2010-12-31
Latitude: 6S - 7.5S
Longitude: 107E - 106E
Magnitude Range: 1 - 9.5 SR
Depth Range: 1 - 1000 Km

EventID: bmg2010aqwr

Date	Time	Latitude	Longitude	Depth	Mag	TypeMag	smaj	smin	az	rms	cPhase	Region
2010-01-10	05:46:54	-7.1	106.42	11	3.6	M	2.51	0.17	195	0.924	17	Java, Indonesia

Net	Sta	Phase	Date	Time		dis	Az	Res	Amp		Per	Qual	mb	ML	mB
IA	SKJI	P	2010-01-10	05:46:57.5	0.2	56	-1.3	0		0	i				
IA	SKJI	S	2010-01-10	05:47:01.0	0.2	56	-1.4	0		0	i				
IA	DBJI	P	2010-01-10	05:47:06.0	0.6	31	-0.3	0		0	i				
IA	CBJI	P	2010-01-10	05:47:06.3	0.7	52	-0.2	0		0	i				
IA	CGJI	P	2010-01-10	05:47:09.4	0.9	304	-0.5	0		0	i				
IA	SBJI	P	2010-01-10	05:47:13.5	1	344	1.1	0		0	i				
IA	DBJI	S	2010-01-10	05:47:16.1	0.6	31	0.3	0		0	i				
IA	LEM	P	2010-01-10	05:47:17.1	1.2	77	1.6	0		0	i				
IA	CISI	P	2010-01-10	05:47:18.7	1.5	108	-0.7	0		0	i				
IA	CGJI	S	2010-01-10	05:47:21.7	0.9	304	-0.7	0		0	i				
IA	JCJI	P	2010-01-10	05:47:26.7	1.9	79	0.8	0		0	i				
IA	CMJI	P	2010-01-10	05:47:29.1	2.1	109	-0.5	0		0	i				
IA	LEM	S	2010-01-10	05:47:33.6	1.2	77	1.1	0		0	i				
IA	KASI	P	2010-01-10	05:47:34.9	2.5	309	0.5	0		0	i				

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IA	KPJI	P	2010-01-10	05:47:36.2	2.5	95	1.4	0	0	1	
IA	CISI	S	2010-01-10	05:47:37.9	1.5	108	-1.1	0	0	i	
IA	CMJI	S	2010-01-10	05:47:57.0	2.1	109	0	0	0	i	

EventID: bmg2010cnor

Date	Time	Latitude	Longitude	Depth	Mag	TypeMag	smaj	smin	az	rms	cPhase	Region
2010-02-05	21:48:22	-7.36	106.63	55	3	MLv	2.8	0.36	205	0.73	14	Java, Indonesia

Net	Sta	Phase	Date	Time	dis	Az	Res	Amp	Per	Qual	mb	ML	mB
IA	SKJI	P	2010-02-05	21:48:35.1	0.4	348	0.6	0	0	i			
IA	CNJI	P	2010-02-05	21:48:35.6	0.5	84	-0.2	0	0	i			
IA	DBJI	P	2010-02-05	21:48:38.1	0.8	8	-0.9	0	0	i			
IA	CGJI	P	2010-02-05	21:48:43.5	1.2	308	0.1	0	0	i			
IA	CISI	P	2010-02-05	21:48:43.5	1.2	99	0.2	0	0	i			
IA	SKJI	S	2010-02-05	21:48:43.6	0.4	348	0.2	0	0	i			
IA	LEM	P	2010-02-05	21:48:43.8	1.1	62	1.6	0	0	i			
IA	CNJI	S	2010-02-05	21:48:45.5	0.5	84	-0.3	0	0	i			
IA	DBJI	S	2010-02-05	21:48:50.4	0.8	8	-0.8	0	0	i			
IA	CMJI	P	2010-02-05	21:48:51.6	1.8	103	-0.6	0	0	i			
IA	CGJI	S	2010-02-05	21:48:59.2	1.2	308	0	0	0	i			
IA	CISI	S	2010-02-05	21:49:00.3	1.2	99	1.1	0	0	i			
IA	KASI	P	2010-02-05	21:49:05.2	2.8	311	0.1	0	0	i			
IA	CMJI	S	2010-02-05	21:49:14.3	1.8	103	-1.2	0	0	i			

EventID: bmg2010defu

Date	Time	Latitude	Longitude	Depth	Mag	TypeMag	smaj	smin	az	rms	cPhase	Region
2010-02-15	00:45:56	-7.38	106.65	25	3	MLv	2.26	0.38	206	1.96	12	Java, Indonesia

Net	Sta	Phase	Date	Time	dis	Az	Res	Amp	Per	Qual	mb	ML	mB
IA	CNJI	P	2010-02-15	00:46:05.1	0.5	82	-1.9	0	0	i			
IA	SKJI	P	2010-02-15	00:46:06.2	0.4	346	0.6	0	0	i			
IA	SKJI	S	2010-02-15	00:46:13.5	0.4	346	0.8	0	0	i			
IA	CNJI	S	2010-02-15	00:46:14.5	0.5	82	-0.6	0	0	i			
IA	CGJI	P	2010-02-15	00:46:16.1	1.2	308	-1.2	0	0	i			
IA	LEM	P	2010-02-15	00:46:17.5	1.1	60	1.8	0	0	i			
IA	CISI	P	2010-02-15	00:46:19.7	1.2	99	3.1	0	0	i			
IA	CISI	S	2010-02-15	00:46:28.0	1.2	99	-4.2	0	0	i			
IA	CMJI	P	2010-02-15	00:46:28.7	1.8	103	2.4	0	0	i			
IA	CGJI	S	2010-02-15	00:46:31.9	1.2	308	-1.5	0	0	i			
IA	KPJI	P	2010-02-15	00:46:33.6	2.3	89	1.1	0	0	i			
IA	KPJI	S	2010-02-15	00:47:00.5	2.3	89	-0.3	0	0	i			

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1. 2. Data lokasi stasiun:

ID Station	Lat	Long
AAI	-3.687109	128.19429
AAK	42.6390	74.4940
ABJI	-7.7956	114.234
ABPO	-19.0174	47.2275
ALKI	-8.1445	124.5903
APSI	-0.910782	121.648666
ARMA	-30.4183	151.6293
ATNI	-9.0835	124.8644
BASI	-10.2189	120.5777
BATI	-10.2065	123.6633
BBKI	-3.4625	114.8411
BBOO	-32.8096	136.0583
BBSI	-5.48845	122.569458
BJI	-7.33298	109.70958
BKB	-1.1073183	116.904826
BKNI	0.3264167	101.039638
BKSI	-5.321843	120.122436
BLDU	-30.6147	116.7091
BLJI	-7.745365	113.595011
BLSI	-5.367548	105.245210
BNDI	-4.31346	129.54272
BNSI	-4.400521	120.106521
BOSA	-28.6141	25.2555
BSSI	-6.1428	120.4904
BTDF	1.3608	103.7729
BYJI	-8.2140	114.3557
CASY	-66.2792	110.5364
CBJI	-6.698052	106.934951
CGJI	-6.6135	105.6928
CHBT	12.7526	102.33
CHTO	18.8138	98.9438
CISI	-7.5557	107.815
CMJI	-7.783696	108.448516
CMMT	18.8128	98.9476
CMSA	-31.5375	145.6916
CNB	-35.3150	149.3633
CNJI	-7.309	107.13
COCO	-12.1901	96.8349
COEN	-13.9574	143.1749
CTA	-20.0883	146.2544
CTAO	-20.0883	146.2544
CTJI	-7.007548	109.183578
DAV	7.0700	125.5790
DBJI	-6.5538	106.7497
DBNI	-8.501888	118.312133
DNP	-8.677404	115.209701
DSRI	-0.4793	104.5778
EDFI	-8.7497	121.6903
EGSI	-5.35241	102.27629
EIDS	-25.3691	151.0817
EIL	29.6699	34.9512
FAKI	-2.9192317	132.265030
FITZ	-18.1020	125.6390
FORT	-30.7790	128.0590
FURI	8.8967	38.6783
GENI	-2.59268	140.167757
GLMI	1.8381	127.7879
GMJI	-8.273206	113.444145

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GRJI	-6.914433	112.479354
GSI	1.3036	97.5754
GTOI	0.7628	122.87
HALK	6.08766	80.68060
HMDM	6.77314	73.18216
IGBI	-8.818	115.146
IPM	4.4795	101.0255
JAGI	-8.4703117	114.152046
JAY	-2.51447	140.70433
JCJI	-6.7344	108.2631
JMBI	-1.6764	103.576
JOW	26.8360	128.2725
KAPI	-5.0142	119.7517
KASI	-5.52361	104.495964
KBL	34.5408	69.0432
KBKI	-3.2995	116.1668
KCSI	3.522185	97.771575
KDI	-3.95743	122.61926
KHK	-8.36404	115.60964
KKM	6.0443	116.2147
KLNI	-8.421889	116.094932
KLI	-4.836292	104.870452
KLSI	-4.6871	104.7317
KMBL	-31.3669	121.8821
KMBO	-1.1268	37.2523
KMMI	-7.041162	113.915725
KMPI	-3.66168	133.70440
KMSI	0.574544	123.890674
KOM	35.6500	139.7628
KPJI	-7.333193	108.931228
KRAI	-3.318356	128.394729
KRJI	-2.091199	101.461929
KRK	-8.152149	112.450637
KSI	-3.651	102.59292
KSM	1.4733	110.3083
KUM	5.2902	100.6492
LBFI	-8.48	119.8921
LBMI	-0.637887	127.500816
LBTB	-25.0145	25.5970
LEM	-6.8266	107.6175
LDM	48.4539	-115.3172
LHI	-31.5200	159.0613
LHSI	-3.826624	103.52333
LODK	3.42195	35.36165
LRTI	-8.2752	123.00
LSZ	-15.2766	28.1882
LUWI	-1.0418067	122.771635
LWLI	-5.017472	104.058914
MALK	38.3134	38.4273
MASI	-3.141521	102.239608
MAW	-67.6039	62.8706
MBWA	-21.1590	119.7312
MCQ	-54.4986	158.9561
MDSI	-4.486037	104.17823
MEEK	-26.6378	118.6145
MGAI	4.0079	126.67
MKBI	-2.4474	101.23958
MMPI	-8.518124	140.414138
MMRI	-8.6357150	122.237605
MMSI	-2.6892	118.9090
MNAI	-4.36048	102.95571
MNI	1.44397	124.83998

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MNSI	0.795498	99.579627
MOO	-42.4417	147.1903
MORW	-29.0683	116.0388
MPSI	0.3374	119.898
MRSI	0.477076	121.940589
MSAI	-3.3462	128.9285
MTKI	-0.9418	114.8959
MTN	-12.8436	131.1327
MWPI	-0.9258	134.0431
NGJI	-7.3676	111.4612
NIL	33.6506	73.2686
NIUE	-19.0763	-169.9272
NLAI	-3.2390	127.0998
NWAO	-32.9269	117.2339
OBMI	-1.3414	127.6444
PALK	7.2728	80.7022
PBKI	-2.7047	111.6697
PBKT	16.5733	100.969
PBSI	-0.0547	98.28
PCJI	-8.1947	111.1771
PCI	-0.90548	119.83665
PDSI	-0.9118	100.4617
PKKI	-2.2410	113.9721
PLAI	-8.7006	117.7219
PMBI	-2.90243	104.69925
PMG	-9.4062	147.1589
PMSI	-3.5008	118.9149
PPBI	-2.1616	106.1364
PPI	-0.45503	100.3968
PPSI	-2.7660	100.0100
PSI	2.6952	98.9240
PTKI	-0.14542	109.40495
PWJI	-8.22	111.8039
QSPA	-89.9279	145.0000
RAPI	-0.4102	130.8211
RAYN	23.5225	45.5032
RKPI	-1.5107	134.1773
RGRI	-0.3491	102.3338
RPSI	2.0723	99.8325
RTBI	-8.4597	114.942
SANI	-2.0497	125.9881
SAUI	-7.9826	131.2988
SBJI	-6.1117	106.1318
SBM	33.9752	-107.1807
SBSI	1.3988	99.4310
SCJI	-7.6810	109.1689
SDSI	-0.9325	101.4280
SGKI	0.5302	117.6043
SIJI	-0.86912	131.26605
SISI	-1.3265	99.0895
SKJI	-7.0053	106.5563
SKNT	16.9742	103.981
SLSI	-2.3924	102.5927
SMKI	-0.4461	117.2085
SMRI	-7.0490651	110.440768
SMSI	0.9885	122.3654
SNAA	-71.6707	-2.8379
SOEI	-9.755265	124.267243
SPSI	-3.9646	119.7691
SRBI	-8.0848	115.2126
SRDT	14.3495	99.1212
STKA	-31.8769	141.5952

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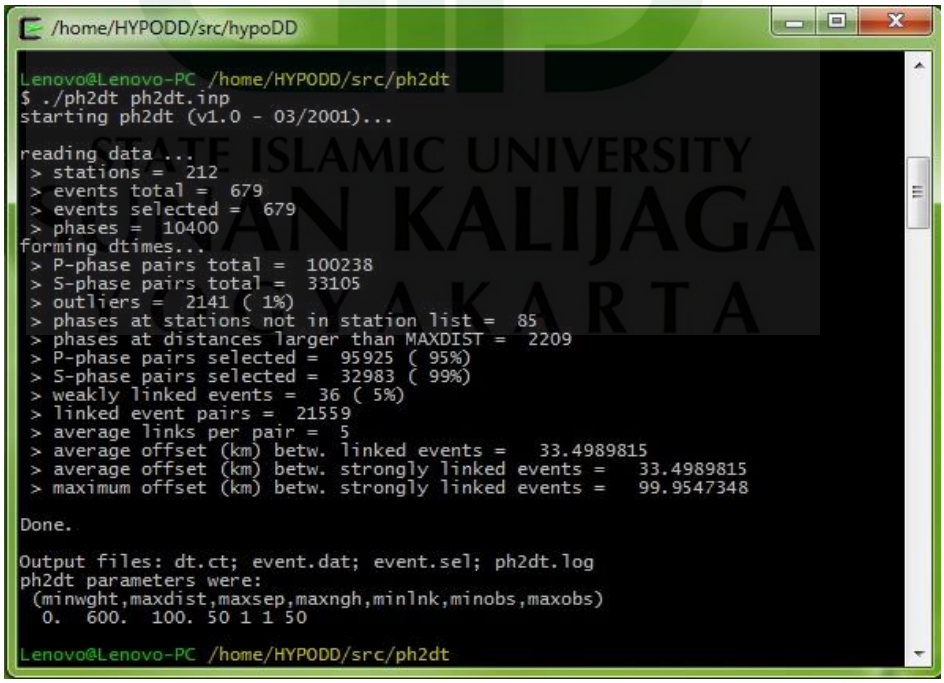
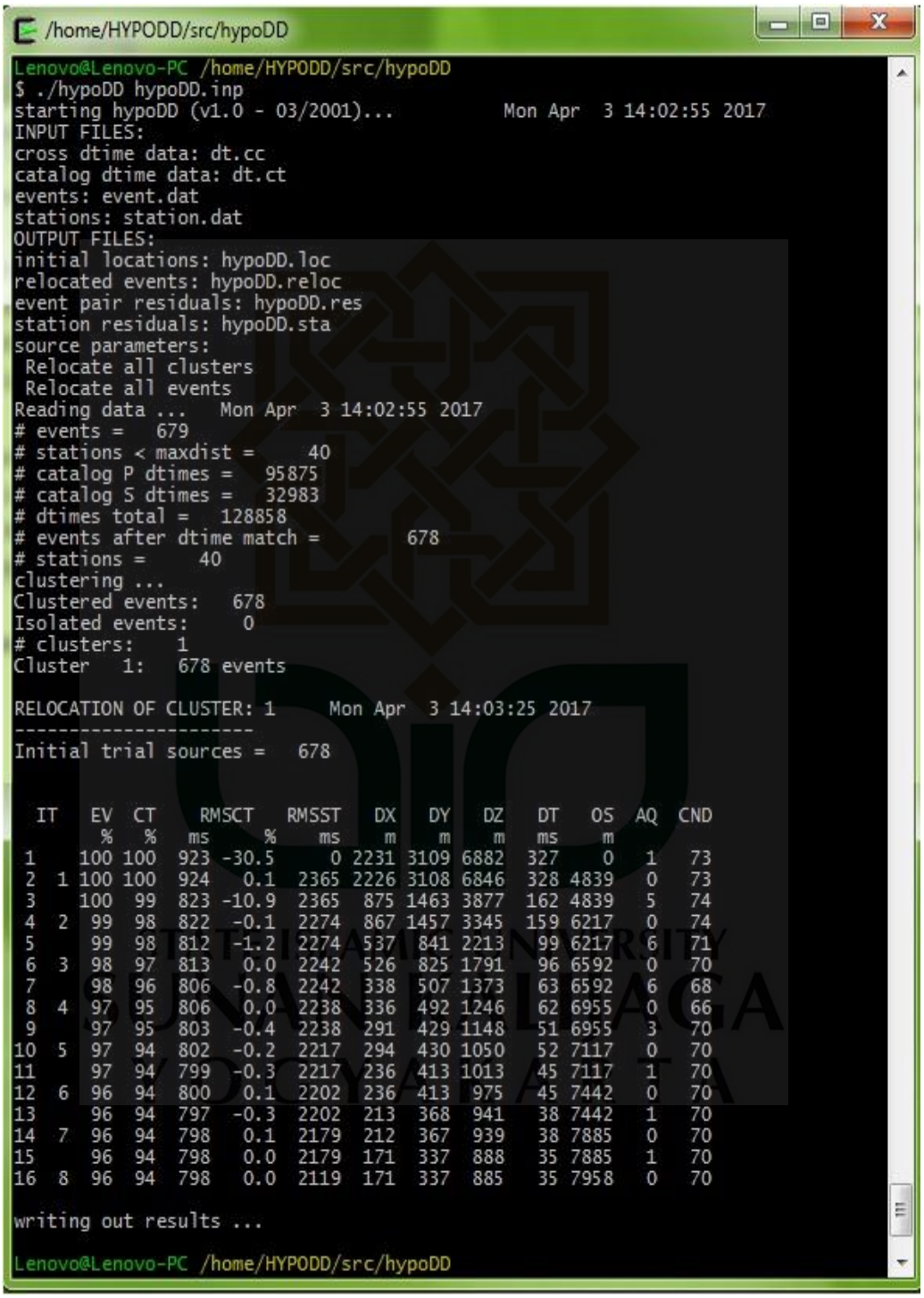
STKI	0.0656	111.4772
SUR	-32.3797	20.8117
SWI	-0.8628	131.2592
SWJI	-7.7349	111.7669
TBJI	-6.8179	111.8481
TNG	-6.1719	106.6469
TNGI	-6.1720	106.6470
TNTI	0.772055	127.366901
TOLI2	1.121398	120.794456
TOO	-37.5714	145.4906
TPI	-2.75637	107.65342
TPRI	0.92	104.32
TPTI	3.2618	97.1774
TRSI	2.0256	98.9594
TTSI	-3.0451	119.8190
TWSI	-8.7381	116.8821
UBPT	15.2773	105.469
UBSI	-3.7611	102.2714
UGM	-7.91248	110.52192
ULN	47.8652	107.0528
UOSS	24.9453	56.2042
UWJI	-6.4191	110.9474
VNDA	-77.5172	161.8528
VOI	-22.0260	46.7059
WOJI	-7.8372	110.9236
WRAB	-19.9333	134.3502
WBSI	-9.6411	119.3911
WSI	-9.66897	120.29767
XMIS	-10.4807	105.6519
YNG	-34.2980	148.3963
YOGI	-7.8166	110.295

1. 3. Hasil runing ph2dt:



1. 4. Hasil runing hypoDD:



```
/home/HYPODD/src/hypoDD
Lenovo@Lenovo-PC /home/HYPODD/src/hypoDD
$ ./hypoDD hypoDD.inp
starting hypoDD (v1.0 - 03/2001)...          Mon Apr  3 14:02:55 2017
INPUT FILES:
cross dtime data: dt.cc
catalog dtime data: dt.ct
events: event.dat
stations: station.dat
OUTPUT FILES:
initial locations: hypoDD.loc
relocated events: hypoDD.reloc
event pair residuals: hypoDD.res
station residuals: hypoDD.sta
source parameters:
 Relocate all clusters
 Relocate all events
Reading data ...   Mon Apr  3 14:02:55 2017
# events =   679
# stations < maxdist =     40
# catalog P dtimes =   95875
# catalog S dtimes =   32983
# dtimes total =   128858
# events after dtime match =       678
# stations =     40
clustering ...
Clustered events:   678
Isolated events:     0
# clusters:    1
Cluster   1:   678 events

RELOCATION OF CLUSTER: 1     Mon Apr  3 14:03:25 2017
----------------------
Initial trial sources =   678


  IT   EV  CT    RMSCT   RMSST   DX   DY   DZ   DT   OS  AQ  CND
       %   %   ms      %    ms    m    m    m   ms    m
 1    100 100  923 -30.5     0 2231 3109 6882  327    0   1   73
 2  1 100 100  924   0.1  2365 2226 3108 6846  328 4839   0   73
 3    100  99  823 -10.9  2365  875 1463 3877  162 4839   5   74
 4  2  99  98  822  -0.1  2274  867 1457 3345  159 6217   0   74
 5     99  98  812  -1.2  2274  537  841 2213   99 6217   6   71
 6  3  98  97  813   0.0  2242  526  825 1791   96 6592   0   70
 7     98  96  806  -0.8  2242  338  507 1373   63 6592   6   68
 8  4  97  95  806   0.0  2238  336  492 1246   62 6955   0   66
 9     97  95  803  -0.4  2238  291  429 1148   51 6955   3   70
10  5  97  94  802  -0.2  2217  294  430 1050   52 7117   0   70
11     97  94  799  -0.3  2217  236  413 1013   45 7117   1   70
12  6  96  94  800   0.1  2202  236  413  975   45 7442   0   70
13     96  94  797  -0.3  2202  213  368  941   38 7442   1   70
14  7  96  94  798   0.1  2179  212  367  939   38 7885   0   70
15     96  94  798   0.0  2179  171  337  888   35 7885   1   70
16  8  96  94  798   0.0  2119  171  337  885   35 7958   0   70

writing out results ...

Lenovo@Lenovo-PC /home/HYPODD/src/hypoDD
```

1. 5. Data **hypoDD.loc**:

ID	Lat	Long	Depth	x	y	z	Ex	Ey	Ez	year	mon	day	hour	min	sec	Mag	CID
1	-7.1	106.419998	11	-84232	25285.9	-35339.2	0	0	0	2010	1	10	5	46	54	3.6	1
2	-7.36	106.629997	55	-61021.4	-3467.8	8660.8	0	0	0	2010	2	5	21	48	22	3	1
3	-7.38	106.650002	25	-58811.4	-5679.7	-21339.2	0	0	0	2010	2	15	0	45	56	3	1
5	-6.7	106.809998	48	-41176.6	69522.3	1660.8	0	0	0	2010	2	20	11	57	1	3.1	1
6	-7.09	106.160004	10	-112948	26391.8	-36339.2	0	0	0	2010	2	27	0	5	33	3.6	1
7	-6.55	106.860001	141	-35657.4	86111	94660.8	0	0	0	2010	3	8	14	21	12	3.3	1
8	-7.29	106.589996	71	-65443.1	4273.6	24660.8	0	0	0	2010	3	27	2	55	21	3.6	1
9	-7.27	106.110001	12	-118447.2	6485.4	-34339.2	0	0	0	2010	4	4	3	51	40	3.9	1
10	-7.09	106.629997	126	-61039.5	26391.8	79660.8	0	0	0	2010	4	6	20	29	42	2.6	1
11	-6.86	106.470001	10	-78729.9	51827.7	-36339.2	0	0	0	2010	4	11	17	45	52	3	1
12	-7.39	106.07	23	-122847.9	-6785.5	-23339.2	0	0	0	2010	4	13	18	17	52	4.2	1
13	-7.1	106.129997	22	-116260.8	25285.9	-24339.2	0	0	0	2010	4	29	18	27	23	2.7	1
14	-7.28	106.080002	14	-121758.5	5379.4	-32339.2	0	0	0	2010	4	30	23	56	36	4	1
15	-6.95	106.959999	124	-24596.2	41874.6	77660.8	0	0	0	2010	5	3	9	28	31	3.9	1
16	-6.85	106.769997	23	-45589.1	52933.7	-23339.2	0	0	0	2010	5	9	19	22	33	2.3	1
17	-7.29	106.419998	30	-84214.4	4273.6	-16339.2	0	0	0	2010	5	11	1	55	58	3.3	1
18	-7.44	106.389999	28	-87512.3	-12315.1	-18339.2	0	0	0	2010	5	11	18	10	36	2.6	1
19	-7.46	106.849998	10	-36726.5	-14526.9	-36339.2	0	0	0	2010	5	13	3	50	3	2.8	1
20	-6.51	106.860001	15	-35658.9	90534.6	-31339.2	0	0	0	2010	5	14	2	52	18	3.2	1
21	-7.12	106.650002	83	-58828.2	23074.1	36660.8	0	0	0	2010	5	18	22	1	0	3.6	1
22	-6.61	106.169998	106	-111901.7	79475.5	59660.8	0	0	0	2010	5	20	15	14	26	4.5	1
23	-7.44	106.760002	45	-46663.1	-12315.1	-1339.2	0	0	0	2010	5	29	3	6	33	2.9	1
24	-7.03	106.540001	10	-70983.8	33027.2	-36339.2	0	0	0	2010	5	31	12	17	32	3.4	1
25	-7.36	106.790001	67	-43355.1	-3467.8	20660.8	0	0	0	2010	6	3	9	47	24	3.1	1
26	-7.22	106.489998	57	-76490.9	12015	10660.8	0	0	0	2010	6	6	21	35	2	2.8	1
27	-7.2	106.220001	43	-106308.8	14226.8	-3339.2	0	0	0	2010	6	16	15	5	35	2.8	1
28	-7.18	106.25	64	-102998.2	16438.6	17660.8	0	0	0	2010	6	18	2	3	36	3.3	1
29	-7.1	106.75	29	-47785.3	25285.9	-17339.2	0	0	0	2010	6	25	21	54	1	2.6	1
30	-7.03	106.830002	129	-38952.6	33027.2	82660.8	0	0	0	2010	6	30	14	16	14	4.1	1
31	-7.21	106.870003	11	-34527.6	13120.8	-35339.2	0	0	0	2010	7	3	21	33	27	2.9	1
32	-7.14	106.870003	10	-34530.2	20862.2	-36339.2	0	0	0	2010	7	7	12	55	15	3.3	1
33	-7.07	106.540001	10	-70980.7	28603.6	-36339.2	0	0	0	2010	8	8	10	22	19	3.6	1
34	-7.14	106.480003	10	-77601.4	20862.2	-36339.2	0	0	0	2010	8	8	10	42	23	3.6	1
35	-7.13	106.279999	97	-99690.8	21968.1	50660.8	0	0	0	2010	8	23	1	51	27	3.1	1
36	-6.81	106.650002	10	-58847.9	57357.3	-36339.2	0	0	0	2010	9	7	6	0	11	3.8	1
37	-7.14	106.620003	10	-62140	20862.2	-36339.2	0	0	0	2010	9	13	18	35	45	3	1
38	-6.87	106.199997	116	-108556.8	50721.8	69660.8	0	0	0	2010	9	25	6	23	5	4.5	1
39	-7.5	106.389999	53	-87506.5	-18950.6	6660.8	0	0	0	2010	9	26	9	53	28	3.7	1
40	-6.43	106.360001	84	-90923.2	99381.9	37660.8	0	0	0	2010	10	8	17	5	19	3.4	1
41	-7.29	106.110001	34	-118444.6	4273.6	-12339.2	0	0	0	2010	10	18	10	18	46	3.5	1
42	-6.85	106.260002	68	-101930.1	52933.7	21660.8	0	0	0	2010	10	29	18	55	50	3.6	1
43	-7.48	106.470001	22	-78676.4	-16738.8	-24339.2	0	0	0	2010	11	1	10	57	51	3.7	1
44	-7.45	106.660004	38	-57702.6	-13421	-8339.2	0	0	0	2010	11	13	0	50	50	3.2	1
45	-7.35	106.120003	25	-117332.4	-2361.9	-21339.2	0	0	0	2010	11	20	18	42	17	4.8	1
46	-7.12	106.809998	57	-41158.1	23074.1	10660.8	0	0	0	2010	12	3	21	3	15	2.4	1
48	-6.18	106	47	-130745.1	127029.7	660.8	0	0	0	2011	1	8	8	11	28	3.6	1
49	-7.35	106.870003	72	-34522.2	-2361.9	25660.8	0	0	0	2011	1	13	5	36	37	4.3	1
50	-6.67	106.360001	148	-90900.3	72840	101660.8	0	0	0	2011	2	2	22	37	47	3.3	1
51	-7.45	106.019997	26	-128360.1	-13421	-20339.2	0	0	0	2011	2	25	3	45	0.8	4	1
52	-7.49	106.040001	18	-126146	-17844.7	-28339.2	0	0	0	2011	3	15	16	30	13.4	4.1	1
53	-6.23	106.050003	76	-125210.8	121500.1	29660.8	0	0	0	2011	4	14	12	56	31.5	3.1	1
54	-6.81	106.589996	10	-65477.2	57357.3	-36339.2	0	0	0	2011	4	22	21	21	15.5	2.8	1
55	-6.77	106.650002	10	-58850.4	61780.9	-36339.2	0	0	0	2011	5	1	18	37	5.9	3	1
56	-6.64	106.5	168	-75433.5	76157.8	121660.8	0	0	0	2011	5	12	19	14	27.6	3.9	1
57	-7.1	106.150002	28	-114051.5	25285.9	-18339.2	0	0	0	2011	5	15	10	57	33.4	3.3	1
58	-6.82	106.639999	10	-59952.3	56251.4	-36339.2	0	0	0	2011	5	30	4	44	31.7	3	1
59	-6.9	106.330002	10	-94191.9	47404.1	-36339.2	0	0	0	2011	6	2	20	40	49.7	3.4	1
60	-6.97	106.550003	10	-69883.6	39662.7	-36339.2	0	0	0	2011	6	6	9	4	45.2	3.1	1
61	-6.91	106.330002	10	-94190.9	46298.2	-36339.2	0	0	0	2011	6	11	3	23	3.6	3.1	1
62	-7.01	106.300003	10	-97494.2	35239	-36339.2	0	0	0	2011	6	11	20	23	10.1	4.9	1
63	-7.06	106.209999	10	-107429.8	29709.5	-36339.2	0	0	0	2011	6	12	2	21	41.9	4.3	1
64	-6.99	106.279999	10	-99706	37450.9	-36339.2	0	0	0	2011	6	15	3	47	18.9	4	1

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65	-6.9	106.309998	10	-96401.8	47404.1	-36339.2	0	0	0	2011	6	15	4	26	36.3	3.4	1
66	-6.86	106.309998	10	-96405.9	51827.7	-36339.2	0	0	0	2011	6	15	7	32	11.8	2.9	1
67	-7.48	106.040001	18	-126147.4	-16738.8	-28339.2	0	0	0	2011	6	23	15	36	13.3	3.3	1
68	-7.35	106.610001	92	-63230	-2361.9	45660.8	0	0	0	2011	7	3	9	1	23.5	4.4	1
69	-6.93	106.300003	11	-97502.7	44086.4	-35339.2	0	0	0	2011	7	11	0	5	3.2	3.4	1
70	-7.2	106.269997	58	-100787.7	14226.8	11660.8	0	0	0	2011	7	17	10	59	9.5	5.2	1
72	-6.69	106.699997	15	-53331.3	70628.2	-31339.2	0	0	0	2011	8	3	16	51	51.5	2.7	1
73	-7.48	106.690002	34	-54388.8	-16738.8	-12339.2	0	0	0	2011	9	3	14	8	51.9	3.7	1
74	-7.18	106.25	160	-102998.2	16438.6	113660.8	0	0	0	2011	9	10	15	44	31.8	3.8	1
75	-7.43	106.699997	15	-53288.4	-11209.2	-31339.2	0	0	0	2011	10	20	16	40	37.7	2.5	1
76	-6.39	106.230003	154	-105295.2	103805.6	107660.8	0	0	0	2011	11	6	4	41	56.8	5	1
77	-6.85	106.089996	106	-120711.3	52933.7	59660.8	0	0	0	2011	11	16	19	32	1.6	3.4	1
78	-7.18	106.300003	10	-97476.2	16438.6	-36339.2	0	0	0	2011	11	21	7	33	48.6	3	1
79	-7.45	106.690002	29	-54390.7	-13421	-17339.2	0	0	0	2011	11	25	13	46	48.5	3.4	1
80	-7.33	106.529999	29	-72064.9	-150.1	-17339.2	0	0	0	2011	12	24	13	4	48.3	2.8	1
81	-6.6	106.82	10	-40075.7	80581.4	-36339.2	0	0	0	2012	1	4	21	28	38.3	3.3	1
82	-7.06	106.830002	10	-38951.3	29709.5	-36339.2	0	0	0	2012	1	10	0	37	13.6	3.3	1
83	-6.81	106.830002	12	-38961.8	57357.3	-34339.2	0	0	0	2012	1	17	4	9	37.2	3	1
84	-6.24	106.010002	10	-129631.3	120394.2	-36339.2	0	0	0	2012	1	23	14	39	26.9	3	1
85	-7.08	106.32	29	-95278.3	27497.7	-17339.2	0	0	0	2012	2	7	1	54	0.6	3	1
86	-7.18	106.120003	87	-117354.4	16438.6	40660.8	0	0	0	2012	2	7	7	11	39.7	4	1
87	-7.31	106.639999	10	-59920.4	2061.7	-36339.2	0	0	0	2012	2	12	11	13	11.6	3.7	1
88	-6.56	106.43	172	-83175.3	85005.1	125660.8	0	0	0	2012	2	23	3	8	44.3	4.1	1
89	-6.99	106.199997	138	-108542.7	37450.9	91660.8	0	0	0	2012	2	24	20	41	16.3	3.7	1
90	-6.93	106.900002	10	-31224.3	44086.4	-36339.2	0	0	0	2012	2	28	2	29	4.8	3	1
91	-6.95	106.459999	27	-79827.1	41874.6	-19339.2	0	0	0	2012	3	8	7	19	26.5	3.6	1
92	-7.38	106.650002	87	-58811.4	-5679.7	40660.8	0	0	0	2012	3	16	21	40	20.5	4.1	1
93	-7.47	106.449997	29	-80885.8	-15632.8	-17339.2	0	0	0	2012	3	31	19	39	39.8	3.2	1
94	-7.2	106.550003	11	-69866.1	14226.8	-35339.2	0	0	0	2012	4	1	9	57	42.3	3.2	1
95	-7.46	106.419998	42	-84198.5	-14526.9	-4339.2	0	0	0	2012	4	6	10	2	58.5	3.6	1
96	-7.45	106.410004	10	-85302.9	-13421	-36339.2	0	0	0	2012	4	28	14	31	0.7	4.6	1
97	-6.78	107	29	-20181.3	60675	-17339.2	0	0	0	2012	5	14	15	39	35.2	3.5	1
98	-7.45	106.07	54	-122839.7	-13421	7660.8	0	0	0	2012	5	20	13	19	35.9	4	1
99	-6.84	106.910004	38	-30122.3	54039.5	-8339.2	0	0	0	2012	5	21	5	29	45.9	3.3	1
100	-7.04	106.949997	88	-25698.5	31921.3	41660.8	0	0	0	2012	7	8	6	57	7.4	3.5	1
101	-6.8	106.029999	10	-127346.2	58463.2	-36339.2	0	0	0	2012	7	25	10	28	51.3	3.1	1
102	-6.76	106.459999	114	-79843.4	62886.8	67660.8	0	0	0	2012	9	3	0	1	15.2	3.6	1
104	-7.39	106.110001	20	-118431.5	-6785.5	-26339.2	0	0	0	2012	9	9	15	58	5.2	4.2	1
105	-7.37	106	23	-130579.4	-4573.7	-23339.2	0	0	0	2012	9	11	12	44	24.5	4.2	1
107	-6.4	106.18	151	-110820.7	102699.6	104660.8	0	0	0	2012	9	26	7	10	51.1	3.5	1
108	-6.24	106.07	174	-122999	120394.2	127660.8	0	0	0	2012	10	1	17	54	48.5	4.4	1
109	-7.43	106.410004	31	-85304.8	-11209.2	-15339.2	0	0	0	2012	10	11	18	52	51.8	3.8	1
110	-7.26	106.699997	62	-53298.5	7591.3	15660.8	0	0	0	2012	11	18	23	18	17.6	3.4	1
111	-7.13	106.019997	17	-128405.5	21968.1	-29339.2	0	0	0	2012	11	26	19	12	4.4	3.2	1
112	-6.7	106.629997	10	-61065.1	69522.3	-36339.2	0	0	0	2012	11	27	17	17	4.3	2.6	1
114	-6.71	106.690002	10	-54434.5	68416.4	-36339.2	0	0	0	2012	12	3	21	23	46.8	3.4	1
115	-7.02	106.540001	10	-70984.6	34133.2	-36339.2	0	0	0	2012	12	5	23	22	35.6	3.3	1
116	-6.6	106.639999	10	-59966.3	80581.4	-36339.2	0	0	0	2012	12	19	9	27	27.6	3.5	1
117	-6.59	106.239998	132	-104168.8	81687.3	85660.8	0	0	0	2013	3	6	21	2	54.7	4.6	1
118	-6.78	106.809998	12	-41173.1	60675	-34339.2	0	0	0	2013	3	27	23	3	8.6	3.4	1
119	-6.65	106.410004	162	-85377	75051.9	115660.8	0	0	0	2013	3	29	12	38	55.3	3.8	1
120	-7.47	106.080002	22	-121732.8	-15632.8	-24339.2	0	0	0	2013	5	2	19	31	9.4	3	1
121	-6.8	106.620003	10	-62162.8	58463.2	-36339.2	0	0	0	2013	5	14	12	58	40.3	3.7	1
122	-6.99	106.93	99	-27908.7	37450.9	52660.8	0	0	0	2013	5	31	6	11	52.6	3.1	1
123	-6.25	106.379997	10	-88729.6	119288.3	-36339.2	0	0	0	2013	7	8	6	16	48.3	3.3	1
124	-7.35	106.089996	28	-120645.5	-2361.9	-18339.2	0	0	0	2013	7	21	11	59	24.1	3.8	1
125	-7.43	106.150002	26	-114010	-11209.2	-20339.2	0	0	0	2013	7	21	12	50	21.3	4.4	1
126	-7.41	106.260002	17	-101867.8	-8997.4	-29339.2	0	0	0	2013	8	27	15	56	43.8	3.5	1
127	-7.42	106.040001	12	-126155.8	-10103.3	-34339.2	0	0	0	2013	10	13	17	37	34.4	4.1	1
128	-7.42	106.089996	10	-120636.1	-10103.3	-36339.2	0	0	0	2013	10	22	17	41	12.3	3.8	1
129	-6.4	106.260002	144	-101978.5	102699.6	97660.8	0	0	0	2013	10	23	6	36	31.9	3.7	1
130	-7.25	106.379997	108	-88635.3	8697.2	61660.8	0	0	0	2013	10	24	8	25	17.1	4.7	1
131	-7.39	106.400002	86	-86412.9	-6785.5	39660.8	0	0	0	2013	10	28	20	59	33.7	3.5	1
132	-7.46	106.290001	61	-98550.2	-14526.9	14660.8	0	0	0	2013	11	11	0	6	43.3	4.1	1
133	-6.59	106.370003	139	-89802.7	81687.3	92660.8	0	0	0	2013	11	13	7	25	2.6	4.9	1
134	-6.56	106.379997	167	-88701.1	85005.1	120660.8	0	0	0	2013	12	12	19	28	29.1	4.7	1

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135	-6.85	106.830002	10	-38960.1	52933.7	-36339.2	0	0	0	2013	12	18	14	14	28.9	4.3	1
136	-6.81	106.639999	121	-59953	57357.3	74660.8	0	0	0	2014	1	15	9	26	11.9	5	1
137	-7.5	106.690002	64	-54387.6	-18950.6	17660.8	0	0	0	2014	1	22	10	17	12.1	3	1
138	-6.76	106.709999	10	-52222.3	62886.8	-36339.2	0	0	0	2014	1	22	17	41	10.7	3.8	1
139	-6.63	106.309998	134	-96429.5	77263.7	87660.8	0	0	0	2014	1	30	3	34	41.2	4	1
140	-7.44	106.43	26	-83096.1	-12315.1	-20339.2	0	0	0	2014	2	15	3	53	15.8	3.6	1
141	-7.2	106.349998	55	-91953	14226.8	8660.8	0	0	0	2014	2	24	17	40	57.6	4.1	1
142	-6.73	106.629997	10	-61063.2	66204.6	-36339.2	0	0	0	2014	2	26	5	16	31.6	3	1
143	-7.38	106.650002	99	-58811.4	-5679.7	52660.8	0	0	0	2014	3	2	1	23	26.6	3.8	1
144	-7.4	106.970001	123	-23479.8	-7891.5	76660.8	0	0	0	2014	3	6	14	46	44.7	3.7	1
145	-7.37	106.440002	42	-81998.3	-4573.7	-4339.2	0	0	0	2014	3	26	13	37	24.7	3.2	1
146	-7.35	106.07	24	-122853.4	-2361.9	-22339.2	0	0	0	2014	4	4	19	24	8.4	4.4	1
147	-6.84	106.839996	14	-37856.4	54039.5	-32339.2	0	0	0	2014	4	8	23	59	1.3	2.2	1
148	-6.72	106.660004	20	-57748.5	67310.5	-26339.2	0	0	0	2014	4	9	0	4	31.4	2.6	1
149	-7.09	106.349998	74	-91964	26391.8	27660.8	0	0	0	2014	4	29	2	36	6.4	4.7	1
150	-7.46	106.139999	50	-115110.4	-14526.9	3660.8	0	0	0	2014	5	14	16	52	12.1	3.9	1
151	-7.42	106	58	-130572.1	-10103.3	11660.8	0	0	0	2014	5	30	17	53	20.2	4.9	1
152	-6.77	106.589996	10	-65480	61780.9	-36339.2	0	0	0	2014	6	7	0	7	20.7	4	1
153	-6.73	106.940002	10	-26811.4	66204.6	-36339.2	0	0	0	2014	6	21	15	29	50.3	2.5	1
154	-6.96	106.309998	10	-96395.5	40768.6	-36339.2	0	0	0	2014	7	24	6	5	32.7	3.3	1
155	-6.93	106.730003	113	-50003	44086.4	66660.8	0	0	0	2014	7	31	10	3	42.1	3.7	1
156	-6.72	106.709999	17	-52224.5	67310.5	-29339.2	0	0	0	2014	8	7	4	35	32.8	2.8	1
157	-7.19	106.199997	85	-108519.1	15332.7	38660.8	0	0	0	2014	8	25	11	0	27.4	3.1	1
158	-6.98	106.690002	14	-54418.8	38556.8	-32339.2	0	0	0	2014	8	27	17	13	7.1	3.1	1
159	-7.31	106.010002	10	-129483.7	2061.7	-36339.2	0	0	0	2014	9	9	14	25	49.3	3.1	1
160	-6.85	106.400002	10	-86463.9	52933.7	-36339.2	0	0	0	2014	9	13	5	7	57.4	3.6	1
161	-6.85	106.449997	10	-80940.7	52933.7	-36339.2	0	0	0	2014	9	13	5	12	57.7	4	1
162	-6.85	106.400002	10	-86463.9	52933.7	-36339.2	0	0	0	2014	9	19	13	21	25.2	3.1	1
163	-7.13	106.129997	105	-116257	21968.1	58660.8	0	0	0	2014	9	24	16	2	23.5	2.9	1
165	-7.43	106.919998	80	-28999.5	-11209.2	33660.8	0	0	0	2014	10	15	20	30	51.9	3.4	1
166	-7.32	106.150002	82	-114023.9	955.8	35660.8	0	0	0	2014	11	4	7	44	1.9	3.6	1
167	-7.28	106.040001	55	-126175.4	5379.4	8660.8	0	0	0	2014	11	8	14	56	52.6	4.9	1
168	-6.69	106.690002	10	-54435.6	70628.2	-36339.2	0	0	0	2014	11	24	20	18	5.3	2.1	1
169	-7.42	106.68	18	-55496.8	-10103.3	-28339.2	0	0	0	2015	1	8	3	30	32.5	3.5	1
170	-6.95	106.379997	19	-88664.3	41874.6	-27339.2	0	0	0	2015	1	21	6	43	15.7	3.1	1
171	-6.87	106.690002	10	-54425.2	50721.8	-36339.2	0	0	0	2015	2	6	1	22	13.7	3.3	1
172	-6.69	106.510002	10	-74324.3	70628.2	-36339.2	0	0	0	2015	2	9	6	55	15.6	2.8	1
173	-6.96	106.260002	117	-101918	40768.6	70660.8	0	0	0	2015	3	12	15	16	51.4	4	1
176	-7.11	106.230003	99	-105214.6	24179.9	52660.8	0	0	0	2015	3	16	10	3	50.5	3.8	1
177	-6.93	106.68	10	-55526.6	44086.4	-36339.2	0	0	0	2015	5	3	16	35	3.6	3.1	1
178	-7.09	106.629997	94	-61039.5	26391.8	47660.8	0	0	0	2015	5	28	6	55	13.2	3.7	1
179	-7.28	106.610001	83	-63234.9	5379.4	36660.8	0	0	0	2015	6	21	4	40	19.9	3	1
180	-7.49	106.32	14	-95235.2	-17844.7	-32339.2	0	0	0	2015	7	12	15	50	50.7	3.3	1
181	-7.49	106.68	36	-55492.4	-17844.7	-10339.2	0	0	0	2015	9	16	4	58	31.7	3.4	1
182	-7.45	106.720001	33	-51078.8	-13421	-13339.2	0	0	0	2015	9	16	13	8	28.1	2.9	1
183	-7.35	106.07	20	-122853.4	-2361.9	-26339.2	0	0	0	2015	9	29	3	57	18.8	3.9	1
184	-7.5	106.43	51	-83090.6	-18950.6	4660.8	0	0	0	2015	10	6	1	43	46.3	4.7	1
185	-7.46	106.550003	28	-69846	-14526.9	-18339.2	0	0	0	2015	10	6	3	24	39.8	3	1
186	-7.5	106.330002	20	-94129.9	-18950.6	-26339.2	0	0	0	2015	10	15	2	58	16.5	3.4	1
187	-7.01	106.339996	73	-93076.8	35239	26660.8	0	0	0	2015	10	15	17	54	36.6	3.7	1
188	-6.99	106.68	122	-55523	37450.9	75660.8	0	0	0	2015	11	12	12	7	21.6	4.8	1
189	-7.15	106.529999	108	-72079.2	19756.3	61660.8	0	0	0	2015	11	16	16	31	36.8	3.1	1
190	-7.11	106.730003	91	-49993.3	24179.9	44660.8	0	0	0	2015	11	30	12	20	0.5	3.5	1
191	-6.71	106.660004	12	-57749.1	68416.4	-34339.2	0	0	0	2015	12	11	19	50	10.4	2.2	1
192	-7.5	106.599998	13	-64323.6	-18950.6	-33339.2	0	0	0	2015	12	14	8	37	12.9	3.3	1
193	-7.39	106.309998	50	-96350.1	-6785.5	3660.8	0	0	0	2015	12	22	1	10	43.6	3.2	1
194	-6.86	106.440002	17	-82043.9	51827.7	-29339.2	0	0	0	2016	1	4	9	11	22.7	2.6	1
195	-7.4	106.900002	18	-31208.2	-7891.5	-28339.2	0	0	0	2016	1	11	16	58	36.6	2.9	1
196	-6.61	106.309998	109	-96431.5	79475.5	62660.8	0	0	0	2016	1	14	9	57	10.2	3.3	1
197	-7.26	106.669998	80	-56611.1	7591.3	33660.8	0	0	0	2016	1	15	9	5	46.6	4.6	1
198	-6.81	106.93	32	-27914.1	57357.3	-14339.2	0	0	0	2016	1	18	23	1	59.9	3	1
199	-7.46	106.57	67	-67638.4	-14526.9	20660.8	0	0	0	2016	2	2	16	30	46.3	3.4	1
200	-7.45	106.760002	38	-46662.6	-13421	-8339.2	0	0	0	2016	2	13	10	38	45.7	2.8	1
201	-7.1	106.440002	10	-82022.6	25285.9	-36339.2	0	0	0	2016	2	17	14	30	54.6	2.5	1
202	-6.92	106.730003	87	-50003.6	45192.3	40660.8	0	0	0	2016	2	18	14	40	4.5	2.4	1
203	-6.89	106.059998	123	-124020	48510	76660.8	0	0	0	2016	3	6	11	50	30.6	4.2	1

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204	-6.8	106.5	17	-75420.7	58463.2	-29339.2	0	0	0	2016	3	6	18	10	28.9	2.7	1
205	-6.48	106.099998	150	-119653.1	93852.4	103660.8	0	0	0	2016	3	7	14	49	18.4	3.1	1
206	-7.23	106.809998	128	-41153.1	10909	81660.8	0	0	0	2016	3	13	23	27	42.2	3.3	1
207	-6.77	106.519997	147	-73213.8	61780.9	100660.8	0	0	0	2016	3	27	13	15	27.2	3.4	1
208	-6.89	106.220001	17	-106344.6	48510	-29339.2	0	0	0	2016	4	5	21	35	24.8	2.6	1
209	-6.67	106.459999	180	-79851	72840	133660.8	0	0	0	2016	4	12	9	56	19.3	3.8	1
210	-6.67	106.650002	10	-58856.7	72840	-36339.2	0	0	0	2016	4	17	4	53	27.1	3	1
211	-7.13	106.980003	12	-22382.1	21968.1	-34339.2	0	0	0	2016	4	19	5	24	38.7	2.9	1
212	-6.79	106.470001	151	-78735.8	59569.1	104660.8	0	0	0	2016	4	21	2	43	55.9	3.6	1
213	-7.48	106.709999	11	-52181.3	-16738.8	-35339.2	0	0	0	2016	4	22	12	6	30.8	3.5	1
214	-6.95	106.279999	16	-99710.3	41874.6	-30339.2	0	0	0	2016	5	2	18	14	32.9	2.7	1
215	-6.92	106.309998	104	-96399.7	45192.3	57660.8	0	0	0	2016	5	12	5	26	35.8	3.6	1
216	-7.01	106.349998	103	-91972	35239	56660.8	0	0	0	2016	5	12	5	26	36.7	3.4	1
217	-6.74	106.669998	10	-56643	65098.7	-36339.2	0	0	0	2016	6	5	22	42	1.2	2.7	1
218	-6.77	106.690002	10	-54431	61780.9	-36339.2	0	0	0	2016	6	14	15	15	33.1	2.3	1
219	-6.82	106.239998	115	-104143.4	56251.4	68660.8	0	0	0	2016	6	24	9	18	39.7	3.9	1
220	-7.48	106.769997	49	-45557.7	-16738.8	2660.8	0	0	0	2016	7	20	1	13	17.2	2.8	1
221	-7.49	106.160004	10	-112898.1	-17844.7	-36339.2	0	0	0	2016	7	25	2	0	54.3	3	1
222	-7.29	106.150002	97	-114027.7	4273.6	50660.8	0	0	0	2016	7	30	7	20	9.6	3.3	1
223	-6.73	106.690002	10	-54433.3	66204.6	-36339.2	0	0	0	2016	8	2	4	1	33.1	3.1	1
224	-6.86	107.75	26	62674.8	51827.7	-20339.2	0	0	0	2010	1	31	17	49	21	2.8	1
225	-6.96	107.849998	10	73714	40768.6	-36339.2	0	0	0	2010	2	6	21	13	44	3.3	1
226	-6.73	108.010002	242	91410.6	66204.6	195660.8	0	0	0	2010	4	6	7	36	44	3	1
227	-6.79	107.739998	35	61574.5	59569.1	-11339.2	0	0	0	2010	4	10	8	4	2	2.9	1
229	-6.41	107.410004	51	25126.5	101593.8	4660.8	0	0	0	2010	5	1	18	49	2	3	1
230	-6.81	107.080002	26	-11342.2	57357.3	-20339.2	0	0	0	2010	5	29	7	37	3	3	1
231	-6.87	107.029999	10	-16865.4	50721.8	-36339.2	0	0	0	2010	6	5	15	28	46	2.9	1
232	-6.12	107.739998	323	61617.4	133665.2	276660.8	0	0	0	2010	7	5	4	12	46	3.8	1
233	-6.95	108.379997	10	132259.4	41874.6	-36339.2	0	0	0	2010	8	2	12	1	38	3.2	1
234	-6.44	107.830002	261	71544.5	98276	214660.8	0	0	0	2010	10	2	6	29	50	3.6	1
235	-6.57	107.220001	10	4125.8	83899.1	-36339.2	0	0	0	2010	11	8	23	20	48	3.5	1
236	-6.86	107.059998	10	-13551.5	51827.7	-36339.2	0	0	0	2010	11	28	17	42	28	3.5	1
237	-6.73	107.389999	21	22907.8	66204.6	-25339.2	0	0	0	2010	12	6	13	15	30	2.8	1
238	-6.84	107.75	26	62676.2	54039.5	-20339.2	0	0	0	2010	12	11	15	38	8	3	1
239	-6.97	107.370003	32	20693.1	39662.7	-14339.2	0	0	0	2011	1	1	2	10	41	3.3	1
240	-6.92	107.709999	38	58252.1	45192.3	-8339.2	0	0	0	2011	1	24	3	46	21	2.8	1
241	-6.9	107.230003	46	5229.3	47404.1	-339.2	0	0	0	2011	2	15	13	52	37	3.1	1
242	-6.72	108.07	253	98040.6	67310.5	206660.8	0	0	0	2011	2	22	17	13	36.1	4.6	1
243	-6.9	107.089996	163	-10237	47404.1	116660.8	0	0	0	2011	2	26	6	29	35.8	4.9	1
244	-6.32	107.68	373	54973	111546.9	326660.8	0	0	0	2011	3	19	14	21	39.8	3.3	1
246	-6.76	108.019997	10	92511.9	62886.8	-36339.2	0	0	0	2011	4	4	1	27	41.9	2.9	1
247	-6.92	108.449997	10	139996.2	45192.3	-36339.2	0	0	0	2011	4	14	20	33	9.8	2.3	1
248	-6.87	107.129997	28	-5818.4	50721.8	-18339.2	0	0	0	2011	4	29	10	0	5.7	2.9	1
249	-6.48	107.300003	13	12967.7	93852.4	-33339.2	0	0	0	2011	6	5	0	45	42.3	3.5	1
250	-6.73	107.260002	200	8544.7	66204.6	153660.8	0	0	0	2011	6	21	22	43	9.5	4.7	1
251	-6.89	107.790001	23	67091.7	48510	-23339.2	0	0	0	2011	7	21	22	46	46.8	3	1
252	-6.51	107.010002	93	-19081.7	90534.6	46660.8	0	0	0	2011	8	11	4	46	32.4	3.3	1
253	-6.92	107.519997	10	37263.4	45192.3	-36339.2	0	0	0	2011	8	28	9	5	59.2	3.3	1
254	-6.55	107.099998	364	-9135.5	86111	317660.8	0	0	0	2011	8	30	9	55	58.2	4.7	1
255	-6.75	107.349998	11	18487.8	63992.8	-35339.2	0	0	0	2011	9	3	17	49	1.3	2.8	1
256	-6.83	107.779999	23	65991	55145.5	-23339.2	0	0	0	2011	10	7	3	32	19.9	3.1	1
257	-6.93	107.720001	34	59356.3	44086.4	-12339.2	0	0	0	2011	10	25	13	8	36.4	3.3	1
258	-6.34	107.870003	81	75973.4	109335.1	34660.8	0	0	0	2011	11	17	18	52	18.5	3.5	1
261	-6.82	107.07	38	-12447.1	56251.4	-8339.2	0	0	0	2011	12	28	18	33	58.4	3.2	1
262	-6.19	107.529999	157	38397.6	125923.8	110660.8	0	0	0	2012	2	24	21	2	43.6	3.1	1
263	-6.59	108.300003	10	123470.4	81687.3	-36339.2	0	0	0	2012	4	17	17	41	2.2	2.2	1
264	-6.78	107	29	-20181.3	60675	-17339.2	0	0	0	2012	5	14	15	39	35.2	3.5	1
265	-6.15	107.370003	311	20710.9	130347.4	264660.8	0	0	0	2012	6	8	7	4	22.7	4.7	1
266	-6.91	108.440002	10	138893.7	46298.2	-36339.2	0	0	0	2012	7	22	12	2	17.7	2.6	1
267	-6.89	107.449997	140	29531.8	48510	93660.8	0	0	0	2012	11	1	14	12	1.6	5.7	1
268	-6.6	107.879997	285	77057.2	80581.4	238660.8	0	0	0	2012	11	24	0	34	52.1	3.5	1
269	-6.83	107.160004	151	-2503.6	55145.5	104660.8	0	0	0	2013	1	7	15	46	52.4	3.1	1
270	-6.95	107.120003	125	-6921.9	41874.6	78660.8	0	0	0	2013	1	15	14	47	54.3	3.6	1
271	-6.76	107.650002	10	51633.2	62886.8	-36339.2	0	0	0	2013	5	29	12	39	4.3	4.6	1
272	-6.38	108.209999	10	113549.5	104911.5	-36339.2	0	0	0	2013	10	10	21	16	13.1	3.9	1
273	-6.25	107.620003	10	48344.6	119288.3	-36339.2	0	0	0	2013	10	13	15	45	37.7	3.5	1

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274	-7	107.120003	136	-6921.5	36345	89660.8	0	0	0	2013	12	19	16	41	48.1	4.5	1
275	-6.6	107.18	10	-294.6	80581.4	-36339.2	0	0	0	2014	4	12	2	55	21.1	3.7	1
276	-6.59	107.18	10	-294.6	81687.3	-36339.2	0	0	0	2014	4	12	16	14	44.8	3.2	1
277	-6.33	107.980003	287	88133	110441	240660.8	0	0	0	2014	8	18	19	47	46.3	4	1
278	-6.83	107.029999	161	-16866.1	55145.5	114660.8	0	0	0	2014	10	17	9	26	0.3	5.2	1
279	-6.85	107.889999	13	78141.7	52933.7	-33339.2	0	0	0	2015	2	14	5	57	50.6	3.4	1
280	-6.29	107.949997	296	84819.7	114864.7	249660.8	0	0	0	2015	3	10	0	59	12.1	4.2	1
281	-6.6	107.440002	48	28436.5	80581.4	1660.8	0	0	0	2015	3	12	10	12	2.3	3.2	1
282	-6.79	108.410004	10	135597.2	59569.1	-36339.2	0	0	0	2015	6	30	22	1	34.4	3.2	1
283	-6.85	108	10	90293.9	52933.7	-36339.2	0	0	0	2015	7	5	1	23	56.3	3.6	1
284	-6.76	107.769997	10	64890.8	62886.8	-36339.2	0	0	0	2015	8	8	19	51	13.7	3.2	1
285	-6.76	107.760002	10	63786.6	62886.8	-36339.2	0	0	0	2015	8	9	2	37	51.3	3.4	1
286	-6.91	108.300003	10	123428.4	46298.2	-36339.2	0	0	0	2015	8	17	8	29	17.6	3.3	1
287	-6.66	107.769997	10	64897.7	73946	-36339.2	0	0	0	2015	11	30	3	1	24.4	2.6	1
288	-6.84	108.379997	235	132275	54039.5	188660.8	0	0	0	2016	1	25	12	54	11.1	3.8	1
289	-6.62	107.400002	10	24015.7	78369.6	-36339.2	0	0	0	2016	3	3	17	20	22.2	2.5	1
290	-6.82	107.129997	10	-5818.7	56251.4	-36339.2	0	0	0	2016	3	18	9	54	5.7	2.7	1
291	-6.74	107.959999	10	85884.9	65098.7	-36339.2	0	0	0	2016	5	10	2	22	35.5	2.9	1
292	-6.54	107.970001	10	87008.4	87216.9	-36339.2	0	0	0	2016	5	10	4	43	2.3	2.6	1
293	-7.24	108.209999	10	113445.2	9803.1	-36339.2	0	0	0	2010	1	10	2	36	47	2.7	1
294	-7.97	107.389999	32	22876.3	-70928.4	-14339.2	0	0	0	2010	1	15	10	18	58	2.9	1
295	-7.03	107.199997	117	1914.2	33027.2	70660.8	0	0	0	2010	1	15	21	22	47	3.3	1
296	-7.74	107.290001	14	11846	-45492.4	-32339.2	0	0	0	2010	1	19	6	38	56	4.2	1
297	-7.96	107.300003	24	12946.6	-69822.5	-22339.2	0	0	0	2010	1	21	6	46	48	3.5	1
298	-7.89	107.370003	49	20671.9	-62081.1	2660.8	0	0	0	2010	1	23	6	54	22	3.2	1
299	-7.9	107.290001	27	11843.9	-63187	-19339.2	0	0	0	2010	1	23	14	30	34	4	1
300	-7.78	107.940002	10	83579.7	-49916.1	-36339.2	0	0	0	2010	1	24	2	57	48	2.5	1
302	-7.3	107.559998	68	41664.8	3167.6	21660.8	0	0	0	2010	1	25	4	22	8	2.6	1
303	-7.24	107.739998	10	61544.4	9803.1	-36339.2	0	0	0	2010	1	25	15	51	11	2.4	1
305	-7.83	107.300003	29	12948.6	-55445.6	-17339.2	0	0	0	2010	1	28	3	49	57	3.3	1
306	-7.96	107.349998	32	18463	-69822.5	-14339.2	0	0	0	2010	1	29	16	44	32	2.9	1
307	-7.38	108.129997	42	104594.7	-5679.7	-4339.2	0	0	0	2010	1	29	19	57	39	2.7	1
308	-7.88	107.300003	31	12947.8	-60975.2	-15339.2	0	0	0	2010	2	5	14	2	6	4	1
309	-7.8	107.309998	32	14052	-52127.9	-14339.2	0	0	0	2010	2	5	14	10	22	3.3	1
310	-7.18	107.550003	33	40566.6	16438.6	-13339.2	0	0	0	2010	2	5	16	31	20	2.2	1
311	-7.15	107.309998	114	14062.2	19756.3	67660.8	0	0	0	2010	2	6	9	23	22	2.9	1
312	-7.82	107.419998	47	26190.8	-54339.8	660.8	0	0	0	2010	2	13	14	34	56	2.6	1
313	-7.9	107.239998	35	6326.3	-63187	-11339.2	0	0	0	2010	2	15	4	11	14	2.9	1
314	-7.96	108.379997	42	132110.2	-69822.5	-4339.2	0	0	0	2010	2	22	13	2	23	4.4	1
315	-7.7	107.32	36	15157.5	-41068.8	-10339.2	0	0	0	2010	2	23	19	40	38	2.7	1
316	-7.44	107.529999	58	38346.4	-12315.1	11660.8	0	0	0	2010	2	25	5	20	11	2.9	1
317	-7.93	107.300003	40	12947.1	-66504.7	-6339.2	0	0	0	2010	2	25	8	44	2	2.7	1
318	-7.79	107.360001	24	19570.4	-51022	-22339.2	0	0	0	2010	2	26	7	25	3	2.9	1
319	-7.35	107.720001	10	59329.1	-2361.9	-36339.2	0	0	0	2010	2	26	21	2	0	3.6	1
320	-8	107.389999	10	22875.5	-74246.1	-36339.2	0	0	0	2010	2	28	7	58	43	4	1
321	-7.77	107.449997	44	29503	-48810.2	-2339.2	0	0	0	2010	2	28	12	22	4	3.3	1
322	-7.05	107.010002	10	-19070.7	30815.4	-36339.2	0	0	0	2010	3	2	6	40	0	3	1
323	-7.97	107.139999	10	-4707.7	-70928.4	-36339.2	0	0	0	2010	3	11	9	55	45	2.8	1
324	-8	107.339996	32	17358.6	-74246.1	-14339.2	0	0	0	2010	3	11	10	4	0	2.5	1
325	-7.99	107.379997	22	21772.2	-73140.2	-24339.2	0	0	0	2010	3	15	5	49	38	4	1
326	-7.84	107.550003	10	40536.6	-56551.6	-36339.2	0	0	0	2010	3	16	19	7	28	2.6	1
327	-8	107.379997	14	21772	-74246.1	-32339.2	0	0	0	2010	3	23	4	51	12	3.2	1
328	-7.2	107.519997	59	37252	14226.8	12660.8	0	0	0	2010	3	25	21	35	19	2.7	1
329	-7.21	107.699997	66	57129.2	13120.8	19660.8	0	0	0	2010	3	25	22	21	36	2.4	1
330	-7.95	107.379997	30	21773.2	-68716.6	-16339.2	0	0	0	2010	3	26	14	35	18	2.7	1
331	-7.2	107.550003	32	40565.7	14226.8	-14339.2	0	0	0	2010	3	27	17	6	37	2.5	1
333	-7.15	107.709999	42	58237.5	19756.3	-4339.2	0	0	0	2010	4	2	15	27	48	2.9	1
334	-7.2	107.830002	91	71486.5	14226.8	44660.8	0	0	0	2010	4	10	1	8	53	2.9	1
335	-7.97	107.099998	10	-9121.2	-70928.4	-36339.2	0	0	0	2010	4	11	19	48	17	3.3	1
336	-7.28	107.559998	64	41665.7	5379.4	17660.8	0	0	0	2010	4	16	14	1	35	3	1
337	-7.13	107.970001	10	86953.5	21968.1	-36339.2	0	0	0	2010	4	16	19	31	44	2.3	1
338	-7.47	107.870003	144	75881.1	-15632.8	97660.8	0	0	0	2010	4	17	13	29	59	2.6	1
339	-7.02	107.449997	36	29527.6	34133.2	-10339.2	0	0	0	2010	4	19	22	7	52	2.7	1
340	-7.94	107.040001	18	-15741.6	-67610.7	-28339.2	0	0	0	2010	4	20	0	45	30	3.3	1
341	-7.15	107.620003	41	48298.5	19756.3	-5339.2	0	0	0	2010	4	21	23	20	37	2.8	1
342	-7.96	107.040001	19	-15741.3	-69822.5	-27339.2	0	0	0	2010	4	23	15	56	16	2.9	1

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343	-7.35	107.599998	64	46079.1	-2361.9	17660.8	0	0	0	2010	4	24	10	57	32	3	1
344	-7.82	107.32	26	15155.5	-54339.8	-20339.2	0	0	0	2010	4	26	21	44	20	2.7	1
345	-7.99	107.309998	39	14048.9	-73140.2	-7339.2	0	0	0	2010	4	28	6	54	6	3.1	1
346	-7.11	107.57	131	42778.2	24179.9	84660.8	0	0	0	2010	5	3	22	27	35	2.6	1
347	-7.7	107.419998	74	26194.4	-41068.8	27660.8	0	0	0	2010	5	4	1	55	18	3.1	1
348	-7.97	107.790001	43	67010.9	-70928.4	-3339.2	0	0	0	2010	5	15	16	51	14	3.1	1
349	-7.95	107.32	37	15153.2	-68716.6	-9339.2	0	0	0	2010	5	18	12	13	19	2.9	1
350	-7.98	107.279999	38	10739.2	-72034.3	-8339.2	0	0	0	2010	5	18	13	2	13	3.5	1
351	-7.5	108.099998	117	101269	-18950.6	70660.8	0	0	0	2010	5	18	22	23	36	2.9	1
352	-7.35	107.82	10	70370.2	-2361.9	-36339.2	0	0	0	2010	5	26	3	49	29	3.3	1
353	-7.93	107.360001	40	19567.3	-66504.7	-6339.2	0	0	0	2010	6	3	14	13	15	3	1
354	-7.37	107.029999	53	-16856.2	-4573.7	6660.8	0	0	0	2010	6	5	23	56	53	2.9	1
355	-7.38	107.580002	113	43869.8	-5679.7	66660.8	0	0	0	2010	6	6	7	24	2	3.1	1
356	-7.99	107.339996	10	17358.8	-73140.2	-36339.2	0	0	0	2010	6	12	14	12	53	3	1
357	-7.01	107.290001	35	11855.6	35239	-11339.2	0	0	0	2010	6	15	0	51	43	2.7	1
358	-7.04	108.199997	232	112365.3	31921.3	185660.8	0	0	0	2010	6	15	18	13	14	4.3	1
359	-7.92	107.370003	36	20671.2	-65398.9	-10339.2	0	0	0	2010	6	19	0	39	56	3.3	1
360	-7.76	107.309998	31	14052.6	-47704.3	-15339.2	0	0	0	2010	6	22	4	25	10	2.9	1
361	-7.97	107.309998	37	14049.3	-70928.4	-9339.2	0	0	0	2010	7	4	11	42	31	3.1	1
362	-7.84	107.07	33	-12433	-56551.6	-13339.2	0	0	0	2010	7	4	12	2	29	3.4	1
363	-8	107.339996	23	17358.6	-74246.1	-23339.2	0	0	0	2010	7	6	0	48	55	3.6	1
364	-7.82	107.080002	33	-11329.5	-54339.8	-13339.2	0	0	0	2010	7	6	17	58	56	2.8	1
365	-7.27	107.18	67	-294.4	6485.4	20660.8	0	0	0	2010	7	9	7	12	17	3.3	1
367	-7.23	107.620003	10	48294.3	10909	-36339.2	0	0	0	2010	7	13	6	52	49	2.9	1
368	-7.2	107.639999	14	50504.1	14226.8	-32339.2	0	0	0	2010	7	13	7	15	20	2.6	1
369	-7.35	107.650002	10	51600.2	-2361.9	-36339.2	0	0	0	2010	7	14	8	10	50	2.9	1
370	-8	107.360001	35	19565.7	-74246.1	-11339.2	0	0	0	2010	7	19	23	53	3	4.1	1
371	-7.24	107.730003	10	60440.8	9803.1	-36339.2	0	0	0	2010	7	23	17	59	12	3.1	1
372	-7.22	107.800003	10	68172.1	12015	-36339.2	0	0	0	2010	7	23	17	59	12	3.2	1
373	-7.88	107.419998	10	26189	-60975.2	-36339.2	0	0	0	2010	7	28	11	51	29	3.2	1
374	-7.99	107.32	41	15152.5	-73140.2	-5339.2	0	0	0	2010	8	2	9	13	49	3.3	1
375	-7.66	107.629997	96	49374.3	-36645.1	49660.8	0	0	0	2010	8	9	23	50	51	2.9	1
376	-7.6	107.080002	61	-11332.3	-30009.7	14660.8	0	0	0	2010	8	10	0	3	1	2.6	1
377	-7.96	107.07	26	-12431.3	-69822.5	-20339.2	0	0	0	2010	8	11	19	32	58	3.2	1
378	-7.89	107.040001	25	-15742.5	-62081.1	-21339.2	0	0	0	2010	8	12	14	42	45	3.2	1
379	-8	107.870003	23	75835.3	-74246.1	-23339.2	0	0	0	2010	8	20	2	4	37	3.5	1
380	-7.87	108.330002	81	126607	-59869.3	34660.8	0	0	0	2010	8	31	7	28	23	4.2	1
381	-7.33	107.620003	30	48289	-150.1	-16339.2	0	0	0	2010	9	13	18	51	0	2.5	1
382	-7.98	107.059998	27	-13534.6	-72034.3	-19339.2	0	0	0	2010	9	16	5	9	10	4.2	1
383	-7.86	107.059998	41	-13536.5	-58763.4	-5339.2	0	0	0	2010	9	17	20	42	16	3.5	1
384	-7.16	107.370003	102	20688.8	18650.4	55660.8	0	0	0	2010	9	24	3	45	27	3.2	1
385	-7.16	107.540001	10	39462.9	18650.4	-36339.2	0	0	0	2010	9	24	19	52	38	3.2	1
386	-7.86	107.43	27	27293.3	-58763.4	-19339.2	0	0	0	2010	10	17	23	52	3	3.8	1
387	-7.34	107.669998	10	53808.7	-1256	-36339.2	0	0	0	2010	10	27	14	49	1	4.4	1
388	-7.89	107.230003	22	5223.5	-62081.1	-24339.2	0	0	0	2010	10	30	15	8	25	3.9	1
389	-7.86	107.050003	39	-14639.4	-58763.4	-7339.2	0	0	0	2010	11	2	10	21	7	3.5	1
390	-7.31	107.57	10	42768.8	2061.7	-36339.2	0	0	0	2010	11	6	2	59	48	3	1
391	-7.97	107.190002	56	809.5	-70928.4	9660.8	0	0	0	2010	11	9	12	39	0	5.2	1
392	-7.99	107.260002	17	8532.8	-73140.2	-29339.2	0	0	0	2010	11	14	14	36	28	3.7	1
393	-7.22	107.800003	16	68172.1	12015	-30339.2	0	0	0	2010	11	16	6	6	20	3	1
394	-7.92	107.360001	28	19567.5	-65398.9	-18339.2	0	0	0	2010	11	20	8	0	35	3.6	1
395	-7.75	107.07	47	-12434.3	-46598.4	660.8	0	0	0	2010	11	22	10	31	16	3.6	1
396	-7.87	107.970001	48	86881.4	-59869.3	1660.8	0	0	0	2010	11	22	23	37	29	3.4	1
397	-7.12	107.709999	15	58239.4	23074.1	-31339.2	0	0	0	2010	11	24	4	42	1	2.9	1
399	-7.34	107.519997	10	37246.3	-1256	-36339.2	0	0	0	2010	12	9	11	58	48	4.1	1
401	-7.39	107.669998	12	53805.7	-6785.5	-34339.2	0	0	0	2010	12	16	18	53	24	3.9	1
402	-7.89	107.230003	23	5223.5	-62081.1	-23339.2	0	0	0	2010	12	17	8	14	58	4.3	1
403	-7.8	107.410004	21	25088.4	-52127.9	-25339.2	0	0	0	2010	12	18	1	37	37	2.6	1
404	-7.96	107.330002	27	16256.6	-69822.5	-19339.2	0	0	0	2010	12	27	22	40	50	2.9	1
406	-7.24	107.440002	10	28416.9	9803.1	-36339.2	0	0	0	2010	12	28	6	58	43	3.4	1
407	-7.5	107.650002	41	51591.5	-18950.6	-5339.2	0	0	0	2011	1	5	18	21	9	2.9	1
408	-7.86	107.370003	85	20672.6	-58763.4	38660.8	0	0	0	2011	1	7	6	27	28	3	1
409	-7.54	107.440002	63	28407.4	-23374.2	16660.8	0	0	0	2011	1	9	14	9	31	3.5	1
410	-7.39	107.470001	64	31724.3	-6785.5	17660.8	0	0	0	2011	1	25	6	41	30	3.9	1
411	-7.91	107.93	37	82463.6	-64292.9	-9339.2	0	0	0	2011	2	2	1	20	11	3.7	1
412	-7.46	107.510002	14	36137.9	-14526.9	-32339.2	0	0	0	2011	2	12	3	17	3	3.7	1

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413	-7.91	107.309998	32	14050.2	-64292.9	-14339.2	0	0	0	2011	2	14	14	7	22	4	1
414	-7.64	107.440002	26	28404.2	-34433.3	-20339.2	0	0	0	2011	2	17	3	45	51	2.9	1
415	-7.49	107.610001	10	47176.2	-17844.7	-36339.2	0	0	0	2011	2	17	13	28	39	3.7	1
416	-7.56	107.57	15	42756.8	-25586	-31339.2	0	0	0	2011	2	17	13	55	41	3.1	1
417	-7.88	107.25	26	7430.1	-60975.2	-20339.2	0	0	0	2011	2	19	1	51	35.7	3.9	1
418	-7.91	107.410004	40	25085.3	-64292.9	-6339.2	0	0	0	2011	2	20	16	12	56.3	4	1
419	-7.96	107.449997	10	29496.6	-69822.5	-36339.2	0	0	0	2011	3	4	6	44	59.3	3.4	1
420	-7.69	107.400002	39	23987.6	-39962.9	-7339.2	0	0	0	2011	3	15	16	3	14.9	2.8	1
421	-7.42	107.660004	16	52700.4	-10103.3	-30339.2	0	0	0	2011	3	22	22	31	18.2	3.1	1
422	-7.5	107.639999	44	50487.3	-18950.6	-2339.2	0	0	0	2011	3	23	2	10	10.3	2.9	1
423	-7.8	107.309998	27	14052	-52127.9	-19339.2	0	0	0	2011	3	25	5	52	1.6	3.8	1
424	-7.84	108.339996	84	127714.3	-56551.6	37660.8	0	0	0	2011	4	4	15	14	15.6	4.3	1
425	-7.23	108.410004	21	135532.6	10909	-25339.2	0	0	0	2011	4	13	10	19	44.2	2.5	1
426	-7.41	107.68	13	54908.8	-8997.4	-33339.2	0	0	0	2011	4	17	10	26	8.8	3.6	1
428	-7.07	107.309998	29	14063.4	28603.6	-17339.2	0	0	0	2011	4	22	23	21	59.1	3.1	1
429	-7.95	107.900002	96	79149.8	-68716.6	49660.8	0	0	0	2011	5	3	20	46	26.8	3.1	1
430	-7.76	107.269997	25	9638	-47704.3	-21339.2	0	0	0	2011	5	4	12	31	38.6	4.1	1
431	-7.82	107.410004	45	25087.9	-54339.8	-1339.2	0	0	0	2011	5	18	6	11	50.8	3.5	1
432	-7.1	108.209999	10	113462.6	25285.9	-36339.2	0	0	0	2011	5	20	4	17	15.9	2.9	1
433	-7.2	107.160004	95	-2502.6	14226.8	48660.8	0	0	0	2011	5	25	3	45	33.3	3.2	1
434	-7.97	107.419998	35	26186.3	-70928.4	-11339.2	0	0	0	2011	6	27	23	25	51.3	2.9	1
435	-7.96	107.93	39	82458.8	-69822.5	-7339.2	0	0	0	2011	7	18	6	25	0.9	3	1
436	-7.49	107.660004	23	52696.3	-17844.7	-23339.2	0	0	0	2011	7	21	7	59	14.2	2.9	1
438	-7.9	107.43	31	27292.1	-63187	-15339.2	0	0	0	2011	8	7	9	13	16.5	3.7	1
439	-7.6	107.269997	30	9639.8	-30009.7	-16339.2	0	0	0	2011	8	7	21	29	19.7	2.6	1
440	-7.86	107.449997	31	29500	-58763.4	-15339.2	0	0	0	2011	8	23	4	49	58.8	3.1	1
441	-7.44	107.629997	19	49386.5	-12315.1	-27339.2	0	0	0	2011	8	31	21	4	32.5	2.9	1
442	-7.78	107.419998	22	26192	-49916.1	-24339.2	0	0	0	2011	9	3	15	51	49.8	2.8	1
443	-7.79	107.220001	56	4120.3	-51022	9660.8	0	0	0	2011	9	5	2	36	24.1	3.8	1
444	-7.93	107.389999	41	22877.4	-66504.7	-5339.2	0	0	0	2011	10	5	10	18	8.7	3.5	1
445	-7.22	107.620003	10	48294.8	12015	-36339.2	0	0	0	2011	10	6	0	46	1.4	4	1
446	-7.93	107.370003	35	20670.9	-66504.7	-11339.2	0	0	0	2011	10	10	17	10	8.9	2.4	1
447	-7.64	107.360001	36	19573.8	-34433.3	-10339.2	0	0	0	2011	10	11	13	7	31.4	3	1
448	-7.55	107.519997	20	37237.5	-24480.2	-26339.2	0	0	0	2011	10	20	20	25	18.2	2.5	1
449	-7.69	107.07	41	-12435.1	-39962.9	-5339.2	0	0	0	2011	10	21	19	5	42.5	3.3	1
451	-7.45	107.5	69	35034.1	-13421	22660.8	0	0	0	2011	10	25	13	59	0.4	3.2	1
452	-7.95	108.029999	34	93493.5	-68716.6	-12339.2	0	0	0	2011	10	30	18	59	23.5	2.7	1
453	-7.82	107.290001	29	11844.9	-54339.8	-17339.2	0	0	0	2011	10	31	0	25	9.9	4.3	1
454	-7.21	107.040001	91	-15754.6	13120.8	44660.8	0	0	0	2011	11	2	13	2	25.6	3.4	1
455	-7.1	107.57	33	42778.6	25285.9	-13339.2	0	0	0	2011	11	3	9	4	52.9	3.1	1
456	-7.52	107.5	10	35031.3	-21162.4	-36339.2	0	0	0	2011	11	8	11	24	4.6	2.7	1
457	-7.98	107.370003	33	20669.7	-72034.3	-13339.2	0	0	0	2011	11	8	15	21	34.5	3.1	1
458	-7.36	107.559998	11	41662	-3467.8	-35339.2	0	0	0	2011	11	9	2	9	1.2	3.3	1
459	-7.89	107.349998	31	18464.5	-62081.1	-15339.2	0	0	0	2011	11	14	13	21	26.3	3	1
460	-7.89	107.769997	49	64809.7	-62081.1	2660.8	0	0	0	2011	11	25	0	20	59.4	3	1
461	-7.97	107.330002	21	16256.4	-70928.4	-25339.2	0	0	0	2011	11	27	4	18	1.1	3.3	1
462	-7.64	107.489998	67	33922.6	-34433.3	20660.8	0	0	0	2011	11	29	10	27	58.1	2.7	1
463	-7.47	107.559998	16	41656.9	-15632.8	-30339.2	0	0	0	2011	12	1	4	53	18.2	2.8	1
464	-7.81	107.290001	30	11845.1	-53233.8	-16339.2	0	0	0	2011	12	5	15	51	46.8	2.9	1
465	-7.76	107.300003	23	12949.6	-47704.3	-23339.2	0	0	0	2011	12	9	21	59	5.4	2.8	1
466	-7.66	107.360001	32	19573.3	-36645.1	-14339.2	0	0	0	2011	12	13	10	58	57.6	2.8	1
467	-7.92	107.910004	53	80256.1	-65398.9	6660.8	0	0	0	2011	12	14	3	12	38.2	3.6	1
468	-7.9	107.230003	17	5223.4	-63187	-29339.2	0	0	0	2011	12	16	11	4	26.8	3.1	1
469	-7.89	107.029999	10	-16846.2	-62081.1	-36339.2	0	0	0	2011	12	20	22	46	36.1	3.6	1
470	-7.94	107.279999	28	10739.7	-67610.7	-18339.2	0	0	0	2011	12	23	16	36	52.2	3.1	1
471	-7.59	107.480003	81	32821.2	-28903.8	34660.8	0	0	0	2011	12	24	15	50	48.9	2.9	1
472	-7.98	107.300003	30	12946.3	-72034.3	-16339.2	0	0	0	2011	12	27	13	15	49.4	3.8	1
473	-7.69	107.110001	26	-8020.2	-39962.9	-20339.2	0	0	0	2011	12	27	22	54	18.2	3.5	1
475	-7.62	107.379997	38	21781.5	-32221.5	-8339.2	0	0	0	2011	12	29	11	36	44.1	3.1	1
476	-7.01	107.300003	39	12960.4	35239	-7339.2	0	0	0	2012	1	1	12	24	4.7	3.2	1
477	-7.88	107.360001	31	19568.4	-60975.2	-15339.2	0	0	0	2012	1	11	22	54	46.3	3.8	1
478	-7.08	108.209999	10	113465.1	27497.7	-36339.2	0	0	0	2012	2	7	18	16	4.9	3.1	1
479	-7.34	107.550003	10	40559.4	-1256	-36339.2	0	0	0	2012	2	26	14	14	17.4	3.9	1
480	-7.24	107.610001	12	47189.2	9803.1	-34339.2	0	0	0	2012	2	26	15	8	4.2	3.1	1
481	-7.17	107.669998	10	53818.7	17544.5	-36339.2	0	0	0	2012	2	29	21	55	53.2	3.2	1
482	-7.24	107.620003	10	48293.8	9803.1	-36339.2	0	0	0	2012	3	7	12	50	44.8	3.4	1

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483	-7.36	107.839996	144	72577.3	-3467.8	97660.8	0	0	0	2012	3	9	8	26	43.3	3.6	1
484	-7.53	107.480003	18	32823.5	-22268.3	-28339.2	0	0	0	2012	3	13	14	31	1.9	3	1
485	-7.91	107.010002	13	-19052.4	-64292.9	-33339.2	0	0	0	2012	3	19	19	36	56.9	3	1
486	-7.96	107.410004	13	25083.8	-69822.5	-33339.2	0	0	0	2012	3	22	10	43	31.9	3.4	1
487	-7.98	107.25	18	7429.3	-72034.3	-28339.2	0	0	0	2012	3	28	1	51	31.8	4.1	1
488	-7.96	107.339996	32	17359.4	-69822.5	-14339.2	0	0	0	2012	4	14	23	56	32.6	3.9	1
491	-7.35	107.449997	10	29516.9	-2361.9	-36339.2	0	0	0	2012	5	3	14	39	15.4	2.9	1
493	-7.32	107.489998	10	33934.7	955.8	-36339.2	0	0	0	2012	5	3	18	9	6.5	2.8	1
494	-7.05	108.389999	24	133349.8	30815.4	-22339.2	0	0	0	2012	5	14	0	31	22.3	2.7	1
495	-7.93	107.300003	31	12947.1	-66504.7	-15339.2	0	0	0	2012	5	16	8	25	18.3	3.5	1
496	-7.03	107.209999	10	3019	33027.2	-36339.2	0	0	0	2012	5	29	22	59	14.3	3.4	1
497	-7.3	107.360001	143	19581.2	3167.6	96660.8	0	0	0	2012	6	11	21	7	43.5	3.6	1
498	-7.87	107.239998	29	6326.5	-59869.3	-17339.2	0	0	0	2012	6	15	22	53	5.6	3.7	1
499	-8	107.639999	38	50458.6	-74246.1	-8339.2	0	0	0	2012	6	20	13	9	4.7	4.3	1
500	-7.77	107.099998	56	-9123.3	-48810.2	9660.8	0	0	0	2012	6	27	4	55	29.5	5.1	1
501	-7.95	107.139999	17	-4707.8	-68716.6	-29339.2	0	0	0	2012	7	7	0	27	29.1	3.8	1
502	-7.93	107.279999	20	10739.8	-66504.7	-26339.2	0	0	0	2012	7	16	20	42	49.2	3.3	1
503	-7.99	107.230003	18	5222.9	-73140.2	-28339.2	0	0	0	2012	7	23	19	32	26.4	3.9	1
504	-7.87	107.269997	30	9636.8	-59869.3	-16339.2	0	0	0	2012	7	23	20	0	4.9	3.9	1
505	-7.88	107.830002	10	71431.8	-60975.2	-36339.2	0	0	0	2012	7	27	9	40	26.8	3.8	1
506	-7.13	107.510002	173	36151.1	21968.1	126660.8	0	0	0	2012	8	10	7	31	52.9	3.1	1
507	-7.75	107.080002	28	-11330.4	-46598.4	-18339.2	0	0	0	2012	8	31	23	37	15.5	3.6	1
508	-7.51	107.550003	10	40551.7	-20056.5	-36339.2	0	0	0	2012	9	6	21	13	10.4	3.9	1
509	-7.89	107.290001	17	11844	-62081.1	-29339.2	0	0	0	2012	9	22	2	48	22.7	3.9	1
510	-7.85	107.269997	30	9637	-57657.5	-16339.2	0	0	0	2012	10	14	0	14	24.5	4.2	1
511	-7.39	108.410004	10	135508.6	-6785.5	-36339.2	0	0	0	2012	11	4	8	59	9.4	2.9	1
512	-7.13	108.059998	305	96892.7	21968.1	258660.8	0	0	0	2012	11	12	18	28	40.4	3.1	1
513	-7.9	107.059998	23	-13535.8	-63187	-23339.2	0	0	0	2012	11	14	6	26	35.6	3.6	1
514	-7.85	107.82	127	70330.6	-57657.5	80660.8	0	0	0	2012	11	20	4	21	53.8	3.2	1
515	-7.21	107.18	123	-294.4	13120.8	76660.8	0	0	0	2012	12	15	8	45	49.9	4.8	1
516	-7.82	107.690002	74	55987.1	-54339.8	27660.8	0	0	0	2012	12	21	17	16	42.1	3.4	1
517	-7.84	107.300003	26	12948.4	-56551.6	-20339.2	0	0	0	2012	12	30	12	36	9.3	3.9	1
518	-7.98	107.339996	10	17359	-72034.3	-36339.2	0	0	0	2013	1	1	11	55	35.8	4.4	1
519	-7.8	107.589996	10	44952	-52127.9	-36339.2	0	0	0	2013	1	13	13	24	11.6	3.3	1
520	-7.55	107.610001	87	47173	-24480.2	40660.8	0	0	0	2013	1	31	0	16	23.3	2.7	1
521	-7.46	108.25	238	117833.7	-14526.9	191660.8	0	0	0	2013	2	5	1	5	11.7	3.1	1
523	-7.42	107.07	145	-12438.9	-10103.3	98660.8	0	0	0	2013	2	26	14	6	1.9	5.4	1
524	-7.64	107.209999	26	3017	-34433.3	-20339.2	0	0	0	2013	3	3	20	55	38.9	3.2	1
526	-7.98	108.040001	30	94593.8	-72034.3	-16339.2	0	0	0	2013	3	8	10	43	29.8	4.4	1
527	-7.81	107.07	10	-12433.4	-53233.8	-36339.2	0	0	0	2013	3	18	21	16	33.1	3.6	1
528	-7.91	107.120003	33	-6914.5	-64292.9	-13339.2	0	0	0	2013	3	27	13	35	43.2	3.4	1
529	-7.43	107.739998	129	61531.5	-11209.2	82660.8	0	0	0	2013	4	15	8	19	11.2	4.2	1
530	-7.34	107.629997	11	49392	-1256	-35339.2	0	0	0	2013	5	1	20	30	44.6	3	1
531	-7.35	107.589996	10	44974.8	-2361.9	-36339.2	0	0	0	2013	5	2	0	38	10.9	3.5	1
532	-7.39	107.559998	10	41660.6	-6785.5	-36339.2	0	0	0	2013	5	5	0	47	2.6	4	1
533	-7.33	107.709999	19	58226	-150.1	-27339.2	0	0	0	2013	5	6	1	26	25.4	3.1	1
534	-7.33	107.620003	10	48289	-150.1	-36339.2	0	0	0	2013	5	6	4	1	11.7	3.7	1
535	-7.38	107.559998	10	41661.1	-5679.7	-36339.2	0	0	0	2013	5	6	11	11	58.9	4	1
536	-7.36	107.559998	10	41662	-3467.8	-36339.2	0	0	0	2013	5	6	17	13	1.4	3.3	1
537	-7.31	107.589996	10	44976.8	2061.7	-36339.2	0	0	0	2013	5	6	17	55	3.2	3.3	1
538	-7.47	107.389999	17	22889.3	-15632.8	-29339.2	0	0	0	2013	5	7	10	12	0.2	3.3	1
539	-7.33	107.690002	17	56018	-150.1	-29339.2	0	0	0	2013	5	7	22	27	6.9	3	1
540	-7.36	107.589996	10	44974.3	-3467.8	-36339.2	0	0	0	2013	5	7	23	12	39.6	3.5	1
541	-7.26	107.739998	10	61543.1	7591.3	-36339.2	0	0	0	2013	5	9	10	49	54.7	3.4	1
542	-7.36	107.610001	12	47183	-3467.8	-34339.2	0	0	0	2013	5	10	0	35	3.2	3.8	1
543	-7.42	107.57	10	42763.5	-10103.3	-36339.2	0	0	0	2013	5	10	2	8	9.6	4.1	1
544	-7.37	107.580002	10	43870.3	-4573.7	-36339.2	0	0	0	2013	5	11	2	35	50.1	3.5	1
545	-7.37	107.690002	30	56015.6	-4573.7	-16339.2	0	0	0	2013	5	11	23	49	17.2	3.1	1
546	-7.83	107.019997	61	-17951.2	-55445.6	14660.8	0	0	0	2013	5	12	13	35	11.2	3.3	1
547	-7.44	107.540001	10	39450.6	-12315.1	-36339.2	0	0	0	2013	5	13	12	45	0.8	4	1
548	-7.29	107.800003	128	68166.9	4273.6	81660.8	0	0	0	2013	5	15	6	34	7.3	3.8	1
549	-7.39	107.529999	10	38348.5	-6785.5	-36339.2	0	0	0	2013	5	17	5	9	11.7	4	1
550	-7.39	107.559998	10	41660.6	-6785.5	-36339.2	0	0	0	2013	5	21	13	47	4.3	3.3	1
551	-7.43	107.550003	10	40555.4	-11209.2	-36339.2	0	0	0	2013	5	21	16	11	16.4	3.1	1
552	-7.37	107.589996	10	44973.8	-4573.7	-36339.2	0	0	0	2013	5	23	16	17	43.5	3.4	1
553	-7.39	107.580002	10	43869.3	-6785.5	-36339.2	0	0	0	2013	5	24	3	28	49.2	3.7	1

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554	-7.16	107.849998	25	73698	18650.4	-21339.2	0	0	0	2013	6	18	11	41	6.3	3.4	1
555	-7.93	107.309998	23	14049.9	-66504.7	-23339.2	0	0	0	2013	8	15	15	27	11.4	3.7	1
556	-7.86	108.059998	73	96813.5	-58763.4	26660.8	0	0	0	2013	9	23	13	41	32.8	4.4	1
557	-7.95	108.080002	10	99010.7	-68716.6	-36339.2	0	0	0	2013	10	11	6	14	33.1	3	1
558	-7.84	107.25	22	7430.5	-56551.6	-24339.2	0	0	0	2013	10	19	18	7	10.8	3	1
559	-7.89	107.739998	63	61499.4	-62081.1	16660.8	0	0	0	2013	10	23	4	11	47.4	3.7	1
560	-7.87	107.269997	27	9636.8	-59869.3	-19339.2	0	0	0	2013	10	23	11	14	20.8	4.3	1
561	-7.99	107.25	23	7429.2	-73140.2	-23339.2	0	0	0	2013	10	27	12	37	38.8	3.4	1
562	-7.22	107.790001	10	67067.6	12015	-36339.2	0	0	0	2013	11	4	4	41	43.9	3.8	1
563	-7.99	107.050003	10	-14637.2	-73140.2	-36339.2	0	0	0	2013	11	11	22	27	59.3	3.5	1
564	-7.91	108.339996	128	127704	-64292.9	81660.8	0	0	0	2013	11	22	4	24	55.2	4.1	1
565	-7.19	108.360001	152	130016.6	15332.7	105660.8	0	0	0	2013	11	24	19	58	16.4	4.9	1
566	-7.88	107.32	26	15154.4	-60975.2	-20339.2	0	0	0	2013	11	26	13	34	41.3	3.9	1
567	-7.54	108.389999	131	133277.7	-23374.2	84660.8	0	0	0	2013	12	13	1	16	50.3	5.1	1
568	-7.56	107.510002	77	36133.9	-25586	30660.8	0	0	0	2013	12	16	14	50	56.2	2.2	1
569	-7	107.120003	136	-6921.5	36345	89660.8	0	0	0	2013	12	19	16	41	48.1	4.5	1
570	-7.4	108.220001	36	114529.5	-7891.5	-10339.2	0	0	0	2014	1	3	7	46	47.3	2.8	1
571	-7.78	108.32	100	125516.2	-49916.1	53660.8	0	0	0	2014	1	3	19	22	44.7	4.6	1
572	-7.97	107.870003	26	75838	-70928.4	-20339.2	0	0	0	2014	1	11	7	10	44.6	2.9	1
573	-7.37	107.550003	20	40558.1	-4573.7	-26339.2	0	0	0	2014	1	14	6	45	38.9	2.5	1
574	-7.52	107.410004	70	25096.4	-21162.4	23660.8	0	0	0	2014	1	15	18	14	37.9	3.9	1
575	-7.61	108.360001	113	129955.8	-31115.6	66660.8	0	0	0	2014	1	16	0	7	11.3	3.1	1
576	-7.08	107.029999	76	-16861.5	27497.7	29660.8	0	0	0	2014	1	26	14	1	46.3	3.5	1
577	-7.96	107.940002	31	83562.4	-69822.5	-15339.2	0	0	0	2014	1	27	3	15	21.1	3.2	1
578	-7.17	107.32	10	15166.5	17544.5	-36339.2	0	0	0	2014	1	27	10	52	14.4	3.2	1
579	-7.21	108.300003	10	123388.2	13120.8	-36339.2	0	0	0	2014	2	3	17	22	37.8	3.2	1
580	-7.89	107.93	44	82465.5	-62081.1	-2339.2	0	0	0	2014	2	5	11	28	0.4	2.7	1
581	-7.81	107.120003	32	-6915.3	-53233.8	-14339.2	0	0	0	2014	2	17	17	30	10.5	2.6	1
582	-7.87	107.029999	21	-16846.6	-59869.3	-25339.2	0	0	0	2014	2	18	21	37	48.8	2.9	1
583	-7.05	108.18	238	110155.5	30815.4	191660.8	0	0	0	2014	2	26	2	36	55.4	4.6	1
584	-7.24	107.290001	156	11852.7	9803.1	109660.8	0	0	0	2014	2	28	5	20	41.5	3.8	1
585	-7.63	107.080002	38	-11332	-33327.4	-8339.2	0	0	0	2014	3	4	3	17	48.7	3.8	1
586	-7.5	107.120003	10	-6917.7	-18950.6	-36339.2	0	0	0	2014	3	11	23	43	44.5	3	1
587	-7.81	107.889999	94	78058.7	-53233.8	47660.8	0	0	0	2014	3	12	7	2	43.4	3.1	1
588	-7.78	107.160004	28	-2501	-49916.1	-18339.2	0	0	0	2014	3	28	20	56	43.6	3.1	1
589	-7.92	107.290001	10	11843.6	-65398.9	-36339.2	0	0	0	2014	4	9	18	22	41.6	4	1
590	-7.42	107.690002	10	56012.4	-10103.3	-36339.2	0	0	0	2014	4	30	18	0	42.1	3	1
591	-7.75	107.349998	31	18467.5	-46598.4	-15339.2	0	0	0	2014	5	1	19	35	13.4	3.1	1
592	-7.28	107.639999	10	50499.7	5379.4	-36339.2	0	0	0	2014	5	31	16	21	46.6	3.3	1
593	-7.88	107.269997	18	9636.7	-60975.2	-28339.2	0	0	0	2014	6	15	5	48	21.3	3.6	1
594	-7.91	107.269997	25	9636.4	-64292.9	-21339.2	0	0	0	2014	6	15	6	34	34.1	3.2	1
595	-7.97	107.129997	10	-5811.3	-70928.4	-36339.2	0	0	0	2014	6	15	15	29	10.4	2.4	1
596	-7.79	107.330002	24	16259.8	-51022	-22339.2	0	0	0	2014	6	27	19	23	25.7	4.3	1
597	-7.86	107.349998	37	18465.1	-58763.4	-9339.2	0	0	0	2014	7	5	17	16	39.9	3.2	1
598	-7.21	107.629997	10	49399	13120.8	-36339.2	0	0	0	2014	7	6	12	44	39.2	3	1
599	-7.27	107.620003	12	48292.2	6485.4	-34339.2	0	0	0	2014	7	6	12	55	53.6	3.2	1
600	-7.23	107.629997	10	49398	10909	-36339.2	0	0	0	2014	7	6	12	58	1.3	3	1
601	-7.26	107.589996	10	44979.2	7591.3	-36339.2	0	0	0	2014	7	6	13	10	39.9	3.1	1
605	-7.17	107.720001	10	59340.8	17544.5	-36339.2	0	0	0	2014	7	6	14	44	37.3	3.2	1
606	-7.32	107.589996	11	44976.3	955.8	-35339.2	0	0	0	2014	7	28	0	10	9.3	2.3	1
607	-7.21	107.769997	10	64859.3	13120.8	-36339.2	0	0	0	2014	8	14	18	2	45.7	3.2	1
608	-7.6	107.559998	10	41650.8	-30009.7	-36339.2	0	0	0	2014	8	14	21	9	52.2	2.8	1
609	-7.97	107.160004	28	-2500.5	-70928.4	-18339.2	0	0	0	2014	8	16	16	26	19.9	2.8	1
610	-7.28	107.699997	10	57124.8	5379.4	-36339.2	0	0	0	2014	8	16	20	12	17.2	3.4	1
611	-7.33	107.379997	10	21788.5	-150.1	-36339.2	0	0	0	2014	8	22	7	6	49.7	3	1
612	-7.88	107.769997	38	64810.4	-60975.2	-8339.2	0	0	0	2014	9	16	8	34	34.2	3	1
613	-7.88	107.239998	16	6326.4	-60975.2	-30339.2	0	0	0	2014	9	20	7	32	1.5	3.2	1
614	-7.86	107.25	21	7430.3	-58763.4	-25339.2	0	0	0	2014	9	29	17	26	27.3	3.1	1
615	-7.38	107.580002	10	43869.8	-5679.7	-36339.2	0	0	0	2014	10	2	6	48	30.6	3.6	1
616	-7.53	107.540001	10	39446.7	-22268.3	-36339.2	0	0	0	2014	10	2	11	53	49.2	3	1
617	-7.42	107.550003	10	40555.8	-10103.3	-36339.2	0	0	0	2014	10	8	5	46	45.9	4.3	1
618	-7.47	107.550003	10	40553.6	-15632.8	-36339.2	0	0	0	2014	10	9	17	47	51.2	2.8	1
619	-7.55	107.510002	10	36134.3	-24480.2	-36339.2	0	0	0	2014	10	10	13	8	4.1	3.7	1
620	-7.37	107.589996	10	44973.8	-4573.7	-36339.2	0	0	0	2014	10	21	8	2	51.6	3.6	1
621	-7.87	107.279999	26	10740.5	-59869.3	-20339.2	0	0	0	2014	11	5	21	41	19.3	4	1
622	-7.87	107.25	25	7430.2	-59869.3	-21339.2	0	0	0	2014	11	21	13	23	50.4	3.8	1

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623	-7.26	107.709999	10	58230.5	7591.3	-36339.2	0	0	0	2014	11	28	21	6	2.5	3.5	1
624	-7.99	107.809998	53	69215.6	-73140.2	6660.8	0	0	0	2014	12	15	10	53	14.4	3.9	1
625	-7.58	107.050003	78	-14644	-27797.9	31660.8	0	0	0	2014	12	26	14	8	41.3	5	1
626	-7.87	107.290001	25	11844.3	-59869.3	-21339.2	0	0	0	2015	1	12	9	20	28.5	3.5	1
627	-7.39	107.830002	150	71471.4	-6785.5	103660.8	0	0	0	2015	2	12	10	29	45.8	4.6	1
628	-7.92	107.029999	10	-16845.7	-65398.9	-36339.2	0	0	0	2015	2	26	11	54	22.5	3.5	1
629	-7.37	107.830002	64	71473	-4573.7	17660.8	0	0	0	2015	3	21	21	8	32.5	2.8	1
630	-7.1	107.660004	10	52719	25285.9	-36339.2	0	0	0	2015	3	28	10	25	24.6	3.3	1
631	-7.68	107.540001	10	39440	-38857	-36339.2	0	0	0	2015	5	13	11	20	32.9	3.1	1
632	-7.26	107.669998	10	53813.4	7591.3	-36339.2	0	0	0	2015	5	26	2	28	12.2	3.3	1
633	-7.81	107.300003	21	12948.9	-53233.8	-25339.2	0	0	0	2015	6	25	5	54	43.2	3	1
634	-7.23	107.349998	10	18478.2	10909	-36339.2	0	0	0	2015	7	1	18	38	29.3	2.8	1
635	-7.78	108.050003	89	95719.4	-49916.1	42660.8	0	0	0	2015	7	12	20	43	48.4	3.4	1
636	-7.69	107.360001	29	19572.7	-39962.9	-17339.2	0	0	0	2015	7	27	0	0	29.7	3.6	1
637	-7.61	107.620003	89	48273.8	-31115.6	42660.8	0	0	0	2015	9	13	7	10	0.3	3.8	1
638	-7.97	107.940002	36	83561.5	-70928.4	-10339.2	0	0	0	2015	9	24	0	1	53.8	2.5	1
639	-7.85	108.010002	42	91297.6	-57657.5	-4339.2	0	0	0	2015	9	24	0	3	18.1	2.4	1
640	-7.67	107.400002	27	23988.2	-37751.1	-19339.2	0	0	0	2015	9	30	16	37	22.7	2.4	1
641	-7.91	107.07	11	-12432	-64292.9	-35339.2	0	0	0	2015	9	30	22	47	6.8	2.9	1
642	-7.14	107.120003	11	-6920.5	20862.2	-35339.2	0	0	0	2015	10	5	15	57	56.1	2.4	1
643	-7.16	107.110001	15	-8024.9	18650.4	-31339.2	0	0	0	2015	10	5	18	6	46.9	2.4	1
644	-7.85	108.220001	55	114471.2	-57657.5	8660.8	0	0	0	2015	10	9	22	16	42.9	2.4	1
645	-7.54	108.410004	95	135485.9	-23374.2	48660.8	0	0	0	2015	10	18	0	42	30.6	2.9	1
646	-7.93	107.25	14	7429.7	-66504.7	-32339.2	0	0	0	2015	11	26	19	38	57.3	3.6	1
647	-7.38	107.849998	125	73680.1	-5679.7	78660.8	0	0	0	2015	12	7	8	35	53.4	3.6	1
648	-7.81	107.279999	33	10741.3	-53233.8	-13339.2	0	0	0	2015	12	21	4	46	11.1	3.3	1
649	-7.34	107.620003	11	48288.4	-1256	-35339.2	0	0	0	2015	12	28	7	46	55.7	3.1	1
650	-7.81	108.209999	80	113372.7	-53233.8	33660.8	0	0	0	2015	12	30	23	36	37.8	3.1	1
652	-7.18	107.82	13	70383.4	16438.6	-33339.2	0	0	0	2016	1	4	8	52	15.7	2.3	1
653	-7.91	107.389999	37	22877.9	-64292.9	-9339.2	0	0	0	2016	1	4	17	31	57.8	3.6	1
654	-7.97	107.410004	48	25083.5	-70928.4	1660.8	0	0	0	2016	1	29	5	56	12.2	3.6	1
655	-7.17	107.300003	23	12958.2	17544.5	-23339.2	0	0	0	2016	2	14	23	1	52.8	2.5	1
656	-7.37	107.019997	129	-17960.5	-4573.7	82660.8	0	0	0	2016	2	16	15	5	48.9	4.9	1
657	-7.99	107.07	21	-12430.9	-73140.2	-25339.2	0	0	0	2016	2	19	12	34	59.6	2.9	1
658	-7.51	107.849998	28	73669.4	-20056.5	-18339.2	0	0	0	2016	2	20	6	26	7.8	2.7	1
659	-7.28	107.629997	10	49395.2	5379.4	-36339.2	0	0	0	2016	2	23	21	43	0.9	2.3	1
660	-7.36	107.709999	10	58224	-3467.8	-36339.2	0	0	0	2016	2	23	23	53	31.2	4.2	1
661	-7.97	107.68	10	54873.9	-70928.4	-36339.2	0	0	0	2016	3	7	5	21	31.5	2.5	1
662	-7.93	107.260002	39	8533.4	-66504.7	-7339.2	0	0	0	2016	3	19	15	19	27.9	3.6	1
663	-7.88	107.220001	36	4119.8	-60975.2	-10339.2	0	0	0	2016	3	30	17	39	19.8	4.1	1
664	-7.86	107.239998	31	6326.6	-58763.4	-15339.2	0	0	0	2016	4	1	18	56	5.8	4	1
665	-7.18	108.379997	17	132226.3	16438.6	-29339.2	0	0	0	2016	4	1	22	55	58.1	2.7	1
666	-7.26	107.610001	10	47188.2	7591.3	-36339.2	0	0	0	2016	4	8	15	14	35.2	3.7	1
667	-7.22	107.57	10	42773	12015	-36339.2	0	0	0	2016	4	8	15	20	36.1	3.1	1
668	-7.17	107.550003	10	40567	17544.5	-36339.2	0	0	0	2016	4	8	15	28	48.6	3.1	1
669	-7.24	107.550003	10	40563.9	9803.1	-36339.2	0	0	0	2016	4	8	17	32	5.5	3.2	1
670	-7.24	107.550003	10	40563.9	9803.1	-36339.2	0	0	0	2016	4	8	17	49	5.9	2.6	1
671	-7.34	107.559998	10	41663	-1256	-36339.2	0	0	0	2016	4	8	19	15	34.1	3.8	1
672	-7.26	107.57	10	42771.1	7591.3	-36339.2	0	0	0	2016	4	8	21	1	5.2	2.1	1
673	-7.36	107.589996	10	44974.3	-3467.8	-36339.2	0	0	0	2016	4	11	2	30	33.7	3.2	1
674	-7.7	107.07	50	-12435	-41068.8	3660.8	0	0	0	2016	5	4	0	37	49.1	3.5	1
675	-7.84	107.360001	13	19569.3	-56551.6	-33339.2	0	0	0	2016	5	6	2	48	51.1	3.3	1
676	-7.19	107.559998	160	41669.9	15332.7	113660.8	0	0	0	2016	5	12	0	21	25.2	4.5	1
677	-7.11	107.080002	147	-11338.5	24179.9	100660.8	0	0	0	2016	5	19	16	50	29.4	2.5	1
678	-7.71	107.540001	71	39438.7	-42174.7	24660.8	0	0	0	2016	6	4	11	12	28.8	4.5	1
679	-7.68	107.690002	96	55996.1	-38857	49660.8	0	0	0	2016	7	1	9	49	37.9	3.3	1

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1. 6. Data **hypoDD.reloc**:

ID	Lat	Long	Depth	x	y	z	Ex	Ey	Ez	year	mon	day	hr	min	sec	mag	NCCP	NCCS	NCTP	NCTS	RCC	RCT	CID
1	-7.143941	106.423564	6.646	-83834.2	20426.3	-39693.3	6862.7	7933.3	6661.6	2010	1	10	5	46	54.73	3.6	0	0	386	134	0	0.886	1
2	-7.36073	106.64383	74.724	-59494	-3548.5	28385.1	7288.9	8694	10542.6	2010	2	5	21	48	21.92	3	0	0	351	189	0	0.695	1
3	-7.417783	106.63892	35.508	-60032.4	-9858.1	-10830	6600.4	6625.8	16275.3	2010	2	15	0	45	55.51	3	0	0	265	126	0	1.396	1
5	-6.645208	106.842709	68.749	-37564.5	75581.8	22409.4	11709.5	11898.4	13398.1	2010	2	20	11	57	2.45	3.1	0	0	264	30	0	0.632	1
6	-7.111262	106.181971	1.816	-110519.2	24040.4	-44522.1	6937.8	13498	7266.2	2010	2	27	0	5	33.74	3.6	0	0	268	47	0	0.579	1
7	-6.639467	106.875344	153.088	-33958.6	76216.7	106748.4	7958.3	12598.4	14900.5	2010	3	8	14	21	11.9	3.3	0	0	295	126	0	0.822	1
8	-7.213323	106.65029	86.036	-58790.4	12753.3	39696.3	7464.5	9216.9	9862.2	2010	3	27	2	55	20.48	3.6	0	0	452	191	0	0.897	1
9	-7.298476	106.131505	11.983	-116069	3336.2	-34356.6	9839.4	11260.8	8649.2	2010	4	4	3	51	39.67	3.9	0	0	386	110	0	0.845	1
10	-7.176579	106.598275	138.088	-64537	16816.9	91748.7	9433.8	12519.1	11034.6	2010	4	6	20	29	42.33	2.6	0	0	290	116	0	1.372	1
11	-6.817286	106.518366	12.405	-73390.3	56551.6	-33933	7395.1	8807.3	10069.7	2010	4	11	17	45	51.86	3	0	0	290	48	0	0.581	1
12	-7.439439	106.08301	21.833	-121404.8	-12253.1	-24506	8436	9616	21613.1	2010	4	13	18	17	51.71	4.2	0	0	407	130	0	0.593	1
13	-7.16032	106.127739	29.52	-116502.5	18615	-16818.8	6514.6	10783.2	16171.9	2010	4	29	18	27	21.85	2.7	0	0	251	125	0	0.414	1
14	-7.368779	106.103966	24.068	-119100.5	-4438.7	-22270.7	12378	13541.4	16939.2	2010	4	30	23	56	36.1	4	0	0	337	80	0	0.593	1
15	-6.934064	107.020254	134.14	-17940.7	43636.9	87800.5	8354.6	11690	8995	2010	5	3	9	28	30.4	3.9	0	0	469	129	0	3.321	1
16	-6.8614	106.762778	33.034	-46386.1	51672.9	-13305.1	8278.1	10494.3	14451	2010	5	9	19	22	31.76	2.3	0	0	193	105	0	0.46	1
17	-7.307644	106.425245	44.318	-83633.4	2322.3	-2021	6038.1	8368.2	9179.8	2010	5	11	1	55	57.39	3.3	0	0	505	114	0	1.197	1
18	-7.473945	106.368264	38.455	-89908.6	-16069.2	-7884.4	8757.3	8524.3	14112.8	2010	5	11	18	10	35.56	2.6	0	0	248	138	0	0.498	1
19	-7.49763	106.841497	11.687	-37663.5	-18688.5	-34651.4	7001.6	6670.3	9670.9	2010	5	13	3	50	3.01	2.8	0	0	149	62	0	0.295	1
20	-6.477447	106.865405	29.186	-35062.8	94134.7	-17152.4	10870.4	13776.9	21569.8	2010	5	14	2	52	17.57	3.2	0	0	246	69	0	0.922	1
21	-7.130524	106.692475	94.617	-54136.7	21910.1	48277.7	8243.8	10287.6	8956.8	2010	5	18	22	0	59.46	3.6	0	0	578	161	0	0.946	1
22	-6.704096	106.245127	123.043	-103589.5	69069.3	76703.6	9874	12977.6	9642.3	2010	5	20	15	14	26.66	4.5	0	0	517	130	0	0.765	1
23	-7.395142	106.792771	65.069	-43047.5	-7354.3	18730.9	7194.7	8511.9	9443.2	2010	5	29	3	6	33.13	2.9	0	0	217	119	0	0.423	1
24	-7.060281	106.551121	8.91	-69753.2	29678.5	-37427.8	7036.6	7760.2	6352.3	2010	5	31	12	17	32.11	3.4	0	0	348	99	0	0.702	1
25	-7.419826	106.778793	79.494	-44589.6	-10084.1	33155.1	7450.5	9296	10465.8	2010	6	3	9	47	23.62	3.1	0	0	258	121	0	1.751	1
26	-7.202819	106.508041	73.458	-74499.8	13915	27119.2	6936.7	9089.3	10395.5	2010	6	6	21	35	2.45	2.8	0	0	373	158	0	0.796	1
27	-7.219255	106.2408	63.707	-104009.8	12097.3	17367.5	6487.1	10020.7	10524	2010	6	16	15	5	35.65	2.8	0	0	263	121	0	0.56	1
28	-7.291958	106.32951	149.341	-94206	4057	103002.1	11056.2	14042.3	13316.4	2010	6	18	2	3	38.69	3.3	0	0	211	27	0	1.975	1
29	-7.140381	106.745511	41.339	-48278.9	20820.1	-4999.7	8630.3	7996.7	9707.2	2010	6	25	21	54	0.9	2.6	0	0	276	65	0	0.725	1
30	-7.143989	106.822468	132.559	-39779.7	20421	86220.2	8577.2	11654.8	10459.3	2010	6	30	14	16	14.11	4.1	0	0	646	0	0	0.937	1
31	-7.166854	106.887829	4.285	-32560.6	17892.4	-42054.6	8926.8	11070.6	11206.5	2010	7	3	21	33	27.01	2.9	0	0	276	98	0	0.624	1
32	-7.121237	106.881944	3.362	-33212.2	22937.3	-42976.1	7118.2	8080.7	8842.3	2010	7	7	12	55	15.29	3.3	0	0	279	105	0	0.674	1
33	-7.071856	106.530462	14.059	-72034.1	28398.3	-32279	6600.8	7711.6	6782.8	2010	8	8	10	22	17.97	3.6	0	0	299	46	0	0.503	1
34	-7.193885	106.488245	4.063	-76686.7	14903.1	-42275	7521	7783.4	7387.5	2010	8	8	10	42	24.15	3.6	0	0	319	35	0	0.662	1
35	-7.052283	106.365803	116.081	-90222.2	30562.9	69741.8	10276.4	13778	10752.3	2010	8	23	1	51	27.63	3.1	0	0	185	104	0	0.384	1
36	-6.788851	106.657431	8.359	-58028.4	59696.2	-37979.6	6453.7	8722.6	13634.4	2010	9	7	6	0	10.93	3.8	0	0	408	52	0	0.774	1
37	-7.148919	106.627977	14.584	-61258.7	19875.9	-31753.8	10668.8	10096.5	11299.6	2010	9	13	18	35	44.77	3	0	0	252	99	0	0.515	1
38	-6.898087	106.265371	123.553	-101331.7	47615.7	77214.1	9121.4	12237.3	10813.6	2010	9	25	6	23	4.21	4.5	0	0	421	110	0	0.637	1
39	-7.441262	106.423982	71.157	-83760.4	-12454.6	24817.3	7854.9	8518	15177.9	2010	9	26	9	53	27.76	3.7	0	0	353	20	0	0.626	1
40	-6.497513	106.405584	101.522	-85879.1	91915.6	55182.6	9602.1	12854.2	7046.1	2010	10	8	17	5	19.01	3.4	0	0	306	134	0	0.56	1

41	-7.244415	106.17497	59.792	-111276.2	9314.9	13452.5	8833.5	8682.8	9050.7	2010	10	18	10	18	45.91	3.5	0	0	273	122	0	0.42	1
42	-6.943789	106.271534	86.82	-100646	42561.4	40480.3	8253	10387	10385.3	2010	10	29	18	55	50.52	3.6	0	0	411	156	0	0.691	1
43	-7.51088	106.485859	19.945	-76923.1	-20153.8	-26394.1	6593.6	8725	12017.4	2010	11	1	10	57	50.24	3.7	0	0	369	110	0	0.76	1
44	-7.413944	106.695138	61.478	-53825.9	-9433.6	15138.5	6799.6	7826.3	10878	2010	11	13	0	50	50.42	3.2	0	0	289	138	0	0.63	1
45	-7.465967	106.088589	28.819	-120785.3	-15186.8	-17519.6	7760.3	10464.5	17341.2	2010	11	20	18	42	18.04	4.8	0	0	425	131	0	0.643	1
46	-7.112103	106.836664	77.285	-38213.3	23947.4	30945.3	8241.4	10613.9	8647.1	2010	12	3	21	3	15.26	2.4	0	0	229	69	0	0.433	1
48	-6.236657	106.0358	60.525	-126779.9	120764	14185.5	33895.4	40425.7	64106.7	2011	1	8	8	11	27.32	3.6	0	0	62	29	0	0.263	1
49	-7.26975	106.908863	87.129	-30234.3	6513	40789.5	7392.7	9964.3	9940.1	2011	1	13	5	36	37.28	4.3	0	0	369	97	0	0.577	1
50	-6.658072	106.443606	152.972	-81663.4	74159.2	106633.1	10348.1	13980.2	9483.9	2011	2	2	22	37	46.56	3.3	0	0	281	80	0	0.689	1
51	-7.537982	106.042016	44.549	-125916.8	-23151	-1790	9901.5	13297.4	21215	2011	2	25	3	45	1.65	4	0	0	259	92	0	0.512	1
52	-7.509048	106.052589	15.874	-124753.7	-19951.2	-30465.7	7837.7	11523.8	19600.8	2011	3	15	16	30	13.32	4.1	0	0	328	127	0	0.726	1
53	-6.326422	106.08196	107.069	-121666.1	110836.7	60730.2	15493.3	19194.2	14843.2	2011	4	14	12	56	32.9	3.1	0	0	109	58	0	0.77	1
54	-6.762445	106.617313	2.63	-62462.5	62616.4	-43708.7	6800.5	7588.5	9339.6	2011	4	22	21	21	16.54	2.8	0	0	278	61	0	0.513	1
55	-6.767827	106.652206	4.732	-58607.1	62021.2	-41606.1	13827.6	15614.4	31483.8	2011	5	1	18	37	6.64	3	0	0	274	56	0	0.529	1
56	-6.61934	106.553327	172.019	-69542.5	78442.6	125680.2	10940	14813.4	9424	2011	5	12	19	14	27.48	3.9	0	0	302	73	0	0.707	1
57	-7.128271	106.180756	43.751	-110651.4	22159.4	-2588.3	8576.7	12104.8	11066.1	2011	5	15	10	57	33.34	3.3	0	0	258	0	0	0.309	1
58	-6.834297	106.657916	12.267	-57972.1	54670.2	-34071.4	8628.9	9264	11510.5	2011	5	30	4	44	31.43	3	0	0	254	36	0	0.403	1
59	-6.937711	106.328933	10.173	-94306.2	43233.6	-36165.6	6886.8	8836.6	9301.4	2011	6	2	20	40	49.63	3.4	0	0	269	31	0	0.44	1
60	-6.958804	106.573816	7.032	-67254	40900.8	-39306.4	7037.7	8481.1	7604.6	2011	6	6	9	4	45.42	3.1	0	0	281	56	0	0.574	1
61	-6.930746	106.343193	11.945	-92731.7	44003.9	-34393.3	7272.3	9895.8	8280.4	2011	6	11	3	23	3.16	3.1	0	0	194	76	0	0.48	1
62	-6.943698	106.34637	12.175	-92379.5	42571.5	-34162.8	5899.2	7579.7	8854	2011	6	11	20	23	10.17	4.9	0	0	363	0	0	0.665	1
63	-6.981467	106.284731	10.678	-99184.2	38394.6	-35660.5	7447.4	8280.1	7077.3	2011	6	12	2	21	41.5	4.3	0	0	428	65	0	0.967	1
64	-6.994599	106.300456	6.389	-97445.8	36942.3	-39949.6	6989.8	7397.3	5098.7	2011	6	15	3	47	19.52	4	0	0	340	97	0	1.259	1
65	-6.928145	106.324387	8.93	-94809.3	44291.5	-37408.2	7732.3	10276.1	5960.4	2011	6	15	4	26	36.36	3.4	0	0	165	64	0	0.935	1
66	-6.875802	106.326806	7.309	-94547.4	50080.1	-39029	8329.4	10280.9	7095.4	2011	6	15	7	32	12.02	2.9	0	0	206	78	0	0.305	1
67	-7.556498	106.052037	8.826	-124808	-25198.8	-37513.3	9985.8	11090.6	7233.2	2011	6	23	15	36	14.64	3.3	0	0	255	85	0	0.676	1
68	-7.338608	106.678662	102.206	-55649.6	-1102.1	55867.1	7778.8	9824.9	10459.5	2011	7	3	9	1	23.58	4.4	0	0	498	223	0	0.879	1
69	-6.935107	106.32299	6.253	-94962.9	43521.6	-40086.6	6329.4	8988.2	7171.7	2011	7	11	0	5	3.05	3.4	0	0	338	143	0	0.696	1
70	-7.189261	106.347986	78.354	-92176.2	15414.4	32014.5	7550.3	9061.1	10426.4	2011	7	17	10	59	9.98	5.2	0	0	535	204	0	0.677	1
72	-6.679575	106.710874	25.9	-52130.1	71781.1	-20438.4	12883.5	15379.7	31020.9	2011	8	3	16	51	50.67	2.7	0	0	202	116	0	1.136	1
73	-7.533887	106.667993	45.799	-56815.2	-22698.2	-540.6	10632.7	10135.6	26837	2011	9	3	14	8	52.56	3.7	0	0	281	42	0	0.445	1
74	-7.017162	106.406439	168.008	-85737.2	34447	121669.9	10354.1	14302.8	11540.7	2011	9	10	15	44	31.57	3.8	0	0	324	107	0	0.801	1
75	-7.450816	106.695552	4.863	-53777.9	-13511.2	-41475.3	9820.4	12390.8	9301.1	2011	10	20	16	40	37.97	2.5	0	0	238	90	0	0.654	1
76	-6.538905	106.278243	163.616	-99947.9	87338	117276.7	10511.2	14405	8741.7	2011	11	6	4	41	57.03	5	0	0	283	101	0	0.718	1
77	-6.961594	106.128841	120.496	-116406	40592.4	74157.1	9263.4	12357.6	11742.3	2011	11	16	19	32	2.34	3.4	0	0	241	148	0	0.532	1
78	-7.19912	106.319491	4.119	-95322	14324.1	-42219.7	6483	10043.2	4585.6	2011	11	21	7	33	48.61	3	0	0	189	96	0	0.385	1
79	-7.485405	106.682736	40.199	-55190.7	-17336.5	-6140.3	6976.2	6802	14147.1	2011	11	25	13	46	48.19	3.4	0	0	214	124	0	0.529	1
80	-7.338506	106.494027	50.166	-76036	-1090.8	3826.6	11544.2	20894.6	20343.3	2011	12	24	13	4	49.02	2.8	0	0	149	106	0	0.329	1
81	-6.695297	106.737589	7.759	-49177.4	70042.5	-38579	10313.2	12598.9	12019.9	2012	1	4	21	28	38.31	3.3	0	0	176	39	0	0.523	1
82	-7.064967	106.829138	11.508	-39046.5	29160.2	-34830.5	6559.8	8741.7	12854.6	2012	1	10	0	37	13	3.3	0	0	197	91	0	0.517	1
83	-6.83064	106.820655	9.453	-39993.6	55074.7	-36886.7	13774.1	18294.3	28554.9	2012	1	17	4	9	36.41	3	0	0	233	21	0	0.675	1
84	-6.302105	105.925584	6.328	-138954.4	113526	-40010.2	35721.9	38291.9	38064.5	2012	1	23	14	39	27.21	3	0	0	75	34	0	0.329	1
85	-7.172186	106.315833	39.486	-95728.9	17302.8	-6853.2	18607	20029.1	19864.4	2012	2	7	1	54	0.56	3	0	0	139	89	0	0.347	1

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86	-7.238866	106.178759	97.14	-110858.5	9928.5	50800.9	7967.5	9517	11286.2	2012	2	7	7	11	40.14	4	0	0	242	64	0	0.431	1
87	-7.325774	106.646205	2.571	-59234.1	317.3	-43767.3	8805.1	7567.1	8869.7	2012	2	12	11	13	11.66	3.7	0	0	118	85	0	0.424	1
88	-6.583074	106.52746	182.301	-72403.6	82453.3	135962.2	10985.8	14909.3	9466.9	2012	2	23	3	8	44.46	4.1	0	0	454	73	0	1.839	1
89	-6.890065	106.239357	140.868	-104206.4	48502.9	94529	14004	16025.1	14437.5	2012	2	24	20	41	17.01	3.7	0	0	142	29	0	0.283	1
90	-6.912586	106.92824	10.646	-28105.5	46012.2	-35692.3	8486.6	10590	14158.8	2012	2	28	2	29	4.55	3	0	0	214	74	0	0.576	1
91	-6.794694	106.609883	25.594	-63281.2	59050	-20744.8	21074.4	22908.4	40803.6	2012	3	8	7	19	26.12	3.6	0	0	282	31	0	0.555	1
92	-7.384045	106.676292	97.971	-55908.4	-6127	51631.6	8943.5	11090.2	10052.1	2012	3	16	21	40	20.96	4.1	0	0	502	145	0	1.23	1
93	-7.519421	106.4866	46.048	-76840.5	-21098.4	-291.4	7481	7896.9	12016.8	2012	3	31	19	39	40.09	3.2	0	0	222	87	0	0.388	1
94	-7.192124	106.602818	10.493	-64034.2	15097.8	-35846.3	9633	7522.8	11657.9	2012	4	1	9	57	41.59	3.2	0	0	228	112	0	0.578	1
95	-7.451094	106.457483	65.304	-80061	-13542	18964.7	7743.6	8587.7	11556.6	2012	4	6	10	2	59.12	3.6	0	0	267	94	0	0.43	1
96	-7.470315	106.46531	18.883	-79195.2	-15667.7	-27455.7	8054.2	8433.1	13108.1	2012	4	28	14	30	59.89	4.6	0	0	308	75	0	0.61	1
97	-6.8098	107.021594	63.158	-17795	57379.4	16818.9	10630.6	14019.5	14481	2012	5	14	15	39	35.93	3.5	0	0	230	0	0	1.073	1
98	-7.388976	106.156278	76.576	-113322.2	-6672.3	30236.9	8786.5	9668.9	13513.4	2012	5	20	13	19	35.89	4	0	0	337	108	0	0.778	1
99	-6.870691	106.916881	65.252	-29361.6	50645.4	18913.2	8819.3	13449.1	10341.3	2012	5	21	5	29	47.13	3.3	0	0	293	100	0	0.743	1
100	-7.104054	106.950063	103.228	-25689.4	24837.5	56889.2	7822.6	10582.8	9177.2	2012	7	8	6	57	8.71	3.5	0	0	367	35	0	0.571	1
101	-6.864253	106.02912	7.896	-127434.6	51357.4	-38442.3	10517.4	12349.7	6464.2	2012	7	25	10	28	51.44	3.1	0	0	185	44	0	0.561	1
102	-6.811186	106.518619	123.108	-73362.8	57226.1	76769.1	9580.2	13456	8874.8	2012	9	3	0	1	15.56	3.6	0	0	256	114	0	0.534	1
104	-7.481989	106.077507	16.898	-122006.6	-16958.7	-29441.2	10626	10802.9	17739	2012	9	9	15	58	6.37	4.2	0	0	358	90	0	1.087	1
105	-7.507966	105.993425	29.914	-131285.2	-19831.5	-16425.5	9331.1	11708.7	16900.2	2012	9	11	12	44	25.54	4.2	0	0	344	97	0	0.643	1
107	-6.394616	106.286993	158.117	-98995.8	103295	111777.9	10136.5	14904	8294.3	2012	9	26	7	10	51.24	3.5	0	0	195	79	0	0.376	1
108	-6.373731	106.181009	171.377	-110712.3	105604.7	125037.8	10720.6	15027.1	8225.7	2012	10	1	17	54	47.16	4.4	0	0	258	81	0	0.399	1
109	-7.457581	106.430855	37.455	-83000.2	-14259.5	-8884.5	18786.8	12742.4	42325.5	2012	10	11	18	52	52.13	3.8	0	0	327	94	0	0.648	1
110	-7.278045	106.726986	78.225	-50317.2	5595.7	31885.6	7567.9	9309.6	9744	2012	11	18	23	18	18.54	3.4	0	0	291	105	0	0.506	1
111	-7.291664	106.006798	29.154	-129840.1	4089.6	-17185.5	11191.4	13731.8	22314.2	2012	11	26	19	12	5.42	3.2	0	0	343	98	0	0.629	1
112	-6.744186	106.661511	6.311	-57580.4	64635.7	-40027.6	8653.1	8247.6	8524.2	2012	11	27	17	17	3.51	2.6	0	0	241	50	0	0.428	1
114	-6.757093	106.715487	5.926	-51616.1	63208.4	-40412.1	8530.3	8474.2	10949	2012	12	3	21	23	46.17	3.4	0	0	237	35	0	0.45	1
115	-7.067524	106.553936	5.974	-69441.9	28877.4	-40364.7	8544.6	7066.5	6478.6	2012	12	5	23	22	35.81	3.3	0	0	287	74	0	0.875	1
116	-6.615051	106.658663	14.347	-57903	78917	-31991.1	10734.2	13036.5	12740.1	2012	12	19	9	27	26.71	3.5	0	0	203	17	0	0.502	1
117	-6.718283	106.279308	142.122	-99811.3	67500.4	95783	10332	13714.6	9851.1	2013	3	6	21	2	54.85	4.6	0	0	331	112	0	0.488	1
118	-6.872123	106.8591	5.487	-35744.7	50487	-40852.1	14726	15359.4	18188.6	2013	3	27	23	3	7.9	3.4	0	0	202	33	0	0.482	1
119	-6.658457	106.484445	165.708	-77150.8	74116.6	119368.3	10937.9	15251.5	8605.2	2013	3	29	12	38	55.14	3.8	0	0	367	65	0	0.702	1
120	-7.559944	106.092409	20.422	-120350.8	-25579.8	-25917.6	7176	10118.8	13839.5	2013	5	2	19	31	9.69	3	0	0	186	100	0	0.609	1
121	-6.695217	106.689907	29.567	-54445.9	70051.2	-16771.2	12428.6	15261.4	24367.4	2013	5	14	12	58	38.99	3.7	0	0	183	48	0	0.501	1
122	-6.977488	106.965687	112.919	-23967.2	38834.6	66579.7	8259.6	11268	9129.1	2013	5	31	6	11	53.67	3.1	0	0	227	66	0	0.533	1
123	-6.209607	106.400386	22.433	-86479.4	123755.4	-23905.1	19257.1	17745.1	41203.9	2013	7	8	6	16	48.05	3.3	0	0	157	27	0	0.968	1
124	-7.377314	106.118421	46.293	-117503.5	-5382.6	-46.3	8349.1	8818.4	14291	2013	7	21	11	59	23.8	3.8	0	0	299	93	0	0.442	1
125	-7.451786	106.136034	33.868	-115549.2	-13618.6	-12471.5	8366.3	10419.1	18400.2	2013	7	21	12	50	21.12	4.4	0	0	385	73	0	0.517	1
126	-7.491679	106.297083	27.569	-97764.9	-18030.3	-18769.9	6995.9	8795.1	16580.4	2013	8	27	15	56	43.64	3.5	0	0	290	96	0	0.626	1
127	-7.429161	106.062731	19.19	-123645	-11116.4	-27148.8	8154	10274.7	13999.2	2013	10	13	17	37	33.76	4.1	0	0	190	45	0	0.558	1
128	-7.424161	106.120403	14.75	-117278.5	-10563.5	-31588.1	10177.3	10551.2	8576.9	2013	10	22	17	41	12.09	3.8	0	0	267	65	0	0.629	1
129	-6.431418	106.341349	156.89	-92984.5	99225.1	110550.3	10681	14627.3	8125.4	2013	10	23	6	36	31.84	3.7	0	0	300	63	0	0.437	1
130	-7.290022	106.467507	90.86	-78968.4	4271.1	44521.1	7945.6	9649	10491.9	2013	10	24	8	25	15.73	4.7	0	0	508	74	0	0.748	1
131	-7.286456	106.475425	102.327	-78094.5	4665.5	55987.8	8101.2	9911.7	11089.3	2013	10	28	20	59	34.34	3.5	0	0	274	94	0	0.615	1

132	-7.407824	106.356356	83.232	-91229.9	-8756.7	36892.7	7618	9352.9	11207.4	2013	11	11	0	6	43.8	4.1	0	0	336	126	0	0.805	1
133	-6.676354	106.478152	141.054	-77844.6	72137.3	94714.8	9877	13242.3	9377.5	2013	11	13	7	25	2.38	4.9	0	0	486	102	0	1.11	1
134	-6.646766	106.434746	163.525	-82643.3	75409.6	117186	10506.2	14495.5	8699.8	2013	12	12	19	28	27.94	4.7	0	0	468	134	0	1.055	1
135	-6.875526	106.839874	6.356	-37868.5	50110.7	-39982.4	10401.1	12502.4	17277.8	2013	12	18	14	14	29.46	4.3	0	0	389	145	0	0.857	1
136	-6.858978	106.706056	119.544	-52652.3	51940.8	73204.7	9056.5	11939.6	9232.4	2014	1	15	9	26	11.04	5	0	0	604	158	0	0.68	1
137	-7.451691	106.729156	87.722	-50067.9	-13608.1	41383.2	10072.1	12481.8	11844.2	2014	1	22	10	17	13.26	3	0	0	202	71	0	0.437	1
138	-6.784079	106.682145	8.078	-55298.3	60223.9	-38260.5	9275.2	8566.6	7471	2014	1	22	17	41	10.77	3.8	0	0	331	57	0	0.726	1
139	-6.775749	106.33323	141.729	-93847.8	61145.1	95390	10273.1	13400.2	10129.1	2014	1	30	3	34	41.23	4	0	0	404	111	0	0.802	1
140	-7.453931	106.399372	48.002	-86476.3	-13855.8	1662.5	11287.5	13239.9	16997.7	2014	2	15	3	53	16.25	3.6	0	0	271	165	0	0.657	1
141	-7.251119	106.391338	72.723	-87382.8	8573.4	26383.6	7155.8	8187.9	10467.5	2014	2	24	17	40	58.33	4.1	0	0	458	106	0	0.609	1
142	-6.748716	106.635505	8.782	-60453.4	64134.8	-37556	8026.1	10119.4	10874.1	2014	2	26	5	16	31.74	3	0	0	254	13	0	0.349	1
143	-7.335157	106.738926	110.206	-48995.8	-720.4	63866.3	8023.6	10244.2	10735.2	2014	3	2	1	23	26.7	3.8	0	0	432	118	0	0.778	1
144	-7.357402	107.026135	128.294	-17283	-3180.5	81954.8	8237.1	10890	10991.1	2014	3	6	14	46	44.58	3.7	0	0	407	127	0	0.629	1
145	-7.329591	106.49148	65.992	-76318	-104.8	19653.2	7084.7	8734.1	9825	2014	3	26	13	37	24.97	3.2	0	0	433	186	0	0.787	1
146	-7.415486	106.106441	34.729	-118821.1	-9604.1	-11609.8	9181.1	10073	16109.2	2014	4	4	19	24	7.97	4.4	0	0	275	75	0	0.49	1
147	-6.865614	106.855722	18.553	-36118.1	51206.9	-27786.1	9243.2	8492.6	12217.7	2014	4	8	23	59	0.22	2.2	0	0	169	69	0	0.418	1
148	-6.730664	106.659845	27.752	-57765.3	66131.2	-18587.6	9902	7680.2	10528.6	2014	4	9	0	4	30.02	2.6	0	0	163	88	0	0.412	1
149	-7.116459	106.426589	80.766	-83502.6	23465.6	34426.8	7462.8	9239.4	10414.1	2014	4	29	2	36	5.77	4.7	0	0	460	176	0	0.781	1
150	-7.432128	106.149238	45.642	-114094	-11444.6	-697.2	11524.8	12711.1	23576.5	2014	5	14	16	52	12.46	3.9	0	0	246	51	0	0.431	1
151	-7.456046	106.076392	13.214	-122133.2	-14089.7	-33125.1	12901	17596.5	14908	2014	5	30	17	53	21.9	4.9	0	0	278	49	0	0.546	1
152	-6.783227	106.58448	8.234	-66088.5	60318.2	-38103.8	8003.9	10731.3	8608.5	2014	6	7	0	7	20.59	4	0	0	165	0	0	0.348	1
153	-6.749243	106.94552	8.95	-26201.2	64076.5	-37388.6	11308.3	7690.9	8163.4	2014	6	21	15	29	49.46	2.5	0	0	120	48	0	0.438	1
154	-6.894363	106.396521	6.659	-86844.3	48027.5	-39679.1	6147.7	9125	8458.8	2014	7	24	6	5	32.66	3.3	0	0	209	111	0	1.099	1
155	-6.961777	106.76981	118.387	-45604.3	40572	72047.5	8308.7	11392.5	9147.3	2014	7	31	10	3	41.96	3.7	0	0	669	207	0	0.724	1
156	-6.768304	106.761573	17.701	-46523.8	61968.5	-28638.6	9016.5	8912.1	15400.9	2014	8	7	4	35	31.23	2.8	0	0	265	80	0	0.707	1
157	-7.207004	106.251729	99.517	-102804.3	13452.1	53177.6	8949.2	12388.8	12481.1	2014	8	25	11	0	28.66	3.1	0	0	307	101	0	0.467	1
158	-6.999544	106.703432	13.436	-52934.2	36395.4	-32903.4	11075.1	10243.4	12961.6	2014	8	27	17	13	5.96	3.1	0	0	315	125	0	0.613	1
159	-7.392125	106.013222	16.174	-129116.4	-7020.6	-30164.4	6837.6	10497	13433.3	2014	9	9	14	25	48.94	3.1	0	0	263	88	0	0.608	1
160	-6.861544	106.409032	10.898	-85465.1	51657	-35439.7	6639.7	8001.9	12305.1	2014	9	13	5	7	56.9	3.6	0	0	366	79	0	0.66	1
161	-6.867184	106.423847	10.666	-83828	51033.3	-35672.3	7086.9	8394.2	13397	2014	9	13	5	12	58	4	0	0	357	75	0	0.655	1
162	-6.88217	106.409001	17.277	-85466.7	49375.9	-29061.5	7092.2	9383	14279.5	2014	9	19	13	21	24.26	3.1	0	0	312	104	0	0.564	1
163	-7.065831	106.238669	119.879	-104262.5	29064.7	73540	10560.1	13281.1	11523.1	2014	9	24	16	2	23.94	2.9	0	0	335	106	0	0.655	1
165	-7.358684	106.972688	91.739	-23184.2	-3322.3	45400.1	7027.8	9510.3	10060.9	2014	10	15	20	30	51.97	3.4	0	0	435	128	0	0.763	1
166	-7.26303	106.242492	99.167	-103817.9	7256.2	52827.3	9287.1	11187.5	11795	2014	11	4	7	44	2.43	3.6	0	0	334	75	0	0.689	1
167	-7.427571	106.080539	20.815	-121679.2	-10940.6	-25524.5	9383.8	11515.6	23204.6	2014	11	8	14	56	54.18	4.9	0	0	487	79	0	0.596	1
168	-6.734668	106.696174	2.806	-53751.2	65688.3	-43532.3	8694.8	7929.4	9641.4	2014	11	24	20	18	4.29	2.1	0	0	160	69	0	0.39	1
169	-7.434528	106.690503	4.028	-54336.4	-11710	-42311.4	8474.5	10272.2	7264.6	2015	1	8	3	30	33.11	3.5	0	0	201	74	0	0.739	1
170	-7.071661	106.402762	28.26	-86138.3	28419.9	-18079.2	9674	14037.7	10585.5	2015	1	21	6	43	15.25	3.1	0	0	167	30	0	0.307	1
171	-6.890586	106.717057	8.226	-51435.3	48445.2	-38112.6	8233	8756.1	7301.9	2015	2	6	1	22	13.04	3.3	0	0	249	91	0	0.513	1
172	-6.705568	106.514852	19.924	-73787.3	68906.6	-26414.4	7219.2	7576.2	15638.3	2015	2	9	6	55	15.59	2.8	0	0	171	85	0	0.484	1
173	-6.971601	106.334906	123.676	-93643	39485.7	77336.6	9118.6	12286.8	11463.3	2015	3	12	15	16	51.43	4	0	0	394	80	0	0.701	1
176	-7.063392	106.341828	115.422	-92869.1	29334.4	69082.6	9092.3	11451.9	11882.9	2015	3	16	10	3	50.73	3.8	0	0	398	54	0	0.451	1
177	-6.982605	106.688853	18.956	-54545.6	38268.7	-27381.8	10913.1	7610.6	23569.4	2015	5	3	16	35	3.52	3.1	0	0	154	65	0	0.55	1

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178	-7.087306	106.684318	100.157	-55040.3	26689.7	53817.6	8538.2	10597.3	8313	2015	5	28	6	55	13.14	3.7	0	0	555	77	0	0.917	1
179	-7.239682	106.677965	95.928	-55732.7	9838.3	49588.5	8578.9	10175.5	9502.9	2015	6	21	4	40	20.27	3	0	0	322	33	0	0.485	1
180	-7.526382	106.321989	15.967	-95011.7	-21868.2	-30372.6	12057.4	13810.1	29104.4	2015	7	12	15	50	49.79	3.3	0	0	259	57	0	0.622	1
181	-7.467552	106.706856	56.841	-52529	-15362.2	10501.4	7634.4	8652.3	11057	2015	9	16	4	58	31.7	3.4	0	0	237	124	0	0.472	1
182	-7.47452	106.699491	51.955	-53341.6	-16132.7	5615.4	8295	9128.4	11714.5	2015	9	16	13	8	28.5	2.9	0	0	253	140	0	0.492	1
183	-7.406345	106.11206	38.794	-118201.9	-8593.1	-7545.6	7945.7	10336.8	16723	2015	9	29	3	57	18.31	3.9	0	0	364	66	0	0.547	1
184	-7.477932	106.515506	41.643	-73653	-16510.1	-4695.9	7825.6	7110.5	12842.9	2015	10	6	1	43	46.48	4.7	0	0	593	6	0	0.728	1
185	-7.406555	106.560665	52.025	-68673	-8616.4	5685.9	5966.3	7973.2	9941.7	2015	10	6	3	24	39.54	3	0	0	289	84	0	0.763	1
186	-7.517105	106.342074	31.631	-92795.4	-20842.3	-14708.6	7641.8	8354.2	16077.7	2015	10	15	2	58	16.2	3.4	0	0	350	43	0	0.501	1
187	-7.004849	106.420723	90.298	-84160.6	35808.8	43958.3	8102.8	10184.2	9941.6	2015	10	15	17	54	36.79	3.7	0	0	556	144	0	0.745	1
188	-7.056848	106.732555	112.763	-49714.4	30058.1	66424.1	8264	11343.7	9986.8	2015	11	12	12	7	20.42	4.8	0	0	705	120	0	0.605	1
189	-7.084758	106.649723	125.881	-58861.2	26971.5	79541.6	8452.1	11445.1	10264.2	2015	11	16	16	31	37.2	3.1	0	0	446	141	0	0.939	1
190	-7.049093	106.81019	104.231	-41140	30915.7	57892.2	7828.4	10561.7	8936.3	2015	11	30	12	20	0.61	3.5	0	0	542	69	0	0.65	1
191	-6.74939	106.66548	8.038	-57141.6	64060.3	-38301.3	7902.2	8497.2	9273.9	2015	12	11	19	50	9.66	2.2	0	0	197	22	0	0.328	1
192	-7.492848	106.637099	19.868	-60228.4	-18159.6	-26471.7	8544	8171.7	12165.4	2015	12	14	8	37	11.86	3.3	0	0	242	33	0	0.387	1
193	-7.326547	106.341003	74.077	-92933.4	231.7	27738.1	9344.3	10560.8	12642.6	2015	12	22	1	10	44.75	3.2	0	0	298	148	0	0.63	1
194	-6.898508	106.39622	21.334	-86877.1	47569.1	-25005.4	6549.1	8957.2	12383.9	2016	1	4	9	11	21.87	2.6	0	0	134	51	0	0.36	1
195	-7.397051	106.909048	28.093	-30209.6	-7565.4	-18246	6724.5	8553.1	10208.3	2016	1	11	16	58	35.71	2.9	0	0	208	104	0	0.482	1
196	-6.717454	106.327693	128.252	-94465.4	67592.1	81912.6	9625.3	13190.5	10164.3	2016	1	14	9	57	11.19	3.3	0	0	247	0	0	0.571	1
197	-7.220194	106.744386	90.972	-48399	11993.5	44632.7	7376.2	9463.1	9421.7	2016	1	15	9	5	46.44	4.6	0	0	709	133	0	0.757	1
198	-6.699993	107.001946	49.464	-19968	69523.1	3124.5	10226.3	10540.1	13406.3	2016	1	18	23	2	1.16	3	0	0	239	102	0	0.61	1
199	-7.376922	106.624252	86.624	-61654.6	-5339.2	40285	7990.4	8909.1	11461.3	2016	2	2	16	30	46.64	3.4	0	0	351	63	0	0.543	1
200	-7.426477	106.775066	60.602	-45000.8	-10819.6	14263.2	7076.2	9238.2	10745.9	2016	2	13	10	38	46.06	2.8	0	0	276	87	0	0.513	1
201	-7.084651	106.482085	13.417	-77376.2	26983.3	-32920.8	8917.8	8213.9	6855.2	2016	2	17	14	30	53.23	2.5	0	0	183	98	0	0.45	1
202	-6.92891	106.709349	97.972	-52284.7	44206.9	51633.2	7932	10563.4	8887.9	2016	2	18	14	40	5.15	2.4	0	0	363	129	0	0.865	1
203	-6.898913	106.162024	123.673	-112748.2	47524.4	77333.6	9191.8	12278.8	11258.4	2016	3	6	11	50	29.12	4.2	0	0	527	168	0	0.989	1
204	-6.799043	106.507397	3.063	-74603.5	58569	-43276.3	17297.4	18888.8	22241.7	2016	3	6	18	10	28.97	2.7	0	0	249	50	0	1.355	1
205	-6.488657	106.211735	156.261	-107303.3	92894.9	109922	10534.4	14227.1	8959.8	2016	3	7	14	49	18.13	3.1	0	0	300	91	0	0.584	1
206	-7.160157	106.839823	136.45	-37862.4	18633	90110.6	8382	11501.7	10666.7	2016	3	13	23	27	42.25	3.3	0	0	392	95	0	0.567	1
207	-6.851592	106.547764	153.144	-70139.9	52757.6	106804.5	10045.9	13658.9	10021.5	2016	3	27	13	15	27.45	3.4	0	0	318	34	0	0.656	1
208	-6.949888	106.218816	20.386	-106468.7	41886.9	-25952.9	10431.2	17270.8	21814	2016	4	5	21	35	23.63	2.6	0	0	191	15	0	0.277	1
209	-6.679992	106.568805	173.029	-67827.7	71735.1	126689.7	10459.2	14114.4	9784.8	2016	4	12	9	56	18.04	3.8	0	0	349	31	0	0.708	1
210	-6.7183	106.658377	6.163	-57928.3	67498.5	-40175.6	10106.6	8612.3	8782.4	2016	4	17	4	53	26.34	3	0	0	254	66	0	0.71	1
211	-7.128362	107.000262	13.491	-20144.7	22149.3	-32848.4	8503.7	9158.4	8147.4	2016	4	19	5	24	37.82	2.9	0	0	237	97	0	0.574	1
212	-6.789486	106.551077	155.834	-69778.5	59626	109494.4	9947.3	13373.1	10263.3	2016	4	21	2	43	55.69	3.6	0	0	428	69	0	0.689	1
213	-7.457156	106.731652	20.93	-49792.1	-14212.4	-25409.7	7137.3	7773.5	10492.5	2016	4	22	12	6	29.61	3.5	0	0	225	63	0	0.411	1
214	-7.011357	106.250312	22.802	-102982.7	35089	-23537.3	6887.3	11399.9	11801.9	2016	5	2	18	14	32.62	2.7	0	0	224	86	0	0.596	1
215	-6.893691	106.404856	111.984	-85923.5	48101.8	65644.8	8662.5	11788.9	9839.6	2016	5	12	5	26	35.73	3.6	0	0	413	37	0	0.689	1
216	-7.087469	106.534588	97.736	-71577.3	26671.7	51396.6	9268.1	12039.3	11491.5	2016	5	12	5	26	35.05	3.4	0	0	318	0	0	0.633	1
217	-6.776973	106.683062	6.722	-55197.4	61009.7	-39615.8	10313.8	9253.4	11578.8	2016	6	5	22	42	0.49	2.7	0	0	182	0	0	0.28	1
218	-6.805851	106.714889	2.758	-51679.5	57816.1	-43580.7	9704.3	9427.9	12952.4	2016	6	14	15	15	32.26	2.3	0	0	193	24	0	0.33	1
219	-6.800231	106.368637	125.088	-89933.6	58437.7	78749.1	9308.5	12510.1	9980.7	2016	6	24	9	18	39.79	3.9	0	0	411	142	0	0.753	1
220	-7.455666	106.804309	71.155	-41770.8	-14047.6	24815.9	8989.8	10636.6	9764.3	2016	7	20	1	13	18	2.8	0	0	204	101	0	0.394	1

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221	-7.459252	106.230195	3.898	-105152.8	-14444.2	-42439.8	14308	13196.4	12897.8	2016	7	25	2	0	53.53	3	0	0	155	0	0	0.29	1
222	-7.320462	106.308925	125.476	-96476	904.7	79137	13177	12466.3	18098.6	2016	7	30	7	20	11.37	3.3	0	0	171	40	0	0.959	1
223	-6.748007	106.689859	11.085	-54448.2	64213.1	-35252.8	8958.8	8864.8	13420	2016	8	2	4	1	32.36	3.1	0	0	224	51	0	0.522	1
224	-7.046803	107.679037	81.082	54824.4	31169	34742.5	13312.8	11460.9	9767.7	2010	1	31	17	49	21.28	2.8	0	0	71	40	0	0.272	1
225	-6.967577	107.850658	6.897	73786.2	39930.6	-39441.4	8776.3	10956.9	11049.1	2010	2	6	21	13	44.32	3.3	0	0	309	88	0	0.537	1
226	-6.573329	108.047451	240.044	95564	83531	193704.8	9655.9	17348.1	7911.1	2010	4	6	7	36	44.63	3	0	0	57	23	0	0.313	1
227	-6.792142	107.719261	53.702	59283.3	59332.2	7363.8	11626	11205.4	17892.8	2010	4	10	8	4	1.95	2.9	0	0	226	30	0	1.789	1
229	-6.421129	107.408399	67.626	24948.9	100363	21286.8	14344.8	14073	27299.1	2010	5	1	18	49	3.09	3	0	0	134	74	0	0.664	1
230	-6.837941	107.173122	50.843	-1054.4	54267.3	4503.3	10758.6	16351.8	10625.4	2010	5	29	7	37	1.69	3	0	0	187	51	0	1.279	1
231	-6.903189	107.039668	4.219	-15796.6	47051.4	-42119.6	7940.7	6752.7	10013	2010	6	5	15	28	46.62	2.9	0	0	294	65	0	0.57	1
232	-6.318426	107.668774	320.409	53732.2	111721	274069.7	10792.2	19317.1	12750.7	2010	7	5	4	12	45.75	3.8	0	0	57	0	0	0.099	1
233	-6.952084	108.407509	5.618	135298.1	41644	-40720.7	11948.9	12786.1	11103.1	2010	8	2	12	1	38.84	3.2	0	0	194	20	0	0.696	1
234	-6.238653	107.875049	247.112	76539.1	120543.2	200773.2	12212.1	21709	16116	2010	10	2	6	29	49.04	3.6	0	0	76	18	0	0.269	1
235	-6.555702	107.237435	6.349	6052.4	85480.4	-39989.2	14888.3	18432.6	15737.2	2010	11	8	23	20	48.23	3.5	0	0	248	98	0	0.749	1
236	-6.894222	107.038333	5.205	-15944.2	48043.1	-41133.3	9381	12462.1	8595.4	2010	11	28	17	42	27.73	3.5	0	0	171	80	0	0.584	1
237	-6.673211	107.417	29.669	25892.6	72485	-16670.2	18402.6	22644.5	44074.4	2010	12	6	13	15	30.33	2.8	0	0	167	89	0	0.848	1
238	-7.047556	107.669376	83.447	53757.2	31085.7	37107.8	14493.3	12220.6	10141.6	2010	12	11	15	38	8.27	3	0	0	64	37	0	0.207	1
239	-6.966662	107.341582	55.753	17553.9	40031.8	9413.3	8875.6	11700.6	8434.4	2011	1	1	2	10	41.41	3.3	0	0	282	70	0	0.8	1
240	-6.867969	107.744616	59.356	62079.5	50946.4	13016.4	15811.5	9172.4	9662.8	2011	1	24	3	46	21.19	2.8	0	0	147	56	0	0.461	1
241	-6.897745	107.231539	70.364	5398.9	47653.5	24024.8	9912	16157.6	12137.8	2011	2	15	13	52	38.1	3.1	0	0	259	18	0	0.703	1
242	-6.780841	107.99932	253.359	90225.5	60582	207019.8	8735.8	15894.4	9485.2	2011	2	22	17	13	36.36	4.6	0	0	108	12	0	0.223	1
243	-6.94644	107.098032	171.031	-9348.8	42268.2	124691.4	8817	12726.1	9502	2011	2	26	6	29	35.94	4.9	0	0	533	119	0	1.333	1
244	-6.430649	107.644408	356.257	51033	99310.2	309917.6	13592.8	29518.2	29243.4	2011	3	19	14	21	39.37	3.3	0	0	43	0	0	0.099	1
246	-6.808196	108.009115	10.507	91304.9	57556.8	-35830.9	9747.1	14447.8	11699.4	2011	4	4	1	27	42.05	2.9	0	0	157	0	0	0.345	1
247	-6.891415	108.478874	14.633	143190.5	48353.6	-31705.4	14849.9	10272.5	10031.2	2011	4	14	20	33	10.34	2.3	0	0	94	0	0	0.442	1
248	-6.849455	107.143672	45.1	-4307.8	52993.9	-1239.7	9451.3	14123.9	14919.7	2011	4	29	10	0	5.79	2.9	0	0	276	97	0	0.746	1
249	-6.557748	107.266764	3.506	9293.5	85254.1	-42833	20775.2	37426.6	39293.5	2011	6	5	0	45	42.42	3.5	0	0	261	51	0	1.375	1
250	-6.557228	107.36995	163.847	20696.3	85311.6	117507.6	12549.8	19604.4	17949.6	2011	6	21	22	43	7.18	4.7	0	0	172	0	0	1.4	1
251	-6.866597	107.745509	44.226	62178.2	51098.2	-2112.9	8546.9	13923.8	14302.6	2011	7	21	22	46	46.5	3	0	0	236	0	0	0.487	1
252	-6.53014	107.076042	103.908	-11783.1	88307.4	57568.3	16114.3	15218.6	14490.4	2011	8	11	4	46	33.2	3.3	0	0	149	30	0	0.377	1
253	-6.909316	107.502667	12.99	35349.5	46373.9	-33347.9	7626.5	13622.7	11248.3	2011	8	28	9	5	58.64	3.3	0	0	308	33	0	0.773	1
254	-6.296321	107.198812	348.967	1784.7	114165.6	302628.2	33295.2	55014.4	32145.3	2011	8	30	9	55	58.19	4.7	0	0	32	0	0	0.14	1
255	-6.721438	107.352942	17.318	18813.7	67151.4	-29021.1	11242.1	16907.4	20550.3	2011	9	3	17	49	0.68	2.8	0	0	134	10	0	0.395	1
256	-6.755064	107.832348	43.708	71780.1	63432.7	-2630.8	15232.6	11958.5	26880.2	2011	10	7	3	32	20.38	3.1	0	0	192	90	0	0.587	1
257	-6.890828	107.738526	59.527	61405.2	48418.4	13187.5	10927	13493.5	19424.3	2011	10	25	13	8	37.21	3.3	0	0	157	72	0	0.332	1
258	-6.293748	107.896129	88.865	78864.9	114450.2	42525.5	45657.7	41643.1	57522.2	2011	11	17	18	52	21.5	3.5	0	0	70	27	0	0.615	1
261	-6.815803	107.091478	69.666	-10074.2	56715.5	23326.7	20288.9	25472.1	27681.2	2011	12	28	18	34	0.08	3.2	0	0	161	54	0	0.393	1
262	-6.110481	107.475087	122.174	32329.8	134717.8	75834.4	61778	68318.5	77576.8	2012	2	24	21	2	42.44	3.1	0	0	16	0	0	0.342	1
263	-6.522961	108.281261	9.455	121407.9	89101.3	-36883	19155.7	15060.3	14682.3	2012	4	17	17	41	2.35	2.2	0	0	94	35	0	0.351	1
264	-6.809649	107.021614	63.165	-17792.8	57396.1	16825.3	9861.3	12581.8	15188.5	2012	5	14	15	39	35.93	3.5	0	0	235	0	0	1.082	1
265	-6.223687	107.429993	311.417	27341.1	122198.2	265077.6	25457.7	36296.4	25474.5	2012	6	8	7	4	22.91	4.7	0	0	75	1	0	0.23	1
266	-6.885505	108.473029	9.137	142545.8	49007.1	-37201.4	13328.6	18318.5	8223.6	2012	7	22	12	2	17.14	2.6	0	0	105	0	0	0.204	1
267	-7.12789	107.422221	131.598	26456.6	22201.4	85258.6	7519.9	11587.4	10313.2	2012	11	1	14	12	0.97	5.7	0	0	354	5	0	0.946	1

268	-6.483018	107.83111	286.28	71663.8	93518.6	239940.4	12470.4	22192.3	14371.3	2012	11	24	0	34	52.93	3.5	0	0	129	10	0	0.261	1
269	-6.920325	107.16032	158.474	-2468.4	45156.3	112134.4	8235.4	11916.2	12712.1	2013	1	7	15	46	53.42	3.1	0	0	196	20	0	0.814	1
270	-7.001112	107.124389	132.641	-6437.1	36222	86301.6	8292.9	11826.2	9505.3	2013	1	15	14	47	54.48	3.6	0	0	376	90	0	0.445	1
271	-6.702667	107.651182	5.873	51766.9	69227.4	-40465.4	15693.7	15399.5	15493	2013	5	29	12	39	4.62	4.6	0	0	170	40	0	0.602	1
272	-6.301638	108.208766	15.76	113422.3	113577.6	-30578.2	23131.9	18846.1	34109	2013	10	10	21	16	13.23	3.9	0	0	124	31	0	0.653	1
273	-6.471938	107.687302	48.158	55771.3	94743.9	1819.5	25639.7	31112.4	52959.6	2013	10	13	15	45	33.34	3.5	0	0	209	12	0	1.383	1
274	-7.033061	107.13801	129.795	-4932.3	32688.7	83455.6	8005.9	11416.2	9675.2	2013	12	19	16	41	46.83	4.5	0	0	619	119	0	0.857	1
275	-6.602654	107.211628	8.865	3200.3	80287.9	-37472.8	10399.8	14546.2	7736.9	2014	4	12	2	55	20.53	3.7	0	0	213	36	0	0.734	1
276	-6.567126	107.204684	10.816	2433.1	84217	-35522.2	12229.9	11819.7	14047.3	2014	4	12	16	14	44.69	3.2	0	0	208	88	0	0.643	1
277	-6.371176	107.890696	290.291	78258.2	105887.3	243951.7	8638.7	16610.3	11090.2	2014	8	18	19	47	46.96	4	0	0	101	6	0	0.245	1
278	-6.920605	107.076573	152.707	-11719.6	45125.3	106368.2	8558.1	12191.3	9413.1	2014	10	17	9	25	59.07	5.2	0	0	466	40	0	0.7	1
279	-6.898759	107.869183	5.656	75838.1	47541.4	-40683.7	9658.1	13398.3	11053.8	2015	2	14	5	57	50.46	3.4	0	0	236	12	0	0.384	1
280	-6.473474	107.844749	297.897	73171.9	94574	251558	9151.2	16692.1	11978.9	2015	3	10	0	59	12.49	4.2	0	0	68	0	0	0.185	1
281	-6.617093	107.471178	62.218	31880.9	78691.1	15878.8	21074.4	20136.8	23688.8	2015	3	12	10	12	2.9	3.2	0	0	128	46	0	0.79	1
282	-6.759341	108.419869	9.578	136691.6	62959.7	-36760.7	12501.5	13721.2	12551.1	2015	6	30	22	1	33.93	3.2	0	0	172	32	0	0.721	1
283	-6.845544	107.985063	5.972	88644.1	53426.4	-40365.8	12353.1	12787.5	13117.4	2015	7	5	1	23	56.74	3.6	0	0	240	69	0	0.555	1
284	-6.677572	107.770025	5.319	64899.6	72002.6	-41019.1	11248	15578	12852.9	2015	8	8	19	51	14.14	3.2	0	0	227	23	0	0.552	1
285	-6.68272	107.761869	5.805	63998.1	71433.3	-40533	13432.1	17964.8	13782.8	2015	8	9	2	37	51.82	3.4	0	0	233	86	0	0.645	1
286	-6.921959	108.297363	13.241	123135.2	44975.6	-33097.2	11958.4	12686	11675.9	2015	8	17	8	29	16.86	3.3	0	0	177	40	0	0.679	1
287	-6.634334	107.763108	5.516	64138.2	76784.3	-40822.6	10126.2	15052.4	21628.1	2015	11	30	3	1	24.01	2.6	0	0	98	45	0	0.352	1
288	-6.797562	108.301372	240.954	123594.5	58732.9	194614.8	9267.9	16036.9	7892.6	2016	1	25	12	54	11.75	3.8	0	0	82	19	0	0.21	1
289	-6.584646	107.410565	8.817	25183.9	82279.5	-37521.3	11512.1	15589	16671.1	2016	3	3	17	20	22.2	2.5	0	0	216	32	0	0.584	1
290	-6.841106	107.147873	5.238	-3843.8	53917.2	-41100	10315.5	12286.8	15359.2	2016	3	18	9	54	5.94	2.7	0	0	254	63	0	0.608	1
291	-6.724303	107.942115	6.226	83910.4	66834.6	-40112	12256.9	21995	18509.6	2016	5	10	2	22	35.22	2.9	0	0	173	9	0	0.272	1
292	-6.519041	107.968717	6.941	86868.4	89534.8	-39397	13052.5	16545.6	17781.8	2016	5	10	4	43	2.25	2.6	0	0	125	0	0	0.621	1
293	-7.215281	108.211194	7.74	113580.3	12536.8	-38598.2	12159.4	7580.9	6553.9	2010	1	10	2	36	46.84	2.7	0	0	71	53	0	0.198	1
294	-8.028654	107.339502	42.221	17303.5	-77415	-4117.9	10344.2	15447.3	19055.1	2010	1	15	10	18	58.15	2.9	0	0	185	156	0	0.304	1
295	-7.061136	107.183504	130.299	92.6	29583.9	83960	8710.8	11552.5	9318.8	2010	1	15	21	22	47.72	3.3	0	0	247	57	0	0.596	1
296	-7.748521	107.299972	9.805	12946.4	-46434.8	-36533.9	8658.9	10978.2	14216.3	2010	1	19	6	38	56.2	4.2	0	0	302	0	0	0.406	1
297	-7.93078	107.289186	32.608	11753.6	-66591	-13731	8647.4	10952.6	33247.9	2010	1	21	6	46	46.77	3.5	0	0	392	118	0	0.455	1
298	-7.896165	107.363605	68.398	19965.8	-62762.9	22058.8	8410.9	15282.7	17417	2010	1	23	6	54	21.99	3.2	0	0	257	160	0	0.315	1
299	-7.846853	107.29622	44.589	12530.9	-57309.4	-1750.6	7112.9	9839.5	14018.9	2010	1	23	14	30	33.3	4	0	0	502	294	0	0.587	1
300	-7.850358	107.911179	3.218	80392.3	-57697.1	-43120.4	8212.6	9730.4	9632.6	2010	1	24	2	57	48.83	2.5	0	0	189	76	0	0.384	1
302	-7.212628	107.529077	91.147	38254.3	12830.2	44807.6	6509.9	11176.2	9248	2010	1	25	4	22	8.69	2.6	0	0	206	73	0	1.941	1
303	-7.234796	107.74889	9.687	62526.7	10378.6	-36651.7	11123.1	9932.4	9197.2	2010	1	25	15	51	10.22	2.4	0	0	219	0	0	0.263	1
305	-7.8584	107.274822	39.552	10169.4	-58586.5	-6787.3	7062.6	8410.4	15355	2010	1	28	3	49	56.87	3.3	0	0	409	186	0	0.375	1
306	-8.008198	107.31335	43.775	14418.5	-75152.8	-2564.4	9196.7	12329	12872.4	2010	1	29	16	44	31.8	2.9	0	0	175	102	0	0.232	1
307	-7.288908	108.120962	59.038	103607.6	4394.3	12698.3	10049.7	13772	13764.3	2010	1	29	19	57	39.25	2.7	0	0	160	116	0	0.375	1
308	-7.846443	107.286718	45.878	11482.4	-57264.1	-460.9	6991.6	9826.3	11877.3	2010	2	5	14	2	5.11	4	0	0	684	331	0	0.645	1
309	-7.784707	107.29441	51.926	12332	-50436.7	5586.8	6962.4	10683.8	14735.4	2010	2	5	14	10	21.58	3.3	0	0	365	184	0	0.562	1
310	-7.175024	107.545102	61.446	40025.5	16988.9	15106.6	10034.7	11172.8	9022.4	2010	2	5	16	31	20.96	2.2	0	0	210	45	0	0.388	1
311	-7.042076	107.310923	124.372	14166.1	31691.7	78032.4	10664.1	13078.7	12955.5	2010	2	6	9	23	22.65	2.9	0	0	162	90	0	0.842	1
312	-7.777432	107.419351	73.559	26120.7	-49632.1	27220.3	7594.6	13291.9	12718.4	2010	2	13	14	34	56.85	2.6	0	0	248	186	0	0.329	1

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313	-7.897745	107.276732	44.343	10379.8	-62937.7	-1995.5	8537.5	11746.6	13583.4	2010	2	15	4	11	12.78	2.9	0	0	286	78	0	0.316	1
314	-8.017163	108.303881	66.447	123703.6	-76144.2	20108.3	7902.7	10587.6	13825.2	2010	2	22	13	2	24.54	4.4	0	0	277	61	0	0.839	1
315	-7.742607	107.314237	45.36	14520.8	-45780.7	-979	6583.8	10527	13875.1	2010	2	23	19	40	37.75	2.7	0	0	349	167	0	0.821	1
316	-7.437823	107.534035	77.02	38792.1	-12074.4	30680.6	7526.1	11960.4	10086.2	2010	2	25	5	20	11.95	2.9	0	0	320	151	0	0.677	1
317	-7.857485	107.300888	70.994	13045.8	-58485.3	24655.2	9661.4	14935.4	13302.6	2010	2	25	8	44	2.97	2.7	0	0	196	97	0	0.303	1
318	-7.848721	107.328171	21.573	16056.6	-57516	-24766.2	7999.2	9661.5	12157.3	2010	2	26	7	25	3.04	2.9	0	0	256	130	0	0.397	1
319	-7.283001	107.727765	10.433	60190.7	5047.5	-35904.9	8782.6	9470.2	9288.2	2010	2	26	21	1	59.64	3.6	0	0	323	110	0	0.694	1
320	-8.00639	107.375357	6.928	21259.9	-74952.8	-39410.5	8559.6	10392.2	9882.9	2010	2	28	7	58	43.62	4	0	0	276	76	0	0.634	1
321	-7.783197	107.422083	66.248	26422	-50269.6	19908.6	12077.6	19556.4	18921.8	2010	2	28	12	22	4.97	3.3	0	0	272	69	0	0.303	1
322	-7.004036	107.034749	3.942	-16338.3	35898.7	-42396.3	9664.6	9549.2	9658.6	2010	3	2	6	40	0.35	3	0	0	272	103	0	0.647	1
323	-7.982708	107.080476	10.018	-11275.1	-72333.8	-36320.5	21187.4	23855.4	26162	2010	3	11	9	55	45.8	2.8	0	0	204	81	0	0.531	1
324	-8.075321	107.29175	33.247	12034.4	-82575.9	-13092.5	10126.5	11732.5	17876.6	2010	3	11	10	4	0.03	2.5	0	0	155	130	0	0.283	1
325	-8.048949	107.343199	21.574	17710.9	-79659.5	-24765.4	9720.9	14197.6	33010	2010	3	15	5	49	37.87	4	0	0	340	134	0	0.542	1
326	-7.818361	107.518356	2.457	37045.2	-54158.5	-43881.7	6715.8	9005.2	7737.7	2010	3	16	19	7	28.55	2.6	0	0	261	103	0	0.44	1
327	-8.039373	107.33819	11.117	17158.5	-78600.5	-35222.6	9322.6	11603.4	11891.5	2010	3	23	4	51	12.92	3.2	0	0	210	118	0	0.47	1
328	-7.02552	107.613285	72.121	47563.1	33522.7	25782.2	8529.8	10683.9	7026	2010	3	25	21	35	19.79	2.7	0	0	275	123	0	0.907	1
329	-7.256826	107.67801	89.816	54698.3	7942.3	43476.5	10933.3	17539.4	13930.2	2010	3	25	22	21	36.66	2.4	0	0	181	117	0	0.71	1
330	-8.009985	107.329772	43.23	16230.3	-75350.4	-3108.8	8870.9	9869.9	15213.1	2010	3	26	14	35	18.31	2.7	0	0	235	183	0	0.514	1
331	-7.173072	107.551113	58.306	40689.4	17204.8	11966.4	8386.5	9122.1	7182.9	2010	3	27	17	6	37.57	2.5	0	0	324	120	0	0.629	1
333	-7.136565	107.702199	70.13	57376.9	21242.1	23790.6	8131.5	11619.9	9015.5	2010	4	2	15	27	49.04	2.9	0	0	290	132	0	0.508	1
334	-7.154392	107.827943	108.477	71262.6	19270.5	62138	10621.6	14362.9	8796.8	2010	4	10	1	8	53.69	2.9	0	0	313	83	0	0.937	1
335	-7.922749	107.102267	8.36	-8871.3	-65702.8	-37978.7	12517	10182.6	8896.5	2010	4	11	19	48	16.17	3.3	0	0	179	37	0	0.292	1
336	-7.250608	107.551342	81.067	40711.3	8630	34727.3	9681.5	13469.7	14308	2010	4	16	14	1	35.22	3	0	0	142	91	0	0.32	1
337	-7.121939	107.972734	1.693	87256.1	22859.6	-44645.1	10365.6	12049.4	22377.5	2010	4	16	19	31	44.51	2.3	0	0	197	122	0	0.82	1
338	-7.556959	107.799044	155.366	68040.7	-25249.8	109026.7	11194.3	14317.8	13551	2010	4	17	13	29	59.26	2.6	0	0	173	120	0	1.031	1
339	-6.994116	107.461961	60.928	30850	36995.7	14589.2	9427.5	12714.8	12496.8	2010	4	19	22	7	52.83	2.7	0	0	294	122	0	0.781	1
340	-7.952075	107.036345	12.282	-16144.8	-68946.1	-34057.4	15762.8	14305.6	42130.9	2010	4	20	0	45	29.83	3.3	0	0	260	124	0	0.458	1
341	-7.137182	107.613536	68.007	47585	21173.9	21668.2	7415	10922.6	9352.6	2010	4	21	23	20	37.82	2.8	0	0	265	80	0	0.646	1
342	-7.936397	107.029778	25.093	-16869.7	-67212.2	-21246	18472.4	13752.2	41972.9	2010	4	23	15	56	15.57	2.9	0	0	257	147	0	0.447	1
343	-7.348236	107.590162	84.893	44993.1	-2166.8	38554.1	5999.9	10054	9638.7	2010	4	24	10	57	33.09	3	0	0	373	117	0	0.749	1
344	-7.813664	107.293721	41.065	12255.6	-53639	-5274.2	6504	9566.4	14770.2	2010	4	26	21	44	19.27	2.7	0	0	348	215	0	0.47	1
345	-7.894126	107.342135	71.049	17596.7	-62537.4	24709.8	7789.9	11421.2	12494	2010	4	28	6	54	6.01	3.1	0	0	190	134	0	0.531	1
346	-7.07549	107.55114	148.627	40696.7	27996.4	102287.4	15151.5	14864.5	10117.5	2010	5	3	22	27	36.58	2.6	0	0	181	114	0	0.939	1
347	-7.955789	107.323685	75.43	15559.7	-69356.8	29090.8	21345.6	33843.9	27849.3	2010	5	4	1	55	18.94	3.1	0	0	213	146	0	0.559	1
348	-7.916168	107.742728	67.025	61798.8	-64975.1	20685.7	5874.3	9119.7	11846.8	2010	5	15	16	51	14.63	3.1	0	0	209	147	0	0.336	1
349	-7.980784	107.276643	54.601	10368.9	-72121	8261.3	7717.8	8058.6	12317.2	2010	5	18	12	13	20.02	2.9	0	0	197	136	0	0.273	1
350	-8.070191	107.261167	36.551	8660.5	-82008.7	-9787.9	9065.2	10269.7	23255.2	2010	5	18	13	2	13.86	3.5	0	0	231	141	0	0.421	1
351	-7.464554	108.037003	127.58	94318.3	-15030.6	81241	9189.6	15461	13371.3	2010	5	18	22	23	36.26	2.9	0	0	237	118	0	0.878	1
352	-7.317089	107.823788	16.883	70791.1	1277.7	-29455.6	16298.2	17213.3	25378.3	2010	5	26	3	49	28.26	3.3	0	0	269	115	0	1.057	1
353	-8.046143	107.314847	39.782	14583	-79349.2	-6557.6	9830.9	12094.4	15080.2	2010	6	3	14	13	15.17	3	0	0	205	159	0	0.331	1
354	-7.346082	107.045832	69.757	-15108.4	-1928.7	23417.7	6590.1	9654.2	10400.1	2010	6	5	23	56	53.47	2.9	0	0	285	129	0	0.612	1
355	-7.388391	107.577569	124.95	43600.8	-6607.6	78610.5	6781.2	9849.1	10830.6	2010	6	6	7	24	2.69	3.1	0	0	272	92	0	0.827	1
356	-8.010111	107.313937	9.798	14483.2	-75364.4	-36539.8	9804.9	13449.5	11261.8	2010	6	12	14	12	53.27	3	0	0	234	75	0	0.632	1

357	-6.94093	107.297771	52.961	12714.9	42877.6	6622.3	11214.1	11096.8	12830.1	2010	6	15	0	51	43.09	2.7	0	0	129	72	0	0.463	1
358	-6.991091	108.169776	230.621	109033.2	37330.2	184282.1	9196.5	15973.2	9093	2010	6	15	18	13	12.8	4.3	0	0	102	37	0	0.32	1
359	-7.884015	107.364143	61.028	20025.4	-61419.2	14688.6	7579.7	12607.6	11572.3	2010	6	19	0	39	56.08	3.3	0	0	356	199	0	0.734	1
360	-7.783547	107.266382	50.577	9238.8	-50308.4	4237.6	6669	9795.6	14549.9	2010	6	22	4	25	9.84	2.9	0	0	202	139	0	0.371	1
361	-8.053836	107.26365	39.644	8934.6	-80200	-6695.2	9904.4	14244.2	17544.5	2010	7	4	11	42	31.05	3.1	0	0	176	121	0	0.268	1
362	-7.847739	107.046799	47.226	-14993.1	-57407.4	887	8121.9	9860.4	20341.4	2010	7	4	12	2	28.63	3.4	0	0	275	128	0	0.398	1
363	-8.033458	107.31037	40.984	14089.3	-77946.3	-5355.4	9187.7	11417.2	15453.7	2010	7	6	0	48	55.61	3.6	0	0	230	84	0	0.33	1
364	-7.812101	107.070307	51.025	-12399.5	-53466.2	4685.8	9419.6	10611	18139.5	2010	7	6	17	58	55.59	2.8	0	0	241	61	0	0.28	1
365	-7.310576	107.1577	78.494	-2756.7	1998	32154.6	6012.9	9587.9	10816.8	2010	7	9	7	12	17.37	3.3	0	0	356	71	0	0.783	1
367	-7.222349	107.616252	6.376	47880.5	11755.1	-39962.6	6789.2	7904	7948.4	2010	7	13	6	52	48.71	2.9	0	0	220	141	0	0.37	1
368	-7.20349	107.623421	5.408	48673.2	13840.8	-40931.1	8997.2	6182.9	11346.4	2010	7	13	7	15	19.83	2.6	0	0	184	122	0	0.338	1
369	-7.312451	107.641844	4.279	50701.6	1790.6	-42058.8	5807.2	7338.3	5550.9	2010	7	14	8	10	50.58	2.9	0	0	346	162	0	0.78	1
370	-7.964156	107.33548	44.988	16861	-70282.1	-1350.2	7661.9	9952.6	15499	2010	7	19	23	53	2.21	4.1	0	0	368	151	0	0.726	1
371	-7.227682	107.717097	8.378	59016.4	11165.4	-37960.2	6409.6	7126.5	5229.5	2010	7	23	17	59	11.53	3.1	0	0	366	159	0	0.621	1
372	-7.21606	107.726486	7.118	60053.9	12450.7	-39220	8294.6	7516.4	7515.6	2010	7	23	17	59	11.92	3.2	0	0	267	0 0	0.461		
373	-7.842045	107.404812	10.34	24514.3	-56777.7	-35998.4	9668.4	12701.5	16043	2010	7	28	11	51	28.25	3.2	0	0	250	118	0	0.711	1
374	-7.972329	107.279507	57.802	10685	-71185.9	11463	7143.4	9042.9	12148.3	2010	8	2	9	13	49.36	3.3	0	0	246	131	0	0.386	1
375	-7.62021	107.632908	108.095	49697.8	-32244.8	61755.8	9610.8	16407.5	11793.8	2010	8	9	23	50	50.79	2.9	0	0	245	103	0	0.731	1
376	-7.522458	107.122468	76.295	-6645.4	-21434.2	29956.2	6932.7	10742.1	11565.6	2010	8	10	0	3	0.41	2.6	0	0	212	145	0	0.659	1
377	-7.956798	107.050341	38.442	-14600.4	-69468.4	-7897.3	9637.5	10463	34486.9	2010	8	11	19	32	57.52	3.2	0	0	276	150	0	0.407	1
378	-7.956796	107.022333	13.152	-17690.7	-69468.1	-33186	16345.5	16771.3	31977.2	2010	8	12	14	42	45.88	3.2	0	0	250	108	0	0.453	1
379	-8.043183	107.813609	32.827	69609.8	-79021.8	-13512.5	7253.7	11306.5	12092.3	2010	8	20	2	4	36.33	3.5	0	0	229	106	0	0.444	1
380	-7.784552	108.277381	97.273	120812.2	-50419.5	50933.9	7466.2	10527	11960.6	2010	8	31	7	28	23.35	4.2	0	0	296	121	0	0.422	1
381	-7.308824	107.590453	58.812	45027.3	2191.8	12472.3	6022.7	9115.1	6183.8	2010	9	13	18	51	0.34	2.5	0	0	293	113	0	0.65	1
382	-7.996422	107.05497	15.394	-14089	-73850.4	-30944.8	12059.6	14749.2	22938.4	2010	9	16	5	9	10.59	4.2	0	0	340	124	0	0.593	1
383	-7.934106	107.059736	45.689	-13564.1	-66958.9	-650.3	10161.5	9589.7	21930.2	2010	9	17	20	42	16.76	3.5	0	0	233	123	0	0.515	1
384	-7.159351	107.37347	113.534	21071.8	18722.1	67194.7	7357.3	11391.5	9224.6	2010	9	24	3	45	27.31	3.2	0	0	243	90	0	0.719	1
385	-7.171062	107.541146	5.199	39588.8	17427.1	-41139.3	10294.9	9053.7	12215	2010	9	24	19	52	38.99	3.2	0	0	263	106	0	0.678	1
386	-7.94269	107.369925	32.365	20662.1	-67908.2	-13973.9	7520.2	9488.6	17642.8	2010	10	17	23	52	3.74	3.8	0	0	425	237	0	0.862	1
387	-7.251891	107.71052	2.781	58288.5	8488	-43557.2	9021.4	9009.4	6543.9	2010	10	27	14	49	1.73	4.4	0	0	414	124	0	0.832	1
388	-7.837405	107.267673	38.344	9380.8	-56264.6	-7995.3	8152.7	10964.3	19700.6	2010	10	30	15	8	24.09	3.9	0	0	471	156	0	0.506	1
389	-7.771679	107.100273	65.182	-9093	-48995.8	18842.6	8141.2	10745.7	14112.7	2010	11	2	10	21	6.58	3.5	0	0	269	189	0	0.529	1
390	-7.301226	107.570576	7.409	42832.8	3032.1	-38928.8	6603	7993	7252.4	2010	11	6	2	59	47.54	3	0	0	227	99	0	0.292	1
391	-8.041054	107.247454	45.001	7147.8	-78786.4	-1338	7244.7	8433.2	12663.6	2010	11	9	12	39	0.54	5.2	0	0	407	167	0	0.765	1
392	-8.074853	107.22693	18.526	4883.3	-82524.2	-27813.6	15182.1	31374.4	39310.2	2010	11	14	14	36	29.57	3.7	0	0	195	132	0	0.614	1
393	-7.235381	107.775798	32.434	65498.1	10313.9	-13904.8	8231.5	9244.6	18816.8	2010	11	16	6	6	19.51	3	0	0	390	0 0	0.601		1
394	-7.981389	107.296153	32.218	12521.5	-72188	-14121.7	9582.8	11597.5	21980.6	2010	11	20	8	0	35.23	3.6	0	0	256	124	0	0.424	1
395	-7.666435	107.113809	66.963	-7600	-37356.8	20623.3	11292.1	15375.1	12243.7	2010	11	22	10	31	15.74	3.6	0	0	266	161	0	0.556	1
396	-7.914168	107.900894	62.075	79251.5	-64753.9	15736.2	8127.2	14962.1	12084.3	2010	11	22	23	37	29.74	3.4	0	0	214	51	0	0.282	1
397	-7.039014	107.73462	5.068	60963.9	32030.3	-41270.5	8324.3	8075.4	9716.3	2010	11	24	4	42	2.76	2.9	0	0	194	114	0	0.417	1
399	-7.364501	107.529016	13.12	38241.1	-3965.6	-33218.5	14543.5	17919.5	28617.6	2010	12	9	11	58	48.07	4.1	0	0	353	82	0	0.748	1
401	-7.408644	107.662215	31.39	52945.2	-8847.4	-14948.9	7519.2	9651.9	7001.1	2010	12	16	18	53	23.3	3.9	0	0	406	126	0	0.863	1
402	-7.860306	107.247224	38.817	7124	-58797.3	-7522.2	7584	9644.2	13011.2	2010	12	17	8	14	56.83	4.3	0	0	450	203	0	0.566	1

403	-7.892719	107.371445	18.549	20830.9	-62381.8	-27790.5	10499.1	14485.8	39099.9	2010	12	18	1	37	36.92	2.6	0	0	153	93	0	0.268	1
404	-8.047996	107.263859	17.174	8957.7	-79554	-29165.2	10166.2	11506.9	16324.9	2010	12	27	22	40	51.08	2.9	0	0	264	143	0	0.514	1
406	-7.176286	107.459719	10.877	30596.3	16849.3	-35461.7	7594.6	9574.9	13591.8	2010	12	28	6	58	42.34	3.4	0	0	194	86	0	0.809	1
407	-7.545574	107.607347	59.402	46880.3	-23990.7	13062.9	9629.4	11320	9160.6	2011	1	5	18	21	9.63	2.9	0	0	369	91	0	1.253	1
408	-7.789638	107.406583	107.058	24711.2	-50982	60718.8	12170.3	21205.8	15470.8	2011	1	7	6	27	28.17	3	0	0	240	146	0	1.088	1
409	-7.452783	107.467738	84.887	31472.2	-13728.9	38547.3	6605.5	11176.1	9967.9	2011	1	9	14	9	31.31	3.5	0	0	323	128	0	0.931	1
410	-7.700782	107.360469	80.086	19624.1	-41155.3	33746.5	7953.4	13245.3	11748	2011	1	25	6	41	30.5	3.9	0	0	376	166	0	2.062	1
411	-7.884744	107.888772	59.896	77916.5	-61499.9	13556.5	6065.9	11266.5	11824.2	2011	2	2	1	20	10.64	3.7	0	0	200	35	0	0.258	1
412	-7.41803	107.522228	28.892	37489.4	-9885.5	-17447.4	5859.2	9011.7	10118.1	2011	2	12	3	17	2.17	3.7	0	0	353	104	0	0.853	1
413	-7.877719	107.275874	40.33	10285.3	-60723	-6009.3	7278.4	9636.3	15006.8	2011	2	14	14	7	21.92	4	0	0	525	278	0	0.937	1
414	-7.673119	107.37039	52.181	20719.8	-38096	5841.5	9678.5	12608	10279.9	2011	2	17	3	45	51.15	2.9	0	0	116	87	0	0.343	1
415	-7.46782	107.626974	26.591	49051.1	-15391.8	-19747.2	13214.6	17462.4	22825.1	2011	2	17	13	28	38.26	3.7	0	0	211	98	0	0.688	1
416	-7.539356	107.581049	30.502	43977.5	-23303	-15836.6	6732.9	10640.4	9847.9	2011	2	17	13	55	40.42	3.1	0	0	188	97	0	0.452	1
417	-7.828064	107.248318	42.809	7245	-55231.5	-3529.8	8063.2	11256.8	13618.3	2011	2	19	1	51	34.99	3.9	0	0	389	208	0	0.528	1
418	-7.87165	107.394644	55.218	23391.5	-60051.8	8879.2	7008.4	10562.2	11944.6	2011	2	20	16	12	56.31	4	0	0	363	249	0	0.647	1
419	-7.984568	107.402144	14.151	24215.9	-72539.5	-32187.1	8347.9	10796.6	9468.2	2011	3	4	6	44	59.7	3.4	0	0	211	118	0	1.14	1
420	-7.845701	107.33855	42.582	17202.1	-57182.1	-3757.5	13045.3	18484.5	16165.6	2011	3	15	16	3	15.67	2.8	0	0	231	180	0	0.532	1
421	-7.455717	107.629299	34.839	49308.5	-14053.3	-11500	13982	14177	15577.7	2011	3	22	22	31	18.46	3.1	0	0	417	117	0	1.049	1
422	-7.48943	107.668189	60.076	53600	-17781.7	13736.5	7352.9	9374.6	8379.9	2011	3	23	2	10	10.77	2.9	0	0	320	137	0	0.757	1
423	-7.786719	107.323983	42.691	15595.6	-50659.2	-3648.2	6991.1	8417.5	14826.3	2011	3	25	5	52	1.47	3.8	0	0	412	52	0	0.395	1
424	-7.78103	108.276407	97.84	120705.2	-50030	51500.4	7238.2	11553.7	11746.1	2011	4	4	15	14	16.5	4.3	0	0	353	144	0	0.476	1
425	-7.237563	108.420874	60.029	136731.9	10072.6	13689.9	12319.8	17637.5	14773.9	2011	4	13	10	19	45.7	2.5	0	0	124	71	0	0.482	1
426	-7.433261	107.667576	26.242	53535.7	-11569.9	-20097.7	7436.3	9394.8	11340.1	2011	4	17	10	26	8.85	3.6	0	0	496	0	0	1.079	1
428	-7.044606	107.3013	52.197	13103.2	31412	5857.3	9626.6	12658.4	12232.1	2011	4	22	23	21	59.85	3.1	0	0	256	0	0	0.728	1
429	-7.910525	107.876451	117.066	76554.7	-64351	70726.5	9998.9	12982.3	13670.3	2011	5	3	20	46	28.4	3.1	0	0	263	47	0	0.893	1
430	-7.736902	107.277278	36.224	10441.9	-45149.8	-10114.1	7447.1	9534.3	14786.9	2011	5	4	12	31	38.08	4.1	0	0	348	215	0	0.491	1
431	-7.761159	107.425051	65.93	26750.2	-47832.5	19591.8	6158.3	9312.9	12305.3	2011	5	18	6	11	51.28	3.5	0	0	358	57	0	0.43	1
432	-7.110896	108.196108	6.491	111927.1	24080.8	-39846.9	12897.9	8521.3	10089	2011	5	20	4	17	16.08	2.9	0	0	125	54	0	0.347	1
433	-7.258487	107.120185	102.902	-6899.4	7758.6	56562.3	6695.6	9957.6	10386	2011	5	25	3	45	34.37	3.2	0	0	369	132	0	0.786	1
434	-7.997068	107.381717	57.691	21961.8	-73921.9	11353	7978.9	12337.3	18864.4	2011	6	27	23	25	52.18	2.9	0	0	238	185	0	0.372	1
435	-7.940968	107.877194	63.992	76634	-67717.7	17653.2	6136.7	10705.5	12138.7	2011	7	18	6	25	1.66	3	0	0	155	113	0	0.298	1
436	-7.520815	107.620855	28.88	48372.8	-21252.5	-17459.6	10981.8	11473	13018.1	2011	7	21	7	59	13.29	2.9	0	0	199	114	0	0.606	1
438	-7.993542	107.379459	45.078	21712.8	-73532	-1261	10276.2	15361.6	20197.1	2011	8	7	9	13	17.5	3.7	0	0	362	0	0	0.367	1
439	-7.662404	107.200085	46.654	1922.6	-36911	314.8	7924.6	8137.6	10893.2	2011	8	7	21	29	20.45	2.6	0	0	154	119	0	0.32	1
440	-7.895796	107.414846	51.471	25620	-62722.1	5131.8	6543.8	9228.1	14251.4	2011	8	23	4	49	59.33	3.1	0	0	321	222	0	0.568	1
441	-7.486082	107.573996	34.798	43201.6	-17411.4	-11541.6	11542.7	9757.8	15243.6	2011	8	31	21	4	32.45	2.9	0	0	264	113	0	0.688	1
442	-7.838785	107.36694	22.877	20335.1	-56417.2	-23462.1	8765.2	13504.5	12866.8	2011	9	3	15	51	49.51	2.8	0	0	212	85	0	0.328	1
443	-7.716799	107.244275	73.181	6799.7	-42926.6	26841.9	6832.2	10371.9	12419.6	2011	9	5	2	36	24.21	3.8	0	0	356	212	0	0.643	1
444	-7.946828	107.365943	64.252	20222.6	-68365.8	17912.3	9271.4	16221.4	20420.2	2011	10	5	10	18	9.98	3.5	0	0	222	159	0	0.279	1
445	-7.209784	107.61792	9.648	48065.4	13144.7	-36690.6	7097.2	8519.3	11367.2	2011	10	6	0	46	1.3	4	0	0	365	93	0	0.717	1
446	-8.009922	107.31431	45.835	14524.3	-75343.5	-503.3	10022.5	14573	14718.7	2011	10	10	17	10	9.8	2.4	0	0	175	155	0	0.243	1
447	-7.724236	107.312771	50.837	14359.3	-43749.1	4498.2	10329.2	15408.9	12841	2011	10	11	13	7	32.01	3	0	0	219	145	0	0.5	1
448	-7.569557	107.494434	35.481	34415	-26642.9	-10858.3	7402.8	10441.6	12518.5	2011	10	20	20	25	17.57	2.5	0	0	224	120	0	0.625	1

449	-7.625096	107.101189	58.875	-8993.4	-32785	12535.8	8592.8	9868	14448.3	2011	10	21	19	5	42.57	3.3	0	0	315	130	0	0.463	1
451	-7.410489	107.514803	87.511	36670	-9051.5	41171.3	7506	11770.2	9863.7	2011	10	25	13	59	1.47	3.2	0	0	293	150	0	0.585	1
452	-7.991186	107.978504	56.304	87807.4	-73271.4	9964.5	9202.8	10054.9	13154.4	2011	10	30	18	59	24.2	2.7	0	0	158	72	0	0.433	1
453	-7.808814	107.299649	45.329	12909.9	-53102.6	-1010.5	7791.7	10517	12844.6	2011	10	31	0	25	9.61	4.3	0	0	424	234	0	0.565	1
454	-7.266878	107.03395	100.174	-16421.8	6830.7	53835.1	8050.3	10257	9471.6	2011	11	2	13	2	26.27	3.4	0	0	245	147	0	0.464	1
455	-7.020578	107.578154	55.115	43683	34069.3	8776.1	8735.1	8087.8	9757.6	2011	11	3	9	4	53.65	3.1	0	0	189	116	0	0.592	1
456	-7.571002	107.476056	7.711	32386.2	-26802.8	-38627.2	7578.2	12593.6	7532.4	2011	11	8	11	24	4.63	2.7	0	0	118	93	0	0.244	1
457	-8.015504	107.335756	50.113	16890.5	-75960.8	3773.4	7795.8	8810.3	12320.9	2011	11	8	15	21	34.99	3.1	0	0	210	98	0	0.353	1
458	-7.298434	107.580097	12.127	43884.3	3340.8	-34212.6	9169.4	11451.8	13996.6	2011	11	9	2	9	0.88	3.3	0	0	281	149	0	0.516	1
459	-7.943991	107.339624	51.427	17318.7	-68052.1	5087.6	6500.1	7723.4	15521.2	2011	11	14	13	21	27.08	3	0	0	312	203	0	0.449	1
460	-7.826032	107.75691	69.595	63370.3	-55006.8	23255.3	6221.8	10153.4	11404.9	2011	11	25	0	20	59.88	3	0	0	269	87	0	0.305	1
461	-8.032242	107.301181	38.701	13075.5	-77811.9	-7638.6	10013.7	12875.5	17356	2011	11	27	4	18	1.51	3.3	0	0	192	104	0	0.301	1
462	-7.790547	107.426733	76.518	26934.9	-51082.5	30179.2	15215.4	23999.2	13834	2011	11	29	10	27	58.93	2.7	0	0	161	123	0	0.475	1
463	-7.445309	107.579903	33.06	43855.7	-12902.2	-13279.5	6743.4	10905.9	8437.9	2011	12	1	4	53	17.58	2.8	0	0	184	83	0	0.323	1
464	-7.803625	107.286285	52.743	11435.1	-52528.8	6403.9	6531.6	9898.5	18228.5	2011	12	5	15	51	47.04	2.9	0	0	266	185	0	0.42	1
465	-7.801943	107.287942	40.142	11618	-52342.8	-6197.2	7155.5	7676.4	17771	2011	12	9	21	59	5.48	2.8	0	0	219	141	0	0.382	1
466	-7.626852	107.349137	56.397	18375	-32979.3	10058.2	9633.6	17450.3	19394.3	2011	12	13	10	58	58.06	2.8	0	0	170	110	0	0.378	1
467	-7.755699	107.881876	80.928	77167	-47228.6	34588.4	6251.6	10526.3	12881.2	2011	12	14	3	12	38.88	3.6	0	0	250	66	0	0.323	1
468	-7.914683	107.212347	3.178	3275.1	-64810.8	-43160.9	9260.8	13235.1	12981	2011	12	16	11	4	27.88	3.1	0	0	252	167	0	0.449	1
469	-7.900202	107.029304	14.966	-16922.7	-63209.4	-31372.3	10752	10184.8	12468.2	2011	12	20	22	46	35.14	3.6	0	0	224	126	0	0.495	1
470	-7.999544	107.251837	36.064	7631.8	-74195.7	-10274.9	8984.2	9230.2	16201.7	2011	12	23	16	36	52.82	3.1	0	0	301	119	0	0.379	1
471	-7.404381	107.532403	92.092	38613.4	-8376	45752.9	5348.5	8919.1	10972	2011	12	24	15	50	48.74	2.9	0	0	228	135	0	0.84	1
472	-8.062996	107.245229	37.173	6902.2	-81212.9	-9165.7	8373.7	8700.6	16170.4	2011	12	27	13	15	50.37	3.8	0	0	275	108	0	0.417	1
473	-7.788583	107.070154	40.073	-12416.7	-50865.3	-6266.4	9625	11802.4	17279.5	2011	12	27	22	54	18.99	3.5	0	0	211	88	0	0.314	1
475	-7.537535	107.389026	62.687	22780.2	-23101.6	16347.8	8599.5	14379.7	12759.4	2011	12	29	11	36	44.67	3.1	0	0	207	154	0	0.515	1
476	-6.924901	107.310102	54.928	14077.2	44650.3	8588.8	8747.6	7941.4	8224.7	2012	1	1	12	24	5.57	3.2	0	0	138	84	0	0.529	1
477	-7.893155	107.32825	54.092	16064.6	-62430.1	7752.5	7324.4	10517.1	15763.2	2012	1	11	22	54	46.89	3.8	0	0	404	291	0	0.61	1
478	-7.03879	108.174153	8.238	109510.9	32055.2	-38099.8	12607.7	14491.2	10361.5	2012	2	7	18	16	5.63	3.1	0	0	98	28	0	0.614	1
479	-7.311751	107.545206	4.542	40031	1868.1	-41796.3	5731.1	7688.9	6482.7	2012	2	26	14	14	18.58	3.9	0	0	440	185	0	0.73	1
480	-7.248962	107.592922	12.54	45302.9	8811.9	-33799.3	7036.6	7747.7	7599.9	2012	2	26	15	8	3.23	3.1	0	0	295	116	0	0.492	1
481	-7.162828	107.674594	23.672	54326.7	18337.6	-22666.1	12869.3	9740.1	19911.5	2012	2	29	21	55	52.5	3.2	0	0	227	82	0	0.362	1
482	-7.229302	107.6172	7.849	47984.8	10986.2	-38489.6	5572.4	6983.3	8039.6	2012	3	7	12	50	44.71	3.4	0	0	269	124	0	0.6	1
483	-7.304975	107.82892	144.679	71358.8	2617.4	98339.7	8705.7	15356.3	12312.7	2012	3	9	8	26	42.93	3.6	0	0	266	52	0	1.877	1
484	-7.490304	107.530181	42.746	38364.3	-17878.3	-3593	8483.2	10997.8	10152.7	2012	3	13	14	31	0.88	3	0	0	177	77	0	0.855	1
485	-7.858796	107.052489	3.617	-14365.1	-58630.2	-42722.6	10284.9	12177.7	11600.8	2012	3	19	19	36	56.57	3	0	0	173	88	0	0.478	1
486	-7.883105	107.392576	8.179	23162.9	-61318.6	-38159.8	8731.5	11847.7	11536.2	2012	3	22	10	43	31.28	3.4	0	0	215	0	0	0.484	1
487	-7.94668	107.256426	26.866	8138.6	-68349.5	-19472.9	9242.2	12166.4	23064.4	2012	3	28	1	51	31.24	4.1	0	0	451	93	0	0.631	1
488	-7.935804	107.274403	27.502	10122.3	-67146.6	-18836.8	15746.5	19254.1	32863	2012	4	14	23	56	32.84	3.9	0	0	346	119	0	0.622	
491	-7.321123	107.459743	1.376	30594	831.6	-44962.3	6984.1	8294.7	10918.8	2012	5	3	14	39	15.57	2.9	0	0	221	109	0	0.383	1
493	-7.31872	107.461882	8.34	30830.3	1097.4	-37997.9	5244.8	9073.4	6395.8	2012	5	3	18	9	6.51	2.8	0	0	161	62	0	0.26	1
494	-7.038019	108.442849	8.75	139188.8	32140.4	-37588.8	13320.4	18642.4	12589.5	2012	5	14	0	31	22.23	2.7	0	0	107	52	0	0.862	1
495	-7.907669	107.289896	55.595	11832.2	-64035.2	9255.3	7559.5	11362.7	14700.3	2012	5	16	8	25	18.57	3.5	0	0	484	123	0	0.582	1
496	-7.051657	107.219055	12.268	4019.1	30632.2	-34069.8	14781	17355.2	37224	2012	5	29	22	59	13.69	3.4	0	0	154	9	0	0.508	1

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497	-7.297015	107.347612	151.762	18213.3	3497.8	105423	8325.1	11912.3	10493.1	2012	6	11	21	7	44.25	3.6	0	0	242	95	0	0.74	1
498	-7.835593	107.241608	47.329	6504.4	-56064.2	990.1	9334.7	14010.8	25205.6	2012	6	15	22	53	5.37	3.7	0	0	557	203	0	0.584	1
499	-7.947445	107.610299	67.274	47184.5	-68434	20935.1	7074.3	10436	12381.1	2012	6	20	13	9	5.31	4.3	0	0	356	146	0	0.55	1
500	-7.67059	107.194516	69.709	1307.9	-37816.3	23369.9	7410.8	10904.4	13904.6	2012	6	27	4	55	29.24	5.1	0	0	436	154	0	0.611	1
501	-7.958275	107.143406	16.838	-4331.8	-69631.7	-29501.5	10716.9	13347.6	23202.6	2012	7	7	0	27	29.41	3.8	0	0	225	94	0	0.385	1
502	-7.917094	107.2643	5.937	9007.8	-65077.5	-40402.4	9062.2	9801.7	9344.5	2012	7	16	20	42	49.76	3.3	0	0	365	77	0	0.452	1
503	-7.921909	107.262646	6.634	8825.2	-65610	-39705	8440.8	11290.2	14317.4	2012	7	23	19	32	26.46	3.9	0	0	327	55	0	0.629	1
504	-7.843311	107.277956	42.959	10515.5	-56917.8	-3380.4	7968.7	12143.9	18696	2012	7	23	20	0	5.77	3.9	0	0	531	148	0	0.587	1
505	-8.035613	107.773913	14.222	65230.9	-78184.6	-32116	17130.9	26455	23810.8	2012	7	27	9	40	27.69	3.8	0	0	152	59	0	0.763	1
506	-6.870553	108.163962	117.911	108405.1	50660.6	71571.4	26057.9	33483.6	30345.1	2012	8	10	7	31	44.4	3.1	0	0	46	26	0	1.499	1
507	-7.643605	107.110802	59.51	-7932.1	-34832	13170.6	10243.7	16191.2	21982.1	2012	8	31	23	37	14.89	3.6	0	0	364	133	0	0.661	1
508	-7.44343	107.545418	13.273	40048.6	-12694.4	-33065.5	5640.8	9327.7	9426.4	2012	9	6	21	13	10.19	3.9	0	0	301	117	0	0.633	1
509	-7.924347	107.258541	11.585	8372.2	-65879.6	-34754.7	12805.1	22200.6	40476.2	2012	9	22	2	48	23.4	3.9	0	0	357	127	0	0.538	1
510	-7.815643	107.281794	44.1	10939.3	-53857.9	-2239.5	8813.1	11548.3	14480.2	2012	10	14	0	14	24.04	4.2	0	0	494	228	0	0.597	1
511	-7.369751	108.422439	11.151	136884.7	-4546.2	-35186.8	13381.9	11086.2	13989	2012	11	4	8	59	8.95	2.9	0	0	113	57	0	0.301	1
512	-6.835671	107.995584	311.786	89807.4	54518.3	265446.5	15306.5	28563.4	16673.5	2012	11	12	18	28	41.76	3.1	0	0	73	15	0	0.189	1
513	-7.907232	107.046974	31.786	-14972.8	-63986.9	-14553.5	12670.8	15985.5	40849.7	2012	11	14	6	26	35.34	3.6	0	0	313	121	0	0.497	1
514	-7.650201	107.804748	137.902	68663.1	-35561.5	91562.6	9239.5	13670.4	13323.6	2012	11	20	4	21	53.83	3.2	0	0	211	93	0	0.784	1
515	-7.275401	107.181699	124.029	-106.8	5888.1	77689.3	7994.6	11131.4	10622.9	2012	12	15	8	45	49.7	4.8	0	0	473	49	0	1.51	1
516	-7.718852	107.685506	90.835	55497.3	-43153.6	44496.1	6808.3	11116.5	11399.6	2012	12	21	17	16	42.7	3.4	0	0	440	112	0	0.457	1
517	-7.820908	107.291416	43.911	12001.1	-54440.2	-2428	7311.5	9702.6	13792.1	2012	12	30	12	36	8.9	3.9	0	0	438	177	0	0.495	1
518	-8.009505	107.276187	14.313	10318.2	-75297.4	-32025.5	11107.4	15222.1	21294	2013	1	1	11	55	36.11	4.4	0	0	263	77	0	0.566	1
519	-7.787985	107.568713	4.392	42603.8	-50799.2	-41945.8	7105.7	7897.1	6768.5	2013	1	13	13	24	11.92	3.3	0	0	252	111	0	0.472	1
520	-7.513638	107.619565	103.309	48230.7	-20458.9	56969.8	7213.5	11773.2	12156.4	2013	1	31	0	16	24.08	2.7	0	0	188	77	0	0.493	1
521	-7.127697	108.122825	245.958	103831.7	22222.8	199618.4	11507.5	19279.4	10972.5	2013	2	5	1	5	13.48	3.1	0	0	45	14	0	0.161	1
523	-7.348717	107.154324	127.489	-3129.3	-2220	81149.6	8018.4	11184.7	10953.2	2013	2	26	14	5	59.36	5.4	0	0	458	79	0	0.796	1
524	-7.626133	107.17783	52.059	-533.8	-32899.8	5719.6	12299.1	12813.2	25450.4	2013	3	3	20	55	39.46	3.2	0	0	126	69	0	0.249	1
526	-8.116477	107.892386	48.849	78294.3	-87127.5	2510	8831.5	12946.2	13770.7	2013	3	8	10	43	31.8	4.4	0	0	201	84	0	0.493	1
527	-7.935892	107.020087	9.789	-17939	-67156.3	-36549.2	11004.9	13372.4	10192.7	2013	3	18	21	16	34.64	3.6	0	0	178	75	0	0.351	1
528	-7.893341	107.100628	40.569	-9052.5	-62450.6	-5770	8866.8	10645.1	19187.5	2013	3	27	13	35	43.28	3.4	0	0	247	155	0	0.522	1
529	-7.383889	107.731805	130.328	60630.1	-6109.7	83989.1	7265.6	11948.9	11281.5	2013	4	15	8	19	11.03	4.2	0	0	263	48	0	0.653	1
530	-7.350557	107.618666	19.568	48140.2	-2423.5	-26771.2	6344.6	7501.5	9419.8	2013	5	1	20	30	44.26	3	0	0	311	176	0	0.653	1
531	-7.354423	107.575417	13.05	43364.8	-2851	-33288.1	8819.4	9799.6	32100.8	2013	5	2	0	38	10.27	3.5	0	0	320	166	0	0.562	1
532	-7.379584	107.559377	9.696	41592.7	-5633.7	-36642.5	5874.5	8598.5	5560.1	2013	5	5	0	47	3.15	4	0	0	350	158	0	0.742	1
533	-7.354856	107.748492	45.154	62474.5	-2898.9	-1185	8596.8	9187.1	8094.8	2013	5	6	1	26	25.92	3.1	0	0	210	126	0	0.799	1
534	-7.33909	107.629912	26.829	49382.6	-1155.4	-19509.3	5913.8	9159.3	10696.7	2013	5	6	4	1	11.07	3.7	0	0	462	114	0	0.69	1
535	-7.388343	107.561921	13.338	41873.1	-6602.3	-32999.9	5248.4	8266.5	7699.6	2013	5	6	11	11	58.95	4	0	0	368	115	0	0.646	1
536	-7.37128	107.52472	7.584	37766.5	-4715.3	-38754.5	5152.2	7714.9	5316.9	2013	5	6	17	13	1.28	3.3	0	0	251	109	0	0.543	1
537	-7.333306	107.585864	16.325	44519.3	-515.7	-30013.2	5683.6	7666.6	13071.7	2013	5	6	17	55	2.85	3.3	0	0	336	117	0	0.709	1
538	-7.504519	107.359512	34.736	19522.8	-19450.4	-11602.9	23476.3	27148.2	31628.5	2013	5	7	10	11	59.59	3.3	0	0	162	66	0	0.74	1
539	-7.367745	107.642643	30.101	50786.7	-4324.4	-16238.6	9476.8	9766.2	8832.1	2013	5	7	22	27	6.13	3	0	0	179	121	0	0.336	1
540	-7.3702	107.583119	16.072	44214.4	-4595.8	-30266.1	6120.4	8256.1	12683.9	2013	5	7	23	12	38.98	3.5	0	0	322	173	0	0.602	1
541	-7.27532	107.692806	12.871	56331	5897	-33467.2	8837.8	6392.3	11961.5	2013	5	9	10	49	53.78	3.4	0	0	185	46	0	0.295	1

542	-7.379664	107.613324	28.792	47548.9	-5642.5	-17547.7	7382.4	8614.7	11564.9	2013	5	10	0	35	2.59	3.8	0	0	289	168	0	0.505	1
543	-7.4203	107.566372	7.792	42363	-10136.5	-38546.1	5230.9	8372.1	6375.8	2013	5	10	2	8	10.24	4.1	0	0	331	146	0	0.695	1
544	-7.382167	107.566055	14.856	42329.8	-5919.3	-31482.1	5150.1	8008.9	12317.5	2013	5	11	2	35	49.61	3.5	0	0	270	143	0	0.485	1
545	-7.435765	107.596843	45.3	45726.4	-11846.8	-1039.5	9359	9906.8	12143.3	2013	5	11	23	49	17.13	3.1	0	0	201	115	0	0.702	1
546	-7.754141	107.048806	79.888	-14773.2	-47056.3	33548.9	9070.6	15201.9	16028	2013	5	12	13	35	11.84	3.3	0	0	186	87	0	0.379	1
547	-7.431682	107.534665	6.645	38862	-11395.3	-39693.2	8851.5	11962.7	16574.1	2013	5	13	12	45	1.49	4	0	0	289	139	0	0.718	1
548	-7.293874	107.720839	139.225	59425.2	3845.1	92885.8	7461	13075.2	10925.5	2013	5	15	6	34	8.05	3.8	0	0	277	83	0	0.742	1
549	-7.375332	107.546154	8.575	40132.9	-5163.4	-37763.6	6460.1	9427.2	13785.7	2013	5	17	5	9	12	4	0	0	342	103	0	0.557	1
550	-7.38116	107.531942	4.65	38563.4	-5807.9	-41688.7	5420.2	7850.6	5343.2	2013	5	21	13	47	4.68	3.3	0	0	250	52	0	0.48	1
551	-7.405144	107.541604	8.581	39629.2	-8460.3	-37757	5185.3	8169.5	5348.3	2013	5	21	16	11	16.36	3.1	0	0	237	91	0	0.618	1
552	-7.380906	107.567835	14.257	42526.5	-5779.9	-32081	6642.7	8182.6	8019	2013	5	23	16	17	43.26	3.4	0	0	174	113	0	0.4	1
553	-7.411113	107.552867	19.45	40872.4	-9120.5	-26888.6	15573.4	17292.8	34330.2	2013	5	24	3	28	48.63	3.7	0	0	255	84	0	0.39	1
554	-7.191359	107.720672	44.655	59413.6	15182.3	-1682.7	11976.3	9466.8	8998.1	2013	6	18	11	41	5.19	3.4	0	0	150	92	0	0.414	1
555	-7.852239	107.293164	48.436	12193.5	-57905.1	2096.9	10270.9	14906.8	18658	2013	8	15	15	27	10.59	3.7	0	0	401	117	0	0.536	1
556	-7.779056	108.031258	92.294	93650.8	-49811.7	45955.1	6437.9	10188.4	11911.6	2013	9	23	13	41	33.39	4.4	0	0	333	118	0	0.433	1
557	-7.922242	108.064125	1.37	97262	-65646.8	-44968	9275.2	12998.1	14575.5	2013	10	11	6	14	32.88	3	0	0	107	74	0	0.32	1
558	-7.814969	107.234664	58.499	5738.3	-53783.4	12159.9	23871.3	37098.9	48178.5	2013	10	19	18	7	10.4	3	0	0	431	195	0	0.959	1
559	-7.8253	107.710197	83.016	58215.4	-54925.9	36677.1	7756.1	11046.8	12367.1	2013	10	23	4	11	47.96	3.7	0	0	337	137	0	0.818	1
560	-7.835136	107.281373	42.343	10892.6	-56013.7	-3996	7991	10673.4	14927	2013	10	23	11	14	20.37	4.3	0	0	706	167	0	0.58	1
561	-7.971498	107.226746	22.635	4863.6	-71094.1	-23703.9	8205.9	10483.9	13857.3	2013	10	27	12	37	38	3.4	0	0	314	134	0	0.575	1
562	-7.205724	107.771115	5.751	64983.1	13593.7	-40587.6	8417.5	7972.5	10774.8	2013	11	4	4	41	44.36	3.8	0	0	325	107	0	0.537	1
563	-7.958122	107.075849	19.26	-11786	-69614.8	-27078.4	9983.3	10737.9	16421.7	2013	11	11	22	27	57.67	3.5	0	0	184	82	0	0.322	1
564	-7.789795	108.282102	136.33	121332.5	-50999.3	89990.8	10176.5	14257.7	14098.7	2013	11	22	4	24	54.56	4.1	0	0	160	58	0	0.835	1
565	-7.3395	108.240671	153.886	116819.4	-1200.7	107547.1	13538.5	20175	17035.4	2013	11	24	19	58	16.81	4.9	0	0	111	43	0	1.093	1
566	-7.820913	107.299	47.932	12838	-54440.7	1592.8	7166.3	9870.7	14009.7	2013	11	26	13	34	40.79	3.9	0	0	489	168	0	0.509	1
567	-7.623818	108.343958	128.058	128183.1	-32643.8	81718.7	10192.9	16139	13733.6	2013	12	13	1	16	49.75	5.1	0	0	235	77	0	0.88	1
568	-7.56524	107.527086	93.592	38019.5	-26165.5	47252.4	8212	14378.5	10713.9	2013	12	16	14	50	57.01	2.2	0	0	193	51	0	0.426	1
569	-7.033061	107.13801	129.795	-4932.3	32688.7	83455.6	8005.9	11416.2	9675.2	2013	12	19	16	41	46.83	4.5	0	0	619	119	0	0.857	1
570	-7.317663	108.220628	46.033	114609.2	1214.3	-306.1	10756.9	11632.8	11524.3	2014	1	3	7	46	46.63	2.8	0	0	169	98	0	0.593	1
571	-7.760436	108.275888	92.448	120650.7	-47752.5	46109.3	8465	12416.5	12340.2	2014	1	3	19	22	44.08	4.6	0	0	376	65	0	0.934	1
572	-7.96596	107.811132	46.245	69342.7	-70481.6	-93.9	8028.1	10453.9	12996.5	2014	1	11	7	10	44.26	2.9	0	0	168	75	0	0.297	1
573	-7.226672	107.598126	25.26	45878.7	11277	-21079.1	10892.5	18973.1	23608.6	2014	1	14	6	45	38.26	2.5	0	0	199	136	0	0.498	1
574	-7.496329	107.408616	82.894	24943.9	-18544.6	36554.7	7770.4	11259.8	11065.2	2014	1	15	18	14	38.43	3.9	0	0	419	73	0	0.516	1
575	-7.560703	108.26764	126.272	119767.6	-25663.8	79933.1	10204.2	16008.1	14557.1	2014	1	16	0	7	11.75	3.1	0	0	228	71	0	0.292	1
576	-7.126876	107.034665	91.373	-16345.3	22313.6	45034.2	7475.4	9930.7	9194.8	2014	1	26	14	1	47.03	3.5	0	0	455	124	0	0.804	1
577	-7.985096	107.899691	54.057	79112.3	-72597.9	7717.9	6104	9259	11474.7	2014	1	27	3	15	21.41	3.2	0	0	201	78	0	0.341	1
578	-7.159678	107.328308	4.853	16084.2	18686	-41485.6	22064.3	25263.7	53215.6	2014	1	27	10	52	13.52	3.2	0	0	269	53	0	0.662	1
579	-7.189533	108.305045	2.498	123947.8	15384.3	-43840.5	10673.2	12088.7	8882.6	2014	2	3	17	22	38.66	3.2	0	0	187	100	0	0.62	1
580	-7.821867	107.896115	66.844	78732.6	-54546.3	20504.5	7172.1	9991.9	12264.9	2014	2	5	11	28	0.84	2.7	0	0	220	31	0	0.254	1
581	-7.759751	107.111181	60	-7889.2	-47676.7	13661.2	14957.2	19156.2	20287.6	2014	2	17	17	30	10.95	2.6	0	0	211	50	0	0.262	1
582	-7.964648	106.999468	19.999	-20213.5	-70336.5	-26339.9	11052.9	10034.4	19751.7	2014	2	18	21	37	49.69	2.9	0	0	218	110	0	0.445	1
583	-6.989115	108.132721	229.504	104940.4	37548.8	183164.3	9160.4	15973.3	8914.3	2014	2	26	2	36	54.34	4.6	0	0	88	25	0	0.27	1
584	-7.261652	107.292456	153.826	12123.5	7408.6	107487.1	8918	12856.4	10416.1	2014	2	28	5	20	40.23	3.8	0	0	345	138	0	0.763	1

585	-7.568459	107.105716	61.068	-8494.2	-26521.5	14728.8	8200.6	11893.7	15181.9	2014	3	4	3	17	49.11	3.8	0	0	326	113	0	0.542	1
586	-7.537304	107.125046	7.522	-6360.7	-23076	-38816.4	9778.8	7297.2	9340.4	2014	3	11	23	43	44.93	3	0	0	201	66	0	0.417	1
587	-7.626976	107.878574	109.078	76813.8	-32993	62738.6	7439.6	12344.8	11981.6	2014	3	12	7	2	43.94	3.1	0	0	260	77	0	0.484	1
588	-7.75086	107.157345	51.822	-2794.5	-46693.5	5482.7	7971.8	11211.5	14318.3	2014	3	28	20	56	43.54	3.1	0	0	316	186	0	0.41	1
589	-7.882694	107.293977	8.073	12282.9	-61273.2	-38264.8	8193.7	10642.2	8904.9	2014	4	9	18	22	41.31	4	0	0	254	63	0	0.427	1
590	-7.395101	107.717638	10.462	59065.2	-7349.6	-35876.1	6536.1	9076	11042.2	2014	4	30	18	0	41.6	3	0	0	250	96	0	0.797	1
591	-7.807755	107.306179	48.118	13630.5	-52985.6	1778.4	8851.9	10124.8	10027	2014	5	1	19	35	13.95	3.1	0	0	158	124	0	0.248	1
592	-7.26779	107.675229	17.78	54390.6	6729.7	-28558.4	6840.9	7633.9	26879.5	2014	5	31	16	21	45.8	3.3	0	0	303	135	0	0.577	1
593	-7.87088	107.265584	40.1	9149.9	-59966.7	-6239.1	7622.9	9587.2	15293.3	2014	6	15	5	48	20.84	3.6	0	0	307	135	0	0.364	1
594	-7.959944	107.244045	45.091	6772.4	-69816.3	-1247.2	7027.8	6552.6	13354.8	2014	6	15	6	34	34.74	3.2	0	0	382	219	0	0.583	1
595	-8.026971	107.063596	9.721	-13136.8	-77228.9	-36617.4	20473.3	21301.4	19861.3	2014	6	15	15	29	12.23	2.4	0	0	104	62	0	0.267	1
596	-7.795079	107.310404	41.034	14097	-51583.7	-5305	7062.3	9825.6	16099	2014	6	27	19	23	25.31	4.3	0	0	313	167	0	0.461	1
597	-7.90396	107.308894	57.264	13928.5	-63625	10924.9	9095.2	11902.5	17279.9	2014	7	5	17	16	40.87	3.2	0	0	193	128	0	0.255	1
598	-7.198377	107.618334	19.408	48111.7	14406.2	-26930.6	9294.9	8085.5	13873	2014	7	6	12	44	38.27	3	0	0	260	146	0	0.577	1
599	-7.269836	107.645443	33.544	51101.3	6503.5	-12794.8	6230.1	7452.6	10059.6	2014	7	6	12	55	53.32	3.2	0	0	300	119	0	0.672	1
600	-7.219916	107.607195	8.545	46880.5	12024.3	-37793.6	6417.4	7340.1	8390.9	2014	7	6	12	58	1.26	3	0	0	255	149	0	0.489	1
601	-7.244411	107.605472	16.718	46689	9315.3	-29620.1	9112.7	9061.2	17313.5	2014	7	6	13	10	39.29	3.1	0	0	314	172	0	0.52	1
605	-7.154046	107.720496	20.215	59396.6	19308.9	-26123.5	20569.7	13958.6	31323.7	2014	7	6	14	44	35.93	3.2	0	0	266	152	0	0.488	1
606	-7.318629	107.590038	13.612	44980.9	1107.4	-32727.6	6158.7	7601.2	8000.6	2014	7	28	0	10	8.14	2.3	0	0	256	152	0	0.361	1
607	-7.212991	107.739183	4.145	61456.3	12790.1	-42192.8	6643.7	7575.8	9538.5	2014	8	14	18	2	45.82	3.2	0	0	339	75	0	0.473	1
608	-7.648587	107.547032	13.679	40217.5	-35383	-32659.1	7397	7857.3	10950.9	2014	8	14	21	9	51.88	2.8	0	0	123	70	0	0.282	1
609	-7.977377	107.135702	53.157	-5181.8	-71744.3	6817.6	10200.3	11377.3	18983.2	2014	8	16	16	26	20.37	2.8	0	0	250	162	0	0.485	1
610	-7.226962	107.717233	5.106	59031.4	11245	-41232.6	7854.8	8305.1	6463.6	2014	8	16	20	12	17.73	3.4	0	0	319	118	0	0.496	1
611	-7.271883	107.40102	11.477	24111.3	6277.2	-34861.3	7996.9	10312.8	10327.7	2014	8	22	7	6	49.27	3	0	0	247	106	0	0.519	1
612	-7.767391	107.76502	60.916	64269.6	-48521.7	14577	5573.7	10443.5	12568	2014	9	16	8	34	34.02	3	0	0	212	137	0	0.44	1
613	-7.878647	107.226774	14.47	4867.2	-60825.6	-31868.8	8258.8	9988	9993.3	2014	9	20	7	32	0.92	3.2	0	0	364	155	0	0.622	1
614	-7.885814	107.251109	35.394	7552.5	-61618.2	-10945.5	9817.1	12393.2	18517.7	2014	9	29	17	26	26.93	3.1	0	0	469	226	0	0.567	1
615	-7.357536	107.577973	8.926	43646.9	-3195.4	-37412.2	7223.9	11208.4	15890.8	2014	10	2	6	48	30.32	3.6	0	0	422	195	0	0.644	1
616	-7.525313	107.535979	14.018	39002.9	-21750	-32319.7	7907.1	10993.4	11579.3	2014	10	2	11	53	48.31	3	0	0	227	112	0	0.436	1
617	-7.373769	107.567864	12.816	42529.9	-4990.5	-33522.3	5569.2	8424.8	6862.3	2014	10	8	5	46	45.61	4.3	0	0	411	18	0	0.575	1
618	-7.418175	107.55307	8.857	40894.5	-9901.5	-37481.2	5404.5	9490.9	5958.7	2014	10	9	17	47	50.75	2.8	0	0	225	114	0	0.456	1
619	-7.537329	107.493871	5.375	34354.1	-23078.9	-40963.3	5483.3	10030.8	7304.6	2014	10	10	13	8	4.5	3.7	0	0	332	111	0	0.653	1
620	-7.355566	107.584271	11.828	44342.3	-2977.5	-34509.8	6720.4	8715.7	6845	2014	10	21	8	2	50.9	3.6	0	0	397	195	0	0.867	1
621	-7.834946	107.280778	42.821	10827	-55992.6	-3518.3	6923.3	10561.8	14516.4	2014	11	5	21	41	18.81	4	0	0	760	190	0	0.757	1
622	-7.824435	107.280168	42.933	10759.8	-54830.3	-3405.7	7235.6	10047.1	14874.1	2014	11	21	13	23	50.27	3.8	0	0	531	101	0	0.582	1
623	-7.231824	107.7294	2.663	60374.7	10707.3	-43675.3	12078.2	8376.2	11622.7	2014	11	28	21	6	3.07	3.5	0	0	307	82	0	0.48	1
624	-7.907417	107.77889	76.508	65789.7	-64007.3	30168.5	6181.8	9291.3	11832.1	2014	12	15	10	53	14.77	3.9	0	0	349	87	0	0.347	1
625	-7.475294	107.12214	86.516	-6681.9	-16218.4	40176.8	6478.2	10162.8	11381.5	2014	12	26	14	8	41.01	5	0	0	455	114	0	1.015	1
626	-7.841939	107.283928	44.368	11174.5	-56766	-1970.5	8382	11348.5	14117.8	2015	1	12	9	20	27.93	3.5	0	0	489	147	0	0.45	1
627	-7.380759	107.798713	150.678	68017.6	-5763.6	104338.5	9365	14143	11755.4	2015	2	12	10	29	45.31	4.6	0	0	237	27	0	0.924	1
628	-7.899422	107.042461	11.554	-15470.9	-63123.1	-34783.8	13902.8	13885.5	27281.5	2015	2	26	11	54	21.28	3.5	0	0	135	66	0	0.338	1
629	-7.446743	107.753557	81.876	63027.3	-13060.8	35536.6	10343.5	11267	9780.3	2015	3	21	21	8	33.69	2.8	0	0	195	83	0	0.439	1
630	-7.194996	107.607731	5.43	46940.9	14780.2	-40907.9	7955.1	9565.5	10111.3	2015	3	28	10	25	26	3.3	0	0	203	14	0	0.498	1

631	-7.700894	107.516612	19.678	36857.7	-41167.7	-26660.7	9458.1	9270.1	12146.4	2015	5	13	11	20	32.24	3.1	0	0	148	12	0	0.417	1
632	-7.28285	107.689027	8.977	55913.2	5064.2	-37361	7970.7	6681.2	8693.7	2015	5	26	2	28	12.33	3.3	0	0	187	7	0	0.343	1
633	-7.856665	107.287441	37.734	11562	-58394.5	-8605	7370.8	8337.3	16724.9	2015	6	25	5	54	43.25	3	0	0	298	149	0	0.373	1
634	-7.205009	107.354168	10.164	18939.2	13672.8	-36174.2	8985	12137.4	12943.9	2015	7	1	18	38	28.73	2.8	0	0	230	69	0	0.584	1
635	-7.638932	108.014146	105.165	91776.9	-34315.3	58826.1	7239.5	11755.3	12300	2015	7	12	20	43	49.35	3.4	0	0	248	83	0	0.471	1
636	-7.69861	107.351321	50.886	18614.5	-40915.1	4546.8	10028.4	9366.5	13235	2015	7	27	0	0	29.77	3.6	0	0	290	80	0	0.722	1
637	-7.544336	107.614178	101.382	47634.5	-23853.8	55043.2	6558.8	9520.4	11692.1	2015	9	13	7	10	0.9	3.8	0	0	458	174	0	0.802	1
638	-7.943221	107.898543	62.913	78989.4	-67966.9	16573.5	6166	10592.5	11644.9	2015	9	24	0	1	54.38	2.5	0	0	183	66	0	0.305	1
639	-7.817401	107.957032	67.957	85455.4	-54052.4	21617.5	6018.7	10968.1	12647.5	2015	9	24	0	3	19.05	2.4	0	0	229	60	0	0.299	1
640	-7.643465	107.356014	47.778	19133.6	-34816.6	1438.4	9665.4	11755.7	15049.7	2015	9	30	16	37	22.87	2.4	0	0	173	96	0	0.517	1
641	-7.877115	107.074216	13.015	-11967.2	-60656.1	-33324.5	12780.9	12538.7	11155.7	2015	9	30	22	47	5.82	2.9	0	0	216	64	0	0.35	1
642	-7.13918	107.100062	13.828	-9122.8	20952.9	-32510.7	11598.3	11345.9	13306	2015	10	5	15	57	55.22	2.4	0	0	189	63	0	0.47	1
643	-7.171925	107.085742	22.038	-10703.8	17331.6	-24300	16137.7	17942.9	21091.1	2015	10	5	18	6	46.92	2.4	0	0	208	52	0	0.49	1
644	-7.867578	108.168579	76.166	108794.5	-59601.4	29826.8	6215.4	11113.4	11696.4	2015	10	9	22	16	43.86	2.4	0	0	201	98	0	0.422	1
645	-7.557644	108.319859	113.728	125532.4	-25325.5	67389.1	9495.3	15710.6	13452.2	2015	10	18	0	42	31.61	2.9	0	0	251	73	0	0.404	1
646	-7.90344	107.272619	6.894	9925.8	-63567.4	-39445.7	8488.9	9597.9	10152.2	2015	11	26	19	38	57.36	3.6	0	0	301	54	0	0.515	1
647	-7.283372	107.823442	133.543	70755.5	5006.5	87203.6	10514.5	14123.9	12720.5	2015	12	7	8	35	54.04	3.6	0	0	273	58	0	0.661	1
648	-7.74827	107.301553	52.617	13120.9	-46407.1	6278.2	7116.9	10030.4	12685.3	2015	12	21	4	46	10.64	3.3	0	0	397	212	0	0.562	1
649	-7.326352	107.607993	13.497	46963.1	253.3	-32842.7	5514.6	10026.9	9403.7	2015	12	28	7	46	55.18	3.1	0	0	387	41	0	0.536	1
650	-7.735041	108.157601	95.071	107599.4	-44944.1	48731.4	6603.3	10340.9	12074.3	2015	12	30	23	36	38.49	3.1	0	0	219	98	0	0.412	1
652	-7.161471	107.838117	7.976	72385.7	18487.7	-38363	22380.5	23308.2	17421	2016	1	4	8	52	15	2.3	0	0	184	28	0	0.378	1
653	-7.827611	107.402552	63.542	24265.3	-55181.4	17202.4	7369.9	10295.5	12447.4	2016	1	4	17	31	57.89	3.6	0	0	286	159	0	0.367	1
654	-7.8862	107.436395	69.73	27998.2	-61660.9	23391	7778.7	13744.4	13366.5	2016	1	29	5	56	12.42	3.6	0	0	354	123	0	0.541	1
655	-7.116923	107.307331	31.068	13768.2	23414.3	-15271	8992.8	9875.8	10822.6	2016	2	14	23	1	52.37	2.5	0	0	134	71	0	0.422	1
656	-7.435864	107.034901	119.326	-16313.8	-11857.7	72987	7826.4	10505.2	11326.9	2016	2	16	15	5	47.72	4.9	0	0	622	162	0	0.925	1
657	-7.956462	107.055941	36.344	-13982.5	-69431.2	-9995.2	16306.1	13931.3	41178.4	2016	2	19	12	34	58.5	2.9	0	0	171	98	0	0.342	1
658	-7.083707	107.752735	50.925	62961.7	27087.7	4585.9	17297.2	24964.5	16230.3	2016	2	20	6	26	5.25	2.7	0	0	14	3	0	0.396	1
659	-7.275253	107.62435	6.729	48771.9	5904.5	-39608.9	5836.7	8618.6	5809.6	2016	2	23	21	43	0.8	2.3	0	0	271	133	0	0.632	1
660	-7.292512	107.719596	3.193	59288.1	3995.8	-43145.6	5983.8	7914.4	7745.9	2016	2	23	23	53	32.98	4.2	0	0	346	115	0	0.706	1
661	-7.970764	107.664575	9.38	53171.8	-71012.9	-36958.4	6989.4	11493.2	11449.4	2016	3	7	5	21	30.83	2.5	0	0	145	87	0	0.303	1
662	-7.859701	107.268262	47.848	9445.5	-58730.3	1508.9	10813.1	11134	15293.9	2016	3	19	15	19	28.39	3.6	0	0	462	239	0	0.844	1
663	-7.809502	107.262284	47.042	8786.3	-53178.8	702.6	10585.9	13916	19868.5	2016	3	30	17	39	19.71	4.1	0	0	492	229	0	0.771	1
664	-7.826207	107.269882	48.176	9624.7	-55026.2	1836.8	9593	9907.6	23474.1	2016	4	1	18	56	5.81	4	0	0	628	158	0	0.582	1
665	-7.16443	108.403082	8.02	134778	18160.5	-38319	11909	12970.6	20531	2016	4	1	22	55	57.63	2.7	0	0	135	40	0	0.387	1
666	-7.274602	107.607697	8.235	46933.1	5976.4	-38103.4	6275.2	8791.1	5632.9	2016	4	8	15	14	35.57	3.7	0	0	441	0	0	0.558	1
667	-7.251314	107.579754	21.593	43848.7	8551.9	-24745.4	14043.5	18212.2	37047.8	2016	4	8	15	20	35.71	3.1	0	0	288	0	0	0.422	1
668	-7.207842	107.559896	18.579	41657.9	13359.5	-27759.5	7109.4	10863.2	16466.5	2016	4	8	15	28	48.26	3.1	0	0	342	0	0	0.586	1
669	-7.265139	107.576957	9.072	43539.1	7023	-37265.9	6727.4	9094.1	9240	2016	4	8	17	32	5.89	3.2	0	0	336	39	0	0.505	1
670	-7.268007	107.57742	8.619	43590.1	6705.8	-37719	7695.9	11660.1	7924.4	2016	4	8	17	49	6.18	2.6	0	0	214	40	0	0.361	1
671	-7.310961	107.578724	6.356	43732.1	1955.4	-39982	6395.4	9342.9	17549.7	2016	4	8	19	15	34.79	3.8	0	0	477	0	0	0.585	1
672	-7.267201	107.578217	9.428	43678.1	6794.9	-36909.8	6944.3	9028.7	8339.9	2016	4	8	21	1	4.74	2.1	0	0	188	40	0	0.33	1
673	-7.316828	107.592639	8.46	45268.2	1306.6	-37878.5	6296.1	9061.9	6786.7	2016	4	11	2	30	33.57	3.2	0	0	404	98	0	0.613	1
674	-7.604154	107.099085	72.46	-9225.9	-30469.1	26120.9	7093.4	11494.6	14464.6	2016	5	4	0	37	49.44	3.5	0	0	368	183	0	0.686	1

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675	-7.830361	107.336648	7.661	16992.5	-55485.6	-38678	8338.8	11200.2	11958.7	2016	5	6	2	48	50.93	3.3	0	0	211	69	0	0.437	1
676	-7.288122	107.517028	157.601	36920.7	4481.2	111263.1	8168	11732.6	10468.6	2016	5	12	0	21	24.59	4.5	0	0	370	60	0	0.848	1
677	-7.145009	107.099613	153.213	-9172.2	20308.3	106873.4	8748.9	12846	9918.4	2016	5	19	16	50	29.71	2.5	0	0	209	99	0	0.414	1
678	-7.648724	107.548281	77.99	40355.4	-35398.1	31650.6	8732.6	8469.8	12057.8	2016	6	4	11	12	28.48	4.5	0	0	430	162	0	0.914	1
679	-7.590435	107.675916	110.675	54446.8	-28951.9	64336.1	5347.8	8746.5	11531.1	2016	7	1	9	49	38.44	3.3	0	0	234	75	0	0.53	1

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1. 7. Data **hypoDD.sta**:

Sta	Lat	Long	Dist	Az	NCCP	NCCS	NCTP	NCTS	RCC	RCT	CID
BJI	-7.333	109.7096	0	0	0	0	252	4	0	1.0478	1
BLSI	-5.3675	105.2452	0	0	0	0	242	32	0	0.5731	1
CBJI	-6.6981	106.935	0	0	0	0	6738	1174	0	0.9515	1
CGJI	-6.6135	105.6928	0	0	0	0	7028	2069	0	0.8569	1
CISI	-7.5557	107.815	0	0	0	0	12908	8148	0	0.697	1
CMJI	-7.7837	108.4485	0	0	0	0	8548	3744	0	0.7595	1
CNJI	-7.309	107.13	0	0	0	0	11145	6470	0	0.7267	1
CTJI	-7.0075	109.1836	0	0	0	0	1482	116	0	0.7688	1
DBJI	-6.5538	106.7497	0	0	0	0	2638	980	0	0.9836	1
EGSI	-5.3524	102.2763	0	0	0	0	185	0	0	0.6527	1
GRJI	-6.9144	112.4794	0	0	0	0	47	0	0	1.3739	1
JCJI	-6.7344	108.2631	0	0	0	0	841	153	0	1.9078	1
KASI	-5.5236	104.496	0	0	0	0	2161	206	0	0.8221	1
KLI	-4.8363	104.8705	0	0	0	0	103	1	0	0.9758	1
KLSI	-4.6871	104.7317	0	0	0	0	277	3	0	1.3525	1
KPJI	-7.3332	108.9312	0	0	0	0	3999	455	0	0.9297	1
KRK	-8.1521	112.4506	0	0	0	0	11	0	0	1.6726	1
LEM	-6.8266	107.6175	0	0	0	0	8956	1823	0	0.9829	1
LHSI	-3.8266	103.5233	0	0	0	0	117	0	0	1.07	1
LWLI	-5.0175	104.0589	0	0	0	0	475	21	0	0.8412	1
MDSI	-4.486	104.1782	0	0	0	0	1083	2	0	0.7601	1
MNAI	-4.3605	102.9557	0	0	0	0	400	1	0	0.5237	1
NGJI	-7.3676	111.4612	0	0	0	0	28	0	0	1.0701	1
PCJI	-8.1947	111.1771	0	0	0	0	1338	30	0	0.6175	1
PMBI	-2.9024	104.6992	0	0	0	0	19	0	0	1.1863	1
PPBI	-2.1616	106.1364	0	0	0	0	102	0	0	0.7424	1
PWJI	-8.22	111.8039	0	0	0	0	637	9	0	0.8336	1
SBJI	-6.1117	106.1318	0	0	0	0	1386	119	0	1.2938	1
SCJI	-7.681	109.1689	0	0	0	0	1217	100	0	0.9462	1
SKJI	-7.0053	106.5563	0	0	0	0	10928	4921	0	0.9713	1
SMRI	-7.0491	110.4408	0	0	0	0	299	6	0	1.0425	1
SWJI	-7.7349	111.7669	0	0	0	0	211	0	0	0.8439	1
TBJI	-6.8179	111.8481	0	0	0	0	15	0	0	0.4686	1
TNG	-6.1719	106.6469	0	0	0	0	409	51	0	2.119	1
TNGI	-6.172	106.647	0	0	0	0	319	33	0	1.4616	1
TPI	-2.7564	107.6534	0	0	0	0	113	0	0	0.8308	1
UGM	-7.9125	110.5219	0	0	0	0	2083	133	0	0.7414	1
UWJI	-6.4191	110.9474	0	0	0	0	27	0	0	1.3251	1
WOJI	-7.8372	110.9236	0	0	0	0	195	3	0	0.7609	1
XMIS	-10.4807	105.6519	0	0	0	0	1118	10	0	0.8692	1

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1. 8. Contoh data **hypoDD.res**:

STA	DT	C1	C2	IDX	QUAL	RES [ms]	WT	OFFS
SKJI	-0.4000001	1	201	4	1	-46.374302	0.995731	11426.6
SKJI	-1.0999999	1	201	3	1	-9.030235	0.995731	11426.6
SKJI	0.0999999	1	34	3	1	-256.935699	0.997544	9394.6
CBJI	0.6000004	1	34	3	1	347.442902	0.997544	9394.6
CGJI	-1.5	1	34	3	1	-232.398392	0.997544	9394.6
CGJI	-3.1999989	1	34	4	1	-701.830017	0.997544	9394.6
SBJI	0.2999992	1	34	3	1	1322.590576	0.997544	9394.6
LEM	-0.1999989	1	34	3	1	-1056.838623	0.997544	9394.6
CISI	1.6000004	1	34	3	1	321.741791	0.997544	9394.6
SKJI	-0.4000001	1	33	3	1	-31.195919	0.987706	16055.1
SKJI	0.6999998	1	33	4	1	58.587627	0.987706	16055.1
CBJI	0.8000002	1	33	3	1	-301.300201	0.987706	16055.1
CGJI	-2.2000008	1	33	3	1	-357.38913	0.987706	16055.1
SBJI	-0.2999992	1	33	3	1	150.151611	0.987706	16055.1
CISI	-0.0999985	1	33	3	1	-403.916931	0.987706	16055.1
JCJI	2.4000015	1	33	3	1	1456.973633	0.987706	16055.1
CMJI	0.5999985	1	33	3	1	308.565277	0.987706	16055.1
SKJI	3.0999999	1	24	4	1	-243.394806	0.985313	17000.2
SKJI	1.9	1	24	3	1	228.090912	0.985313	17000.2
CBJI	2.1999998	1	24	3	1	43.146049	0.985313	17000.2
CGJI	-1.8999996	1	24	3	1	-526.450867	0.985313	17000.2
CGJI	-2.1999989	1	24	4	1	-274.748749	0.985313	17000.2
SBJI	0.5	1	24	3	1	230.621216	0.985313	17000.2
LEM	1.3999996	1	24	3	1	-640.497742	0.985313	17000.2
CISI	1.3000011	1	24	3	1	121.792404	0.985313	17000.2
CMJI	2.0999985	1	24	4	1	-331.801636	0.985313	17000.2
CMJI	0.3999977	1	24	3	1	-744.981201	0.985313	17000.2
CBJI	-3.1999998	1	78	3	1	-253.336334	0.993069	13251.1
CGJI	-0.3000002	1	78	3	1	17.790667	0.993069	13251.1
CGJI	-0.3999996	1	78	4	1	-375.664764	0.993069	13251.1
CISI	-2.7999992	1	78	3	1	-380.651306	0.993069	13251.1
CISI	-3.8999977	1	78	4	1	-239.969971	0.993069	13251.1
SKJI	2.4000001	1	115	3	1	288.98941	0.986533	16703.6
SKJI	3.7	1	115	4	1	-328.456482	0.986533	16703.6
DBJI	0.6999998	1	115	3	1	-735.219788	0.986533	16703.6
CBJI	2.5	1	115	3	1	674.755005	0.986533	16703.6
CGJI	-3	1	115	4	1	-328.391418	0.986533	16703.6
CGJI	-2.1000004	1	115	3	1	-338.141815	0.986533	16703.6
CISI	1.4000015	1	115	3	1	427.977173	0.986533	16703.6
CMJI	4.0999985	1	115	4	1	2148.047119	0.986533	16703.6
CMJI	0.3999977	1	115	3	1	-510.721497	0.986533	16703.6
KPJI	-1.5999985	1	115	3	1	-2893.427979	0.986533	16703.6
SKJI	-1.5999999	1	62	3	1	-218.389328	0.957479	24372.4
CBJI	0.3000002	1	62	3	1	-331.191315	0.957479	24372.4
CGJI	2.5999994	1	62	3	1	-162.265976	0.957479	24372.4
CISI	-2.5	1	62	3	1	-335.33252	0.957479	24372.4
JCJI	-0.7999992	1	62	3	1	-135.507156	0.957479	24372.4
CMJI	-2.1000023	1	62	3	1	69.651833	0.957479	24372.4
KASI	2.1000023	1	62	3	1	-804.691528	0.957479	24372.4
KPJI	-1.0999985	1	62	3	1	429.988281	0.957479	24372.4
SKJI	-1.5	1	94	4	1	299.189331	0.973166	20862.2
SKJI	-1.9000001	1	94	3	1	-254.076691	0.973166	20862.2

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1. 9. Data Sudut Pergeseran:

ID	Lokasi Awal			Relokasi			Mag	Sudut Pergeseran
	Lat	Long	Depth	Lat	Long	Depth		(dalam derajat)
1	-7.1	106.419998	11	-7.143941	106.423564	6.646	3.6	2.521331844
2	-7.36	106.629997	55	-7.36073	106.64383	74.724	3	0.377851517
3	-7.38	106.650002	25	-7.417783	106.63892	35.508	3	2.182693626
4	-7.45	106.889999	10	-7.553391	106.859448	0.625	2.5	5.953942774
5	-6.7	106.809998	48	-6.645208	106.842709	68.749	3.1	3.586180625
6	-7.09	106.160004	10	-7.111262	106.181971	1.816	3.6	1.491728288
7	-6.55	106.860001	141	-6.639467	106.875344	153.088	3.3	5.193869626
8	-7.29	106.589996	71	-7.213323	106.65029	86.036	3.6	4.808007341
9	-7.27	106.110001	12	-7.298476	106.131505	11.983	3.9	1.761651144
10	-7.09	106.629997	126	-7.176579	106.598275	138.088	2.6	5.103113193
11	-6.86	106.470001	10	-6.817286	106.518366	12.405	3	3.395730129
12	-7.39	106.07	23	-7.439439	106.08301	21.833	4.2	2.850276502
13	-7.1	106.129997	22	-7.16032	106.127739	29.52	2.7	3.457141704
14	-7.28	106.080002	14	-7.368779	106.103966	24.068	4	5.13343496
15	-6.95	106.959999	124	-6.934064	107.020254	134.14	3.9	2.878206458
16	-6.85	106.769997	23	-6.8614	106.762778	33.034	2.3	0.739932514
17	-7.29	106.419998	30	-7.307644	106.425245	44.318	3.3	1.023267058
18	-7.44	106.389999	28	-7.473945	106.368264	38.455	2.6	2.003523668
19	-7.46	106.849998	10	-7.49763	106.841497	11.687	2.8	2.163396972
20	-6.51	106.860001	15	-6.477447	106.865405	29.186	3.2	1.889564739
21	-7.12	106.650002	83	-7.130524	106.692475	94.617	3.6	1.728969427
22	-6.61	106.169998	106	-6.704096	106.245127	123.043	4.5	6.71607871
23	-7.44	106.760002	45	-7.395142	106.792771	65.069	2.9	2.689610144
24	-7.03	106.540001	10	-7.060281	106.551121	8.91	3.4	1.795146495
25	-7.36	106.790001	67	-7.419826	106.778793	79.494	3.1	3.439760522
26	-7.22	106.489998	57	-7.202819	106.508041	73.458	2.8	1.163081955
27	-7.2	106.220001	43	-7.219255	106.2408	63.707	2.8	1.315073252
28	-7.18	106.25	64	-7.291958	106.32951	149.341	3.3	6.932740508
29	-7.1	106.75	29	-7.140381	106.745511	41.339	2.6	2.320059471
30	-7.03	106.830002	129	-7.143989	106.822468	132.559	4.1	6.537923599
31	-7.21	106.870003	11	-7.166854	106.887829	4.285	2.9	2.551193599
32	-7.14	106.870003	10	-7.121237	106.881944	3.362	3.3	1.166517117
33	-7.07	106.540001	10	-7.071856	106.530462	14.059	3.6	0.399953425
34	-7.14	106.480003	10	-7.193885	106.488245	4.063	3.6	3.101858117
35	-7.13	106.279999	97	-7.052283	106.365803	116.081	3.1	5.59811255
36	-6.81	106.650002	10	-6.788851	106.657431	8.359	3.8	1.267026993
37	-7.14	106.620003	10	-7.148919	106.627977	14.584	3	0.591379751
38	-6.87	106.199997	116	-6.898087	106.265371	123.553	4.5	3.483217388
39	-7.5	106.389999	53	-7.441262	106.423982	71.157	3.7	3.442898005
40	-6.43	106.360001	84	-6.497513	106.405584	101.522	3.4	4.643414752
41	-7.29	106.110001	34	-7.244415	106.17497	59.792	3.5	3.326072177
42	-6.85	106.260002	68	-6.943789	106.271534	86.82	3.6	5.40074462
43	-7.48	106.470001	22	-7.51088	106.485859	19.945	3.7	1.797741113
44	-7.45	106.660004	38	-7.413944	106.695138	61.478	3.2	2.224045654
45	-7.35	106.120003	25	-7.465967	106.088589	28.819	4.8	6.688909897
46	-7.12	106.809998	57	-7.112103	106.836664	77.285	2.4	1.123025825
48	-6.18	106	47	-6.236657	106.0358	60.525	3.6	3.836738566
49	-7.35	106.870003	72	-7.26975	106.908863	87.129	4.3	4.739535892
50	-6.67	106.360001	148	-6.658072	106.443606	152.972	3.3	4.49898199

51	-7.45	106.019997	26	-7.537982	106.042016	44.549	4	5.060269328
52	-7.49	106.040001	18	-7.509048	106.052589	15.874	4.1	1.119691466
53	-6.23	106.050003	76	-6.326422	106.08196	107.069	3.1	5.819862415
54	-6.81	106.589996	10	-6.762445	106.617313	2.63	2.8	3.050188557
55	-6.77	106.650002	10	-6.767827	106.652206	4.732	3	0.167248909
56	-6.64	106.5	168	-6.61934	106.553327	172.019	3.9	3.107976358
57	-7.1	106.150002	28	-7.128271	106.180756	43.751	3.3	2.008606961
58	-6.82	106.639999	10	-6.834297	106.657916	12.267	3	1.201070124
59	-6.9	106.330002	10	-6.937711	106.328933	10.173	3.4	2.161243001
60	-6.97	106.550003	10	-6.958804	106.573816	7.032	3.1	1.238852622
61	-6.91	106.330002	10	-6.930746	106.343193	11.945	3.1	1.334880393
62	-7.01	106.300003	10	-6.943698	106.34637	12.175	4.9	4.312623616
63	-7.06	106.209999	10	-6.981467	106.284731	10.678	4.3	5.501762504
64	-6.99	106.279999	10	-6.994599	106.300456	6.389	4	0.927750459
65	-6.9	106.309998	10	-6.928145	106.324387	8.93	3.4	1.744581157
66	-6.86	106.309998	10	-6.875802	106.326806	7.309	2.9	1.210191258
67	-7.48	106.040001	18	-7.556498	106.052037	8.826	3.3	4.388823605
68	-7.35	106.610001	92	-7.338608	106.678662	102.206	4.4	2.026946332
69	-6.93	106.300003	11	-6.935107	106.32299	6.253	3.4	1.08902722
70	-7.2	106.269997	58	-7.189261	106.347986	78.354	5.2	2.805185561
72	-6.69	106.699997	15	-6.679575	106.710874	25.9	2.7	0.828138761
73	-7.48	106.690002	34	-7.533887	106.667993	45.799	3.7	3.116972515
74	-7.18	106.25	160	-7.017162	106.406439	168.008	3.8	11.15357569
75	-7.43	106.699997	15	-7.450816	106.695552	4.863	2.5	1.197050048
76	-6.39	106.230003	154	-6.538905	106.278243	163.616	5	8.953475475
77	-6.85	106.089996	106	-6.961594	106.128841	120.496	3.4	6.643921825
78	-7.18	106.300003	10	-7.19912	106.319491	4.119	3	1.293843454
79	-7.45	106.690002	29	-7.485405	106.682736	40.199	3.4	2.034599276
80	-7.33	106.529999	29	-7.338506	106.494027	50.166	2.8	1.133639401
81	-6.6	106.82	10	-6.695297	106.737589	7.759	3.3	7.018045884
82	-7.06	106.830002	10	-7.064967	106.829138	11.508	3.3	0.286758865
83	-6.81	106.830002	12	-6.83064	106.820655	9.453	3	1.268939877
84	-6.24	106.010002	10	-6.302105	105.925584	6.328	3	6.003790818
85	-7.08	106.32	29	-7.172186	106.315833	39.486	3	5.284248483
86	-7.18	106.120003	87	-7.238866	106.178759	97.14	4	3.931757543
87	-7.31	106.639999	10	-7.325774	106.646205	2.571	3.7	0.921848743
88	-6.56	106.43	172	-6.583074	106.52746	182.301	4.1	5.514013994
89	-6.99	106.199997	138	-6.890065	106.239357	140.868	3.7	5.997276997
90	-6.93	106.900002	10	-6.912586	106.92824	10.646	3	1.638347758
91	-6.95	106.459999	27	-6.794694	106.609883	25.594	3.6	11.39690713
92	-7.38	106.650002	87	-7.384045	106.676292	97.971	4.1	0.722949277
93	-7.47	106.449997	29	-7.519421	106.4866	46.048	3.2	2.925614591
94	-7.2	106.550003	11	-7.192124	106.602818	10.493	3.2	1.904434009
95	-7.46	106.419998	42	-7.451094	106.457483	65.304	3.6	0.977019573
96	-7.45	106.410004	10	-7.470315	106.46531	18.883	4.6	1.68287462
97	-6.78	107	29	-6.8098	107.021594	63.158	3.5	2.019606753
98	-7.45	106.07	54	-7.388976	106.156278	76.576	4	4.06606372
99	-6.84	106.910004	38	-6.870691	106.916881	65.252	3.3	1.789390283
100	-7.04	106.949997	88	-7.104054	106.950063	103.228	3.5	3.670024827
101	-6.8	106.029999	10	-6.864253	106.02912	7.896	3.1	3.681676229
102	-6.76	106.459999	114	-6.811186	106.518619	123.108	3.6	4.154727897
104	-7.39	106.110001	20	-7.481989	106.077507	16.898	4.2	5.323869583
105	-7.37	106	23	-7.507966	105.993425	29.914	4.2	7.906290486
107	-6.4	106.18	151	-6.394616	106.286993	158.117	3.5	6.098132551
108	-6.24	106.07	174	-6.373731	106.181009	171.377	4.4	9.953922286

109	-7.43	106.410004	31	-7.457581	106.430855	37.455	3.8	1.650452367
110	-7.26	106.699997	62	-7.278045	106.726986	78.225	3.4	1.34082729
111	-7.13	106.019997	17	-7.291664	106.006798	29.154	3.2	9.273608112
112	-6.7	106.629997	10	-6.744186	106.661511	6.311	2.6	3.013322027
113	-7.36	106.110001	27	-7.454871	106.093184	0.306	4	5.451443211
114	-6.71	106.690002	10	-6.757093	106.715487	5.926	3.4	3.001337434
115	-7.02	106.540001	10	-7.067524	106.553936	5.974	3.3	2.783636638
116	-6.6	106.639999	10	-6.615051	106.658663	14.347	3.5	1.330806018
117	-6.59	106.239998	132	-6.718283	106.279308	142.122	4.6	7.643359447
118	-6.78	106.809998	12	-6.872123	106.8591	5.487	3.4	5.801180447
119	-6.65	106.410004	162	-6.658457	106.484445	165.708	3.8	4.004197675
120	-7.47	106.080002	22	-7.559944	106.092409	20.422	3	5.158739079
121	-6.8	106.620003	10	-6.695217	106.689907	29.567	3.7	6.988936941
122	-6.99	106.93	99	-6.977488	106.965687	112.919	3.1	1.719635704
123	-6.25	106.379997	10	-6.209607	106.400386	22.433	3.3	2.591686025
124	-7.35	106.089996	28	-7.377314	106.118421	46.293	3.8	1.742670956
125	-7.43	106.150002	26	-7.451786	106.136034	33.868	4.4	1.288901237
126	-7.41	106.260002	17	-7.491679	106.297083	27.569	3.5	4.752788532
127	-7.42	106.040001	12	-7.429161	106.062731	19.19	4.1	0.754612566
128	-7.42	106.089996	10	-7.424161	106.120403	14.75	3.8	0.767228868
129	-6.4	106.260002	144	-6.431418	106.341349	156.89	3.7	4.958075214
130	-7.25	106.379997	108	-7.290022	106.467507	90.86	4.7	3.590089681
131	-7.39	106.400002	86	-7.286456	106.475425	102.327	3.5	6.300390979
132	-7.46	106.290001	61	-7.407824	106.356356	83.232	4.1	3.366220092
133	-6.59	106.370003	139	-6.676354	106.478152	141.054	4.9	7.637312287
134	-6.56	106.379997	167	-6.646766	106.434746	163.525	4.7	5.794105727
135	-6.85	106.830002	10	-6.875526	106.839874	6.356	4.3	1.537186133
136	-6.81	106.639999	121	-6.858978	106.706056	119.544	5	4.273630429
137	-7.5	106.690002	64	-7.451691	106.729156	87.722	3	2.888682891
138	-6.76	106.709999	10	-6.784079	106.682145	8.078	3.8	1.971905351
139	-6.63	106.309998	134	-6.775749	106.33323	141.729	4	8.4385626
140	-7.44	106.43	26	-7.453931	106.399372	48.002	3.6	1.058083433
141	-7.2	106.349998	55	-7.251119	106.391338	72.723	4.1	3.242581539
142	-6.73	106.629997	10	-6.748716	106.635505	8.782	3	1.109140724
143	-7.38	106.650002	99	-7.335157	106.738926	110.206	3.8	3.532067244
144	-7.4	106.970001	123	-7.357402	107.026135	128.294	3.7	2.849280514
145	-7.37	106.440002	42	-7.329591	106.49148	65.992	3.2	2.717973467
146	-7.35	106.07	24	-7.415486	106.106441	34.729	4.4	3.869422451
147	-6.84	106.839996	14	-6.865614	106.855722	18.553	2.2	1.652096881
148	-6.72	106.660004	20	-6.730664	106.659845	27.752	2.6	0.61105767
149	-7.09	106.349998	74	-7.116459	106.426589	80.766	4.7	3.354945692
150	-7.46	106.139999	50	-7.432128	106.149238	45.642	3.9	1.61068048
151	-7.42	106	58	-7.456046	106.076392	13.214	4.9	2.717801176
152	-6.77	106.589996	10	-6.783227	106.58448	8.234	4	0.807348628
153	-6.73	106.940002	10	-6.749243	106.94552	8.95	2.5	1.138478955
154	-6.96	106.309998	10	-6.894363	106.396521	6.659	3.3	5.462707205
155	-6.93	106.730003	113	-6.961777	106.76981	118.387	3.7	2.55867169
156	-6.72	106.709999	17	-6.768304	106.761573	17.701	2.8	3.828994286
157	-7.19	106.199997	85	-7.207004	106.251729	99.517	3.1	2.052406706
158	-6.98	106.690002	14	-6.999544	106.703432	13.436	3.1	1.263492343
159	-7.31	106.010002	10	-7.392125	106.013222	16.174	3.1	4.706250888
160	-6.85	106.400002	10	-6.861544	106.409032	10.898	3.6	0.791566591
161	-6.85	106.449997	10	-6.867184	106.423847	10.666	4	1.596670803
162	-6.85	106.400002	10	-6.88217	106.409001	17.277	3.1	1.892793343
163	-7.13	106.129997	105	-7.065831	106.238669	119.879	2.9	5.632796253

165	-7.43	106.919998	80	-7.358684	106.972688	91.739	3.4	4.298777949
166	-7.32	106.150002	82	-7.26303	106.242492	99.167	3.6	4.314881787
167	-7.28	106.040001	55	-7.427571	106.080539	20.815	4.9	8.526790509
168	-6.69	106.690002	10	-6.734668	106.696174	2.806	2.1	2.579404749
169	-7.42	106.68	18	-7.434528	106.690503	4.028	3.5	0.868846981
170	-6.95	106.379997	19	-7.071661	106.402762	28.26	3.1	7.038098856
171	-6.87	106.690002	10	-6.890586	106.717057	8.226	3.3	1.741930307
172	-6.69	106.510002	10	-6.705568	106.514852	19.924	2.8	0.927532819
173	-6.96	106.260002	117	-6.971601	106.334906	123.676	4	3.395357922
176	-7.11	106.230003	99	-7.063392	106.341828	115.422	3.8	5.185319408
177	-6.93	106.68	10	-6.982605	106.688853	18.956	3.1	3.040008394
178	-7.09	106.629997	94	-7.087306	106.684318	100.157	3.7	2.161542577
179	-7.28	106.610001	83	-7.239682	106.677965	95.928	3	3.175227642
180	-7.49	106.32	14	-7.526382	106.321989	15.967	3.3	2.084891936
181	-7.49	106.68	36	-7.467552	106.706856	56.841	3.4	1.404255212
182	-7.45	106.720001	33	-7.47452	106.699491	51.955	2.9	1.474723985
183	-7.35	106.07	20	-7.406345	106.11206	38.794	3.9	3.411232765
184	-7.5	106.43	51	-7.477932	106.515506	41.643	4.7	2.157027126
185	-7.46	106.550003	28	-7.406555	106.560665	52.025	3	3.072280945
186	-7.5	106.330002	20	-7.517105	106.342074	31.631	3.4	1.007623056
187	-7.01	106.339996	73	-7.004849	106.420723	90.298	3.7	3.476503182
188	-6.99	106.68	122	-7.056848	106.732555	112.763	4.8	4.427784625
189	-7.15	106.529999	108	-7.084758	106.649723	125.881	3.1	5.929549285
190	-7.11	106.730003	91	-7.049093	106.81019	104.231	3.5	4.741817914
191	-6.71	106.660004	12	-6.74939	106.66548	8.038	2.2	2.274549925
192	-7.5	106.599998	13	-7.492848	106.637099	19.868	3.3	0.849302679
193	-7.39	106.309998	50	-7.326547	106.341003	74.077	3.2	3.732124853
194	-6.86	106.440002	17	-6.898508	106.39622	21.334	2.6	3.029182687
195	-7.4	106.900002	18	-7.397051	106.909048	28.093	2.9	0.283770055
196	-6.61	106.309998	109	-6.717454	106.327693	128.252	3.3	6.228104988
197	-7.26	106.669998	80	-7.220194	106.744386	90.972	4.6	3.349943032
198	-6.81	106.93	32	-6.699993	107.001946	49.464	3	7.292733962
199	-7.46	106.57	67	-7.376922	106.624252	86.624	3.4	4.935834336
200	-7.45	106.760002	38	-7.426477	106.775066	60.602	2.8	1.392083181
201	-7.1	106.440002	10	-7.084651	106.482085	13.417	2.5	1.881984542
202	-6.92	106.730003	87	-6.92891	106.709349	97.972	2.4	1.076961217
203	-6.89	106.059998	123	-6.898913	106.162024	123.673	4.2	4.813564498
204	-6.8	106.5	17	-6.799043	106.507397	3.063	2.7	0.372621668
205	-6.48	106.099998	150	-6.488657	106.211735	156.261	3.1	6.29241285
206	-7.23	106.809998	128	-7.160157	106.839823	136.45	3.3	4.135888532
207	-6.77	106.519997	147	-6.851592	106.547764	153.144	3.4	4.872557202
208	-6.89	106.220001	17	-6.949888	106.218816	20.386	2.6	3.431763514
209	-6.67	106.459999	180	-6.679992	106.568805	173.029	3.8	5.789621134
210	-6.67	106.650002	10	-6.7183	106.658377	6.163	3	2.802120061
211	-7.13	106.980003	12	-7.128362	107.000262	13.491	2.9	0.775258488
212	-6.79	106.470001	151	-6.789486	106.551077	155.834	3.6	4.06179796
213	-7.48	106.709999	11	-7.457156	106.731652	20.93	3.5	1.389409816
214	-6.95	106.279999	16	-7.011357	106.250312	22.802	2.7	3.749216986
215	-6.92	106.309998	104	-6.893691	106.404856	111.984	3.6	4.661380701
216	-7.01	106.349998	103	-7.087469	106.534588	97.736	3.4	8.812518348
217	-6.74	106.669998	10	-6.776973	106.683062	6.722	2.7	2.220464164
218	-6.77	106.690002	10	-6.805851	106.714889	2.758	2.3	2.403498944
219	-6.82	106.239998	115	-6.800231	106.368637	125.088	3.9	6.469311522
220	-7.48	106.769997	49	-7.455666	106.804309	71.155	2.8	1.578462811
221	-7.49	106.160004	10	-7.459252	106.230195	3.898	3	2.305962953

222	-7.29	106.150002	97	-7.320462	106.308925	125.476	3.3	5.0552411
223	-6.73	106.690002	10	-6.748007	106.689859	11.085	3.1	1.031751329
224	-6.86	107.75	26	-7.046803	107.679037	81.082	2.8	11.16336555
225	-6.96	107.849998	10	-6.967577	107.850658	6.897	3.3	0.435123783
226	-6.73	108.010002	242	-6.573329	108.047451	240.044	3	9.196399408
227	-6.79	107.739998	35	-6.792142	107.719261	53.702	2.9	1.045393167
229	-6.41	107.410004	51	-6.421129	107.408399	67.626	3	0.644127294
230	-6.81	107.080002	26	-6.837941	107.173122	50.843	3	4.845406744
231	-6.87	107.029999	10	-6.903189	107.039668	4.219	2.9	1.955525278
232	-6.12	107.739998	323	-6.318426	107.668774	320.409	3.8	12.07408486
233	-6.95	108.379997	10	-6.952084	108.407509	5.618	3.2	1.24338111
234	-6.44	107.830002	261	-6.238653	107.875049	247.112	3.6	11.81968364
235	-6.57	107.220001	10	-6.555702	107.237435	6.349	3.5	1.26208391
236	-6.86	107.059998	10	-6.894222	107.038333	5.205	3.5	2.214201519
237	-6.73	107.389999	21	-6.673211	107.417	29.669	2.8	3.547444214
238	-6.84	107.75	26	-7.047556	107.669376	83.447	3	12.4333998
239	-6.97	107.370003	32	-6.966662	107.341582	55.753	3.3	1.275319902
240	-6.92	107.709999	38	-6.867969	107.744616	59.356	2.8	3.394948091
241	-6.9	107.230003	46	-6.897745	107.231539	70.364	3.1	0.1478345
242	-6.72	108.07	253	-6.780841	107.99932	253.359	4.6	5.021568155
243	-6.9	107.089996	163	-6.94644	107.098032	171.031	4.9	2.686309296
244	-6.32	107.68	373	-6.430649	107.644408	356.257	3.3	6.656662941
246	-6.76	108.019997	10	-6.808196	108.009115	10.507	2.9	2.815042238
247	-6.92	108.449997	10	-6.891415	108.478874	14.633	2.3	2.118676949
248	-6.87	107.129997	28	-6.849455	107.143672	45.1	2.9	1.347998189
249	-6.48	107.300003	13	-6.557748	107.266764	3.506	3.5	4.823990114
250	-6.73	107.260002	200	-6.557228	107.36995	163.847	4.7	11.51577075
251	-6.89	107.790001	23	-6.866597	107.745509	44.226	3	2.500684334
252	-6.51	107.010002	93	-6.53014	107.076042	103.908	3.3	3.854804526
253	-6.92	107.519997	10	-6.909316	107.502667	12.99	3.3	1.008482673
254	-6.55	107.099998	364	-6.296321	107.198812	348.967	4.7	15.57270854
255	-6.75	107.349998	11	-6.721438	107.352942	17.318	2.8	1.643497401
256	-6.83	107.779999	23	-6.755064	107.832348	43.708	3.1	5.028419542
257	-6.93	107.720001	34	-6.890828	107.738526	59.527	3.3	2.403239481
258	-6.34	107.870003	81	-6.293748	107.896129	88.865	3.5	3.043112026
261	-6.82	107.07	38	-6.815803	107.091478	69.666	3.2	1.085780221
262	-6.19	107.529999	157	-6.110481	107.475087	122.174	3.1	5.520638008
263	-6.59	108.300003	10	-6.522961	108.281261	9.455	2.2	3.977726006
264	-6.78	107	29	-6.809649	107.021614	63.165	3.5	2.01285847
265	-6.15	107.370003	311	-6.223687	107.429993	311.417	4.7	5.433623569
266	-6.91	108.440002	10	-6.885505	108.473029	9.137	2.6	2.087972372
267	-6.89	107.449997	140	-7.12789	107.422221	131.598	5.7	13.68115083
268	-6.6	107.879997	285	-6.483018	107.83111	286.28	3.5	7.228277194
269	-6.83	107.160004	151	-6.920325	107.16032	158.474	3.1	5.175263059
270	-6.95	107.120003	125	-7.001112	107.124389	132.641	3.6	2.934879032
271	-6.76	107.650002	10	-6.702667	107.651182	5.873	4.6	3.28550374
272	-6.38	108.209999	10	-6.301638	108.208766	15.76	3.9	4.490365503
273	-6.25	107.620003	10	-6.471938	107.687302	48.158	3.5	13.28217509
274	-7	107.120003	136	-7.033061	107.13801	129.795	4.5	2.043416352
275	-6.6	107.18	10	-6.602654	107.211628	8.865	3.7	1.727910564
276	-6.59	107.18	10	-6.567126	107.204684	10.816	3.2	1.883675976
277	-6.33	107.980003	287	-6.371176	107.890696	290.291	4	5.623709052
278	-6.83	107.029999	161	-6.920605	107.076573	152.707	5.2	5.643046852
279	-6.85	107.889999	13	-6.898759	107.869183	5.656	3.4	2.963914752
280	-6.29	107.949997	296	-6.473474	107.844749	297.897	4.2	12.10024091

281	-6.6	107.440002	48	-6.617093	107.471178	62.218	3.2	1.955430236
282	-6.79	108.410004	10	-6.759341	108.419869	9.578	3.2	1.825935055
283	-6.85	108	10	-6.845544	107.985063	5.972	3.6	0.766761736
284	-6.76	107.769997	10	-6.677572	107.770025	5.319	3.2	4.722776737
285	-6.76	107.760002	10	-6.68272	107.761869	5.805	3.4	4.42887638
286	-6.91	108.300003	10	-6.921959	108.297363	13.241	3.3	0.695971557
287	-6.66	107.769997	10	-6.634334	107.763108	5.516	2.6	1.516103041
288	-6.84	108.379997	235	-6.797562	108.301372	240.954	3.8	4.573161804
289	-6.62	107.400002	10	-6.584646	107.410565	8.817	2.5	2.105559402
290	-6.82	107.129997	10	-6.841106	107.147873	5.238	2.7	1.492377687
291	-6.74	107.959999	10	-6.724303	107.942115	6.226	2.9	1.288798561
292	-6.54	107.970001	10	-6.519041	107.968717	6.941	2.6	1.202979756
293	-7.24	108.209999	10	-7.215281	108.211194	7.74	2.7	1.416862742
294	-7.97	107.389999	32	-8.028654	107.339502	42.221	2.9	3.385597874
295	-7.03	107.199997	117	-7.061136	107.183504	130.299	3.3	1.910343002
296	-7.74	107.290001	14	-7.748521	107.299972	9.805	4.2	0.492202915
297	-7.96	107.300003	24	-7.93078	107.289186	32.608	3.5	1.675113903
298	-7.89	107.370003	49	-7.896165	107.363605	68.398	3.2	0.353517226
299	-7.9	107.290001	27	-7.846853	107.29622	44.589	4	3.045091954
300	-7.78	107.940002	10	-7.850358	107.911179	3.218	2.5	4.031307123
302	-7.3	107.559998	68	-7.212628	107.529077	91.147	2.6	5.103880437
303	-7.24	107.739998	10	-7.234796	107.74889	9.687	2.4	0.41915807
305	-7.83	107.300003	29	-7.8584	107.274822	39.552	3.3	1.627132364
306	-7.96	107.349998	32	-8.008198	107.31335	43.775	2.9	2.774491164
307	-7.38	108.129997	42	-7.288908	108.120962	59.038	2.7	5.225466637
308	-7.88	107.300003	31	-7.846443	107.286718	45.878	4	1.922644918
309	-7.8	107.309998	32	-7.784707	107.29441	51.926	3.3	0.877922718
310	-7.18	107.550003	33	-7.175024	107.545102	61.446	2.2	0.334945469
311	-7.15	107.309998	114	-7.042076	107.310923	124.372	2.9	6.183696582
312	-7.82	107.419998	47	-7.777432	107.419351	73.559	2.6	2.438967475
313	-7.9	107.239998	35	-7.897745	107.276732	44.343	2.9	0.160023035
314	-7.96	108.379997	42	-8.017163	108.303881	66.447	4.4	3.32474323
315	-7.7	107.32	36	-7.742607	107.314237	45.36	2.7	2.441582032
316	-7.44	107.529999	58	-7.437823	107.534035	77.02	2.9	0.155736783
317	-7.93	107.300003	40	-7.857485	107.300888	70.994	2.7	4.154803534
318	-7.79	107.360001	24	-7.848721	107.328171	21.573	2.9	3.364631798
319	-7.35	107.720001	10	-7.283001	107.727765	10.433	3.6	3.845486157
320	-8	107.389999	10	-8.00639	107.375357	6.928	4	0.386769064
321	-7.77	107.449997	44	-7.783197	107.422083	66.248	3.3	0.766101197
322	-7.05	107.010002	10	-7.004036	107.034749	3.942	3	2.832584082
323	-7.97	107.139999	10	-7.982708	107.080476	10.018	2.8	0.838416097
324	-8	107.339996	32	-8.075321	107.29175	33.247	2.5	4.343783984
325	-7.99	107.379997	22	-8.048949	107.343199	21.574	4	3.394780346
326	-7.84	107.550003	10	-7.818361	107.518356	2.457	2.6	1.240483392
327	-8	107.379997	14	-8.039373	107.33819	11.117	3.2	2.28976446
328	-7.2	107.519997	59	-7.02552	107.613285	72.121	2.7	10.6210492
329	-7.21	107.699997	66	-7.256826	107.67801	89.816	2.4	2.781018692
330	-7.95	107.379997	30	-8.009985	107.329772	43.23	2.7	3.454792911
331	-7.2	107.550003	32	-7.173072	107.551113	58.306	2.5	1.543362708
333	-7.15	107.709999	42	-7.136565	107.702199	70.13	2.9	0.823125976
334	-7.2	107.830002	91	-7.154392	107.827943	108.477	2.9	2.614189198
335	-7.97	107.099998	10	-7.922749	107.102267	8.36	3.3	2.707307715
336	-7.28	107.559998	64	-7.250608	107.551342	81.067	3	1.70639266
337	-7.13	107.970001	10	-7.121939	107.972734	1.693	2.3	0.473467675
338	-7.47	107.870003	144	-7.556959	107.799044	155.366	2.6	5.161206943

339	-7.02	107.449997	36	-6.994116	107.461961	60.928	2.7	1.569443272
340	-7.94	107.040001	18	-7.952075	107.036345	12.282	3.3	0.692113311
341	-7.15	107.620003	41	-7.137182	107.613536	68.007	2.8	0.773144254
342	-7.96	107.040001	19	-7.936397	107.029778	25.093	2.9	1.353456935
343	-7.35	107.599998	64	-7.348236	107.590162	84.893	3	0.290720798
344	-7.82	107.32	26	-7.813664	107.293721	41.065	2.7	0.36727691
345	-7.99	107.309998	39	-7.894126	107.342135	71.049	3.1	5.494857193
346	-7.11	107.57	131	-7.07549	107.55114	148.627	2.6	2.113060312
347	-7.7	107.419998	74	-7.955789	107.323685	75.43	3.1	14.63926166
348	-7.97	107.790001	43	-7.916168	107.742728	67.025	3.1	3.09289262
349	-7.95	107.32	37	-7.980784	107.276643	54.601	2.9	1.784877088
350	-7.98	107.279999	38	-8.070191	107.261167	36.551	3.5	5.170604118
351	-7.5	108.099998	117	-7.464554	108.037003	127.58	2.9	2.416380143
352	-7.35	107.82	10	-7.317089	107.823788	16.883	3.3	1.88874448
353	-7.93	107.360001	40	-8.046143	107.314847	39.782	3	6.661809187
354	-7.37	107.029999	53	-7.346082	107.045832	69.757	2.9	1.436747754
355	-7.38	107.580002	113	-7.388391	107.577569	124.95	3.1	0.484892564
356	-7.99	107.339996	10	-8.010111	107.313937	9.798	3	1.172494544
357	-7.01	107.290001	35	-6.94093	107.297771	52.961	2.7	3.972212344
358	-7.04	108.199997	232	-6.991091	108.169776	230.621	4.3	3.083733096
359	-7.92	107.370003	36	-7.884015	107.364143	61.028	3.3	2.061842794
360	-7.76	107.309998	31	-7.783547	107.266382	50.577	2.9	1.364342602
361	-7.97	107.309998	37	-8.053836	107.26365	39.644	3.1	4.82030543
362	-7.84	107.07	33	-7.847739	107.046799	47.226	3.4	0.44358591
363	-8	107.339996	23	-8.033458	107.31037	40.984	3.6	1.936425822
364	-7.82	107.080002	33	-7.812101	107.070307	51.025	2.8	0.453064016
365	-7.27	107.18	67	-7.310576	107.1577	78.494	3.3	2.422881835
367	-7.23	107.620003	10	-7.222349	107.616252	6.376	2.9	0.456183306
368	-7.2	107.639999	14	-7.20349	107.623421	5.408	2.6	0.610213079
369	-7.35	107.650002	10	-7.312451	107.641844	4.279	2.9	2.164004377
370	-8	107.360001	35	-7.964156	107.33548	44.988	4.1	2.061384915
371	-7.24	107.730003	10	-7.227682	107.717097	8.378	3.1	0.826296652
372	-7.22	107.800003	10	-7.21606	107.726486	7.118	3.2	2.511606946
373	-7.88	107.419998	10	-7.842045	107.404812	10.34	3.2	2.174607247
374	-7.99	107.32	41	-7.972329	107.279507	57.802	3.3	1.054170787
375	-7.66	107.629997	96	-7.62021	107.632908	108.095	2.9	2.280071559
376	-7.6	107.080002	61	-7.522458	107.122468	76.295	2.6	4.497032591
377	-7.96	107.07	26	-7.956798	107.050341	38.442	3.2	0.217800398
378	-7.89	107.040001	25	-7.956796	107.022333	13.152	3.2	3.827624018
379	-8	107.870003	23	-8.043183	107.813609	32.827	3.5	2.53128325
380	-7.87	108.330002	81	-7.784552	108.277381	97.273	4.2	4.894777057
381	-7.33	107.620003	30	-7.308824	107.590453	58.812	2.5	1.488564479
382	-7.98	107.059998	27	-7.996422	107.05497	15.394	4.2	0.941697869
383	-7.86	107.059998	41	-7.934106	107.059736	45.689	3.5	4.245961049
384	-7.16	107.370003	102	-7.159351	107.37347	113.534	3.2	0.132430792
385	-7.16	107.540001	10	-7.171062	107.541146	5.199	3.2	0.635174875
386	-7.86	107.43	27	-7.94269	107.369925	32.365	3.8	4.738455171
387	-7.34	107.669998	10	-7.251891	107.71052	2.781	4.4	5.194984065
388	-7.89	107.230003	22	-7.837405	107.267673	38.344	3.9	3.013009964
389	-7.86	107.050003	39	-7.771679	107.100273	65.182	3.5	5.060014533
390	-7.31	107.57	10	-7.301226	107.570576	7.409	3	0.503007446
391	-7.97	107.190002	56	-8.041054	107.247454	45.001	5.2	4.099661509
392	-7.99	107.260002	17	-8.074853	107.22693	18.526	3.7	4.872688603
393	-7.22	107.800003	16	-7.235381	107.775798	32.434	3	1.198879547
394	-7.92	107.360001	28	-7.981389	107.296153	32.218	3.6	3.53324573

395	-7.75	107.07	47	-7.666435	107.113809	66.963	3.6	4.800650675
396	-7.87	107.970001	48	-7.914168	107.900894	62.075	3.4	2.533622467
397	-7.12	107.709999	15	-7.039014	107.73462	5.068	2.9	4.743637257
398	-7.39	107.529999	10	-7.355588	107.523723	0.579	3.1	1.97866577
399	-7.34	107.519997	10	-7.364501	107.529016	13.12	4.1	1.425621755
401	-7.39	107.669998	12	-7.408644	107.662215	31.39	3.9	1.086018067
402	-7.89	107.230003	23	-7.860306	107.247224	38.817	4.3	1.701406044
403	-7.8	107.410004	21	-7.892719	107.371445	18.549	2.6	5.311446123
404	-7.96	107.330002	27	-8.047996	107.263859	17.174	2.9	5.070801471
406	-7.24	107.440002	10	-7.176286	107.459719	10.877	3.4	3.713190084
407	-7.5	107.650002	41	-7.545574	107.607347	59.402	2.9	2.728909094
408	-7.86	107.370003	85	-7.789638	107.406583	107.058	3	4.031234656
409	-7.54	107.440002	63	-7.452783	107.467738	84.887	3.5	5.027587175
410	-7.39	107.470001	64	-7.700782	107.360469	80.086	3.9	17.88301415
411	-7.91	107.93	37	-7.884744	107.888772	59.896	3.7	1.450378513
412	-7.46	107.510002	14	-7.41803	107.522228	28.892	3.7	2.421190603
413	-7.91	107.309998	32	-7.877719	107.275874	40.33	4	1.850937939
414	-7.64	107.440002	26	-7.673119	107.37039	52.181	2.9	2.051420198
415	-7.49	107.610001	10	-7.46782	107.626974	26.591	3.7	1.319771069
416	-7.56	107.57	15	-7.539356	107.581049	30.502	3.1	1.197910028
417	-7.88	107.25	26	-7.828064	107.248318	42.809	3.9	2.975712552
418	-7.91	107.410004	40	-7.87165	107.394644	55.218	4	2.197467513
419	-7.96	107.449997	10	-7.984568	107.402144	14.151	3.4	1.44396439
420	-7.69	107.400002	39	-7.845701	107.33855	42.582	2.8	8.921952871
421	-7.42	107.660004	16	-7.455717	107.629299	34.839	3.1	2.166258857
422	-7.5	107.639999	44	-7.48943	107.668189	60.076	2.9	0.83016009
423	-7.8	107.309998	27	-7.786719	107.323983	42.691	3.8	0.762473651
424	-7.84	108.339996	84	-7.78103	108.276407	97.84	4.3	3.380733804
425	-7.23	108.410004	21	-7.237563	108.420874	60.029	2.5	0.564617146
426	-7.41	107.68	13	-7.433261	107.667576	26.242	3.6	1.365702475
428	-7.07	107.309998	29	-7.044606	107.3013	52.197	3.1	1.497962005
429	-7.95	107.900002	96	-7.910525	107.876451	117.066	3.1	2.263931164
430	-7.76	107.269997	25	-7.736902	107.277278	36.224	4.1	1.324138543
431	-7.82	107.410004	45	-7.761159	107.425051	65.93	3.5	3.371688277
432	-7.1	108.209999	10	-7.110896	108.196108	6.491	2.9	0.82651241
433	-7.2	107.160004	95	-7.258487	107.120185	102.902	3.2	3.606466616
434	-7.97	107.419998	35	-7.997068	107.381717	57.691	2.9	1.576276103
435	-7.96	107.93	39	-7.940968	107.877194	63.992	3	1.12837473
436	-7.49	107.660004	23	-7.520815	107.620855	28.88	2.9	1.924327778
437	-7.29	108.209999	13	-7.281934	108.231329	0.562	2.9	0.803610903
438	-7.9	107.43	31	-7.993542	107.379459	45.078	3.7	5.364571853
439	-7.6	107.269997	30	-7.662404	107.200085	46.654	2.6	3.6812957
440	-7.86	107.449997	31	-7.895796	107.414846	51.471	3.1	2.051208512
441	-7.44	107.629997	19	-7.486082	107.573996	34.798	2.9	2.908755912
442	-7.78	107.419998	22	-7.838785	107.36694	22.877	2.8	3.369673514
443	-7.79	107.220001	56	-7.716799	107.244275	73.181	3.8	4.196125866
444	-7.93	107.389999	41	-7.946828	107.365943	64.252	3.5	0.971085218
445	-7.22	107.620003	10	-7.209784	107.61792	9.648	4	0.58964628
446	-7.93	107.370003	35	-8.009922	107.31431	45.835	2.4	4.592298837
447	-7.64	107.360001	36	-7.724236	107.312771	50.837	3	4.847186342
448	-7.55	107.519997	20	-7.569557	107.494434	35.481	2.5	1.198238875
449	-7.69	107.07	41	-7.625096	107.101189	58.875	3.3	3.734604738
451	-7.45	107.5	69	-7.410489	107.514803	87.511	3.2	2.290461933
452	-7.95	108.029999	34	-7.991186	107.978504	56.304	2.7	2.383848852
453	-7.82	107.290001	29	-7.808814	107.299649	45.329	4.3	0.641276197

454	-7.21	107.040001	91	-7.266878	107.03395	100.174	3.4	3.265000316
455	-7.1	107.57	33	-7.020578	107.578154	55.115	3.1	4.562694264
456	-7.52	107.5	10	-7.571002	107.476056	7.711	2.7	2.951539035
457	-7.98	107.370003	33	-8.015504	107.335756	50.113	3.1	2.053271179
458	-7.36	107.559998	11	-7.298434	107.580097	12.127	3.3	3.574196682
459	-7.89	107.349998	31	-7.943991	107.339624	51.427	3	3.093641354
460	-7.89	107.769997	49	-7.826032	107.75691	69.595	3	3.665019182
461	-7.97	107.330002	21	-8.032242	107.301181	38.701	3.3	3.574047323
462	-7.64	107.489998	67	-7.790547	107.426733	76.518	2.7	8.635989774
463	-7.47	107.559998	16	-7.445309	107.579903	33.06	2.8	1.481550787
464	-7.81	107.290001	30	-7.803625	107.286285	52.743	2.9	0.3653979
465	-7.76	107.300003	23	-7.801943	107.287942	40.142	2.8	2.403641958
466	-7.66	107.360001	32	-7.626852	107.349137	56.397	2.8	1.903663853
467	-7.92	107.910004	53	-7.755699	107.881876	80.928	3.6	9.412856845
468	-7.9	107.230003	17	-7.914683	107.212347	3.178	3.1	0.842969591
469	-7.89	107.029999	10	-7.900202	107.029304	14.966	3.6	0.584533799
470	-7.94	107.279999	28	-7.999544	107.251837	36.064	3.1	3.416374093
471	-7.59	107.480003	81	-7.404381	107.532403	92.092	2.9	10.68339914
472	-7.98	107.300003	30	-8.062996	107.245229	37.173	3.8	4.782275639
473	-7.69	107.110001	26	-7.788583	107.070154	40.073	3.5	5.653317545
475	-7.62	107.379997	38	-7.537535	107.389026	62.687	3.1	4.726941666
476	-7.01	107.300003	39	-6.924901	107.310102	54.928	3.2	4.89634863
477	-7.88	107.360001	31	-7.893155	107.32825	54.092	3.8	0.755959349
478	-7.08	108.209999	10	-7.03879	108.174153	8.238	3.1	2.778782169
479	-7.34	107.550003	10	-7.311751	107.545206	4.542	3.9	1.62445917
480	-7.24	107.610001	12	-7.248962	107.592922	12.54	3.1	0.759901162
481	-7.17	107.669998	10	-7.162828	107.674594	23.672	3.2	0.443610141
482	-7.24	107.620003	10	-7.229302	107.6172	7.849	3.4	0.619998922
483	-7.36	107.839996	144	-7.304975	107.82892	144.679	3.6	3.168471627
484	-7.53	107.480003	18	-7.490304	107.530181	42.746	3	2.471641537
485	-7.91	107.010002	13	-7.858796	107.052489	3.617	3	2.934045393
486	-7.96	107.410004	13	-7.883105	107.392576	8.179	3.4	4.406107975
487	-7.98	107.25	18	-7.94668	107.256426	26.866	4.1	1.909508454
488	-7.96	107.339996	32	-7.935804	107.274403	27.502	3.9	1.429696373
489	-7.01	107.459999	10	-7.103828	107.431712	0.859	3.6	5.499181027
491	-7.35	107.449997	10	-7.321123	107.459743	1.376	2.9	1.67749073
493	-7.32	107.489998	10	-7.31872	107.461882	8.34	2.8	0.824042317
494	-7.05	108.389999	24	-7.038019	108.442849	8.75	2.7	2.297902761
495	-7.93	107.300003	31	-7.907669	107.289896	55.595	3.5	1.280006044
496	-7.03	107.209999	10	-7.051657	107.219055	12.268	3.4	1.296835124
497	-7.3	107.360001	143	-7.297015	107.347612	151.762	3.6	0.411547487
498	-7.87	107.239998	29	-7.835593	107.241608	47.329	3.7	1.97137525
499	-8	107.639999	38	-7.947445	107.610299	67.274	4.3	3.01770441
500	-7.77	107.099998	56	-7.67059	107.194516	69.709	5.1	5.735056904
501	-7.95	107.139999	17	-7.958275	107.143406	16.838	3.8	0.474523484
502	-7.93	107.279999	20	-7.917094	107.2643	5.937	3.3	0.742075145
503	-7.99	107.230003	18	-7.921909	107.262646	6.634	3.9	3.905453777
504	-7.87	107.269997	30	-7.843311	107.277956	42.959	3.9	1.529155437
505	-7.88	107.830002	10	-8.035613	107.773913	14.222	3.8	8.918699679
506	-7.13	107.510002	173	-6.870553	108.163962	117.911	3.1	31.48512093
507	-7.75	107.080002	28	-7.643605	107.110802	59.51	3.6	6.101528477
508	-7.51	107.550003	10	-7.44343	107.545418	13.273	3.9	3.81539841
509	-7.89	107.290001	17	-7.924347	107.258541	11.585	3.9	1.970027296
510	-7.85	107.269997	30	-7.815643	107.281794	44.1	4.2	1.96852881
511	-7.39	108.410004	10	-7.369751	108.422439	11.151	2.9	1.204898608

512	-7.13	108.059998	305	-6.835671	107.995584	311.786	3.1	17.09323751
513	-7.9	107.059998	23	-7.907232	107.046974	31.786	3.6	0.416005014
514	-7.85	107.82	127	-7.650201	107.804748	137.902	3.2	11.44766651
515	-7.21	107.18	123	-7.275401	107.181699	124.029	4.8	3.747616676
516	-7.82	107.690002	74	-7.718852	107.685506	90.835	3.4	5.795379755
517	-7.84	107.300003	26	-7.820908	107.291416	43.911	3.9	1.093942177
518	-7.98	107.339996	10	-8.009505	107.276187	14.313	4.4	1.76578576
519	-7.8	107.589996	10	-7.787985	107.568713	4.392	3.3	0.692241122
520	-7.55	107.610001	87	-7.513638	107.619565	103.309	2.7	2.09057877
521	-7.46	108.25	238	-7.127697	108.122825	245.958	3.1	19.39790102
523	-7.42	107.07	145	-7.348717	107.154324	127.489	5.4	4.629637455
524	-7.64	107.209999	26	-7.626133	107.17783	52.059	3.2	0.891182809
525	-7.85	107.150002	10	-7.977347	107.111438	0.542	3.5	7.296281293
526	-7.98	108.040001	30	-8.116477	107.892386	48.849	4.4	7.967533943
527	-7.81	107.07	10	-7.935892	107.020087	9.789	3.6	7.211035595
528	-7.91	107.120003	33	-7.893341	107.100628	40.569	3.4	0.955911573
529	-7.43	107.739998	129	-7.383889	107.731805	130.328	4.2	2.6497284
530	-7.34	107.629997	11	-7.350557	107.618666	19.568	3	0.682525053
531	-7.35	107.589996	10	-7.354423	107.575417	13.05	3.5	0.475009555
532	-7.39	107.559998	10	-7.379584	107.559377	9.696	4	0.597009629
533	-7.33	107.709999	19	-7.354856	107.748492	45.154	3.1	1.786926244
534	-7.33	107.620003	10	-7.33909	107.629912	26.829	3.7	0.59217415
535	-7.38	107.559998	10	-7.388343	107.561921	13.338	4	0.480613903
536	-7.36	107.559998	10	-7.37128	107.52472	7.584	3.3	1.147520598
537	-7.31	107.589996	10	-7.333306	107.585864	16.325	3.3	1.34072833
538	-7.47	107.389999	17	-7.504519	107.359512	34.736	3.3	2.074387629
539	-7.33	107.690002	17	-7.367745	107.642643	30.101	3	2.529549886
540	-7.36	107.589996	10	-7.3702	107.583119	16.072	3.5	0.613011079
541	-7.26	107.739998	10	-7.27532	107.692806	12.871	3.4	1.734382353
542	-7.36	107.610001	12	-7.379664	107.613324	28.792	3.8	1.130142792
543	-7.42	107.57	10	-7.4203	107.566372	7.792	4.1	0.089052456
544	-7.37	107.580002	10	-7.382167	107.566055	14.856	3.5	0.788049111
545	-7.37	107.690002	30	-7.435765	107.596843	45.3	3.1	4.425260437
546	-7.83	107.019997	61	-7.754141	107.048806	79.888	3.3	4.347150283
547	-7.44	107.540001	10	-7.431682	107.534665	6.645	4	0.492488697
548	-7.29	107.800003	128	-7.293874	107.720839	139.225	3.8	2.426893937
549	-7.39	107.529999	10	-7.375332	107.546154	8.575	4	0.939623047
550	-7.39	107.559998	10	-7.38116	107.531942	4.65	3.3	0.884948205
551	-7.43	107.550003	10	-7.405144	107.541604	8.581	3.1	1.438585905
552	-7.37	107.589996	10	-7.380906	107.567835	14.257	3.4	0.855719483
553	-7.39	107.580002	10	-7.411113	107.552867	19.45	3.7	1.388127781
554	-7.16	107.849998	25	-7.191359	107.720672	44.655	3.4	4.981721222
555	-7.93	107.309998	23	-7.852239	107.293164	48.436	3.7	4.45536328
556	-7.86	108.059998	73	-7.779056	108.031258	92.294	4.4	4.637617741
557	-7.95	108.080002	10	-7.922242	108.064125	1.37	3	1.592116737
558	-7.84	107.25	22	-7.814969	107.234664	58.499	3	1.434317446
559	-7.89	107.739998	63	-7.8253	107.710197	83.016	3.7	3.706630567
560	-7.87	107.269997	27	-7.835136	107.281373	42.343	4.3	1.997527952
561	-7.99	107.25	23	-7.971498	107.226746	22.635	3.4	1.073315581
562	-7.22	107.790001	10	-7.205724	107.771115	5.751	3.8	1.043000667
563	-7.99	107.050003	10	-7.958122	107.075849	19.26	3.5	1.83491844
564	-7.91	108.339996	128	-7.789795	108.282102	136.33	4.1	6.884363751
565	-7.19	108.360001	152	-7.3395	108.240671	153.886	4.9	9.358871983
566	-7.88	107.32	26	-7.820913	107.299	47.932	3.9	3.385251708
567	-7.54	108.389999	131	-7.623818	108.343958	128.058	5.1	4.853248821

568	-7.56	107.510002	77	-7.56524	107.527086	93.592	2.2	0.411328902
569	-7	107.120003	136	-7.033061	107.13801	129.795	4.5	2.043416352
570	-7.4	108.220001	36	-7.317663	108.220628	46.033	2.8	4.717593284
571	-7.78	108.32	100	-7.760436	108.275888	92.448	4.6	1.140435879
572	-7.97	107.870003	26	-7.96596	107.811132	46.245	2.9	0.448008323
573	-7.37	107.550003	20	-7.226672	107.598126	25.26	2.5	8.337962657
574	-7.52	107.410004	70	-7.496329	107.408616	82.894	3.9	1.356515965
575	-7.61	108.360001	113	-7.560703	108.26764	126.272	3.1	3.15167283
576	-7.08	107.029999	76	-7.126876	107.034665	91.373	3.5	2.691974181
577	-7.96	107.940002	31	-7.985096	107.899691	54.057	3.2	1.463332168
578	-7.17	107.32	10	-7.159678	107.328308	4.853	3.2	0.664361318
579	-7.21	108.300003	10	-7.189533	108.305045	2.498	3.2	1.185773744
580	-7.89	107.93	44	-7.821867	107.896115	66.844	2.7	3.903174703
581	-7.81	107.120003	32	-7.759751	107.111181	60	2.6	2.879239256
582	-7.87	107.029999	21	-7.964648	106.999468	19.999	2.9	5.423430728
583	-7.05	108.18	238	-6.989115	108.132721	229.504	4.6	4.02403671
584	-7.24	107.290001	156	-7.261652	107.292456	153.826	3.8	1.243130724
585	-7.63	107.080002	38	-7.568459	107.105716	61.068	3.8	3.545254374
586	-7.5	107.120003	10	-7.537304	107.125046	7.522	3	2.139469455
587	-7.81	107.889999	94	-7.626976	107.878574	109.078	3.1	10.48670605
588	-7.78	107.160004	28	-7.75086	107.157345	51.822	3.1	1.669651908
589	-7.92	107.290001	10	-7.882694	107.293977	8.073	4	2.137499347
590	-7.42	107.690002	10	-7.395101	107.717638	10.462	3	1.581838326
591	-7.75	107.349998	31	-7.807755	107.306179	48.118	3.1	3.313684546
592	-7.28	107.639999	10	-7.26779	107.675229	17.78	3.3	1.30889754
593	-7.88	107.269997	18	-7.87088	107.265584	40.1	3.6	0.522564401
594	-7.91	107.269997	25	-7.959944	107.244045	45.091	3.2	2.863867989
595	-7.97	107.129997	10	-8.026971	107.063596	9.721	2.4	3.308087277
596	-7.79	107.330002	24	-7.795079	107.310404	41.034	4.3	0.299048079
597	-7.86	107.349998	37	-7.90396	107.308894	57.264	3.2	2.519053546
598	-7.21	107.629997	10	-7.198377	107.618334	19.408	3	0.779059608
599	-7.27	107.620003	12	-7.269836	107.645443	33.544	3.2	0.803789965
600	-7.23	107.629997	10	-7.219916	107.607195	8.545	3	0.961566486
601	-7.26	107.589996	10	-7.244411	107.605472	16.718	3.1	1.024555163
605	-7.17	107.720001	10	-7.154046	107.720496	20.215	3.2	0.914275946
606	-7.32	107.589996	11	-7.318629	107.590038	13.612	2.3	0.078562084
607	-7.21	107.769997	10	-7.212991	107.739183	4.145	3.2	1.071635136
608	-7.6	107.559998	10	-7.648587	107.547032	13.679	2.8	2.788907051
609	-7.97	107.160004	28	-7.977377	107.135702	53.157	2.8	0.45417296
610	-7.28	107.699997	10	-7.226962	107.717233	5.106	3.4	3.089574855
611	-7.33	107.379997	10	-7.271883	107.40102	11.477	3	3.389287868
612	-7.88	107.769997	38	-7.767391	107.76502	60.916	3	6.452006227
613	-7.88	107.239998	16	-7.878647	107.226774	14.47	3.2	0.079861547
614	-7.86	107.25	21	-7.885814	107.251109	35.394	3.1	1.479033514
615	-7.38	107.580002	10	-7.357536	107.577973	8.926	3.6	1.28823336
616	-7.53	107.540001	10	-7.525313	107.535979	14.018	3	0.278519983
617	-7.42	107.550003	10	-7.373769	107.567864	12.816	4.3	2.686979793
618	-7.47	107.550003	10	-7.418175	107.55307	8.857	2.8	2.970176316
619	-7.55	107.510002	10	-7.537329	107.493871	5.375	3.7	0.778900674
620	-7.37	107.589996	10	-7.355566	107.584271	11.828	3.6	0.841352911
621	-7.87	107.279999	26	-7.834946	107.280778	42.821	4	2.008446104
622	-7.87	107.25	25	-7.824435	107.280168	42.933	3.8	2.610411337
623	-7.26	107.709999	10	-7.231824	107.7294	2.663	3.5	1.7347186
624	-7.99	107.809998	53	-7.907417	107.77889	76.508	3.9	4.734090534
625	-7.58	107.050003	78	-7.475294	107.12214	86.516	5	6.140177892

626	-7.87	107.290001	25	-7.841939	107.283928	44.368	3.5	1.607769605
627	-7.39	107.830002	150	-7.380759	107.798713	150.678	4.6	0.967366074
628	-7.92	107.029999	10	-7.899422	107.042461	11.554	3.5	1.179680308
629	-7.37	107.830002	64	-7.446743	107.753557	81.876	2.8	4.782436484
630	-7.1	107.660004	10	-7.194996	107.607731	5.43	3.3	5.778400536
631	-7.68	107.540001	10	-7.700894	107.516612	19.678	3.1	1.216776667
632	-7.26	107.669998	10	-7.28285	107.689027	8.977	3.3	1.440031801
633	-7.81	107.300003	21	-7.856665	107.287441	37.734	3	2.673696117
634	-7.23	107.349998	10	-7.205009	107.354168	10.164	2.8	1.438901108
635	-7.78	108.050003	89	-7.638932	108.014146	105.165	3.4	8.086731599
636	-7.69	107.360001	29	-7.69861	107.351321	50.886	3.6	0.499609413
637	-7.61	107.620003	89	-7.544336	107.614178	101.382	3.8	3.76336037
638	-7.97	107.940002	36	-7.943221	107.898543	62.913	2.5	1.553177443
639	-7.85	108.010002	42	-7.817401	107.957032	67.957	2.4	1.868144118
640	-7.67	107.400002	27	-7.643465	107.356014	47.778	2.4	1.598208075
641	-7.91	107.07	11	-7.877115	107.074216	13.015	2.9	1.884191767
642	-7.14	107.120003	11	-7.13918	107.100062	13.828	2.4	0.75000677
643	-7.16	107.110001	15	-7.171925	107.085742	22.038	2.4	1.116146274
644	-7.85	108.220001	55	-7.867578	108.168579	76.166	2.4	1.006911938
645	-7.54	108.410004	95	-7.557644	108.319859	113.728	2.9	1.851096362
646	-7.93	107.25	14	-7.90344	107.272619	6.894	3.6	1.523846577
647	-7.38	107.849998	125	-7.283372	107.823442	133.543	3.6	5.587762977
648	-7.81	107.279999	33	-7.74827	107.301553	52.617	3.3	3.537869148
649	-7.34	107.620003	11	-7.326352	107.607993	13.497	3.1	0.853637233
650	-7.81	108.209999	80	-7.735041	108.157601	95.071	3.1	4.300309116
652	-7.18	107.82	13	-7.161471	107.838117	7.976	2.3	1.247572268
653	-7.91	107.389999	37	-7.827611	107.402552	63.542	3.6	4.720460998
654	-7.97	107.410004	48	-7.8862	107.436395	69.73	3.6	4.802275082
655	-7.17	107.300003	23	-7.116923	107.307331	31.068	2.5	3.053378402
656	-7.37	107.019997	129	-7.435864	107.034901	119.326	4.9	3.791952229
657	-7.99	107.07	21	-7.956462	107.055941	36.344	2.9	1.923926911
658	-7.51	107.849998	28	-7.083707	107.752735	50.925	2.7	24.57812701
659	-7.28	107.629997	10	-7.275253	107.62435	6.729	2.3	0.324137022
660	-7.36	107.709999	10	-7.292512	107.719596	3.193	4.2	3.876642091
661	-7.97	107.68	10	-7.970764	107.664575	9.38	2.5	0.111584151
662	-7.93	107.260002	39	-7.859701	107.268262	47.848	3.6	4.027848091
663	-7.88	107.220001	36	-7.809502	107.262284	47.042	4.1	4.038396785
664	-7.86	107.239998	31	-7.826207	107.269882	48.176	4	1.936069723
665	-7.18	108.379997	17	-7.16443	108.403082	8.02	2.7	1.220846055
666	-7.26	107.610001	10	-7.274602	107.607697	8.235	3.7	0.839818276
667	-7.22	107.57	10	-7.251314	107.579754	21.593	3.1	1.823156095
668	-7.17	107.550003	10	-7.207842	107.559896	18.579	3.1	2.196201952
669	-7.24	107.550003	10	-7.265139	107.576957	9.072	3.2	1.684588993
670	-7.24	107.550003	10	-7.268007	107.57742	8.619	2.6	1.833380499
671	-7.34	107.559998	10	-7.310961	107.578724	6.356	3.8	1.749500994
672	-7.26	107.57	10	-7.267201	107.578217	9.428	2.1	0.488787466
673	-7.36	107.589996	10	-7.316828	107.592639	8.46	3.2	2.474698081
674	-7.7	107.07	50	-7.604154	107.099085	72.46	3.5	5.501164804
675	-7.84	107.360001	13	-7.830361	107.336648	7.661	3.3	0.552808974
676	-7.19	107.559998	160	-7.288122	107.517028	157.601	4.5	5.79761491
677	-7.11	107.080002	147	-7.145009	107.099613	153.213	2.5	2.140157596
678	-7.71	107.540001	71	-7.648724	107.548281	77.99	4.5	3.511794018
679	-7.68	107.690002	96	-7.590435	107.675916	110.675	3.3	5.134561402

LAMPIRAN 2

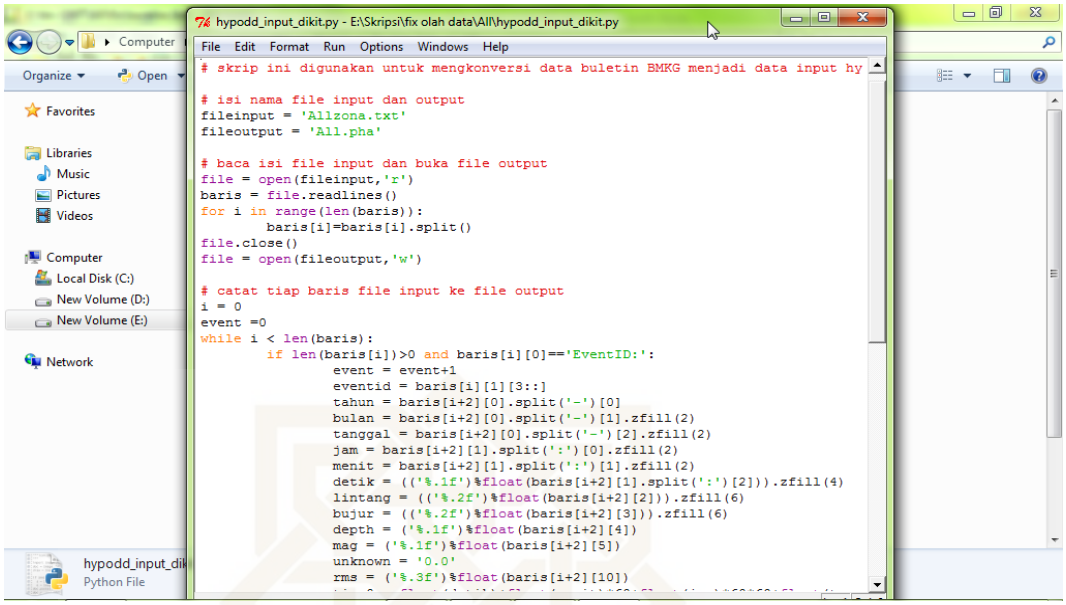
Pengolahan Relokasi dengan HypoDD

Langkah-langkah pengolahan relokasi hiposenter gempa dengan HypoDD :

1. Langkah pertama yang harus kita lakukan adalah menngkonversi katalog data gempa dan data stasiun. Konversi data stasiun dapat dilakukan langsung dengan merubah ekstensi format filenya (*****.txt** diubah *****.dat**) asalkan format data telah sesuai, sedangkan untuk mengkonversi katalog data gempa dilakukan dengan sebuah program yang berekstensi *****.py** yang dapat dijalankan oleh *software python 2.7.2,* maka pastikan software tersebut telah terinstal. Berikut katalog data gempa sebelum dikonversi:

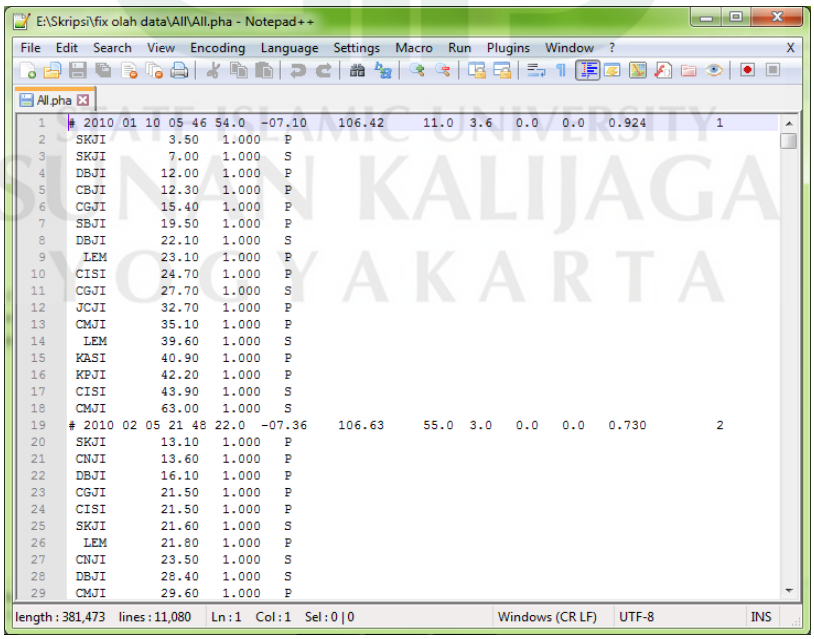
```
Meteorological Climatological and Geophysical Agency, BMKG
Earthquake Database
============================================================

File Created: Tue Aug 09 2016 14:13:52 WIB
Earthquake Events = 47 Events
Date Range: 2010-01-01 - 2010-12-31
Latitude: 6S - 7.5S
Longitude: 107E - 106E
Magnitude Range: 1 - 9.5 SR
Depth Range: 1 - 1000 Km


EventID: bmg2010aqwr
Date       Time       Latitude   Longitude   Depth   Mag TypeMag smaj       smin    az  rms    cPhase  Region
2010-01-10  05:46:54   -7.1       106.42      11      3.6 M       2.51       0.17    195 0.924  17      Java, Indonesia

Net Sta Phase   Date       Time        dis Az  Res Amp     Per Qual    mb  ML  mB
IA  SKJI    P   2010-01-10  05:46:57.5  0.2 56  -1.3    0       0   i
IA  SKJI    S   2010-01-10  05:47:01.0  0.2 56  -1.4    0       0   i
IA  DBJI    P   2010-01-10  05:47:06.0  0.6 31  -0.3    0       0   i
IA  CBJI    P   2010-01-10  05:47:06.3  0.7 52  -0.2    0       0   i
IA  CGJI    P   2010-01-10  05:47:09.4  0.9 304 -0.5    0       0   i
IA  SBJI    P   2010-01-10  05:47:13.5  1   344 1.1 0       0   i
IA  DBJI    S   2010-01-10  05:47:16.1  0.6 31  0.3 0       0   i
IA  LEM P   2010-01-10  05:47:17.1  1.2 77  1.6 0       0   i
IA  CISI    P   2010-01-10  05:47:18.7  1.5 108 -0.7    0       0   i
IA  CGJI    S   2010-01-10  05:47:21.7  0.9 304 -0.7    0       0   i
IA  JCJI    P   2010-01-10  05:47:26.7  1.9 79  0.8 0       0   i
IA  CMJI    P   2010-01-10  05:47:29.1  2.1 109 -0.5    0       0   i
```

2. pastikan katalog data gempa dan program yang berektensi *****.py** tersebut ada dalam satu folder. Kemudian klik kanan pada program konversi berekstensi *****.py** lalu pilih **Edit with IDLE**, akan muncul tampilan berikut:

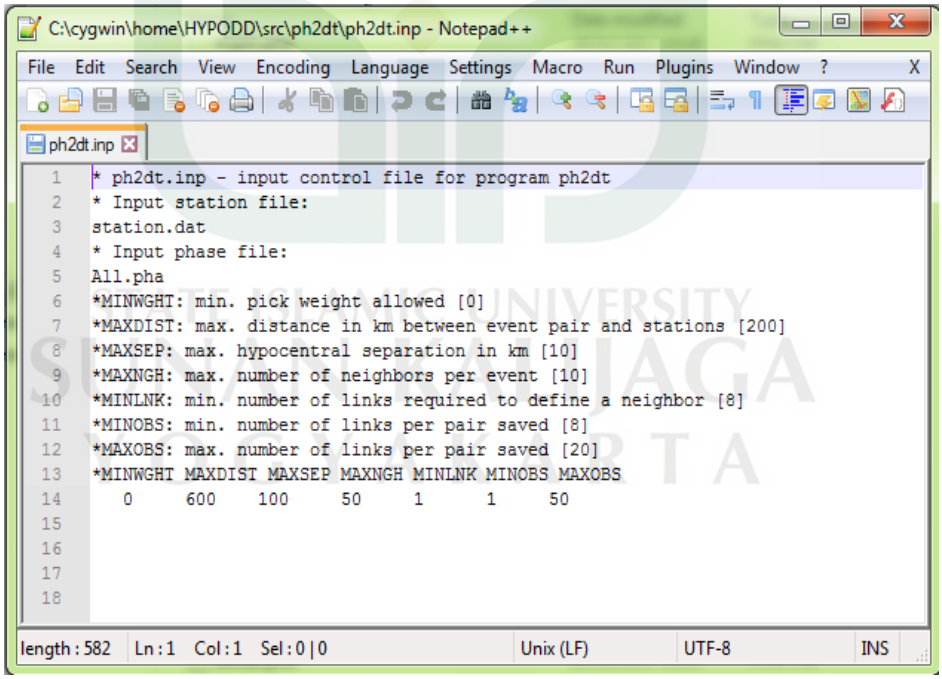


Pada **fileinput** sesuaikan dengan nama data katalog gempa yang akan dikonversi, dan **fileoutput** adalah nama data output atau hasil konversi dari katalog data gempa, sesuaikan nama output sesuai keinginan.

3. Klik **Run** pilih **modul(f5)**, akan muncul file berekstensi ***.pha**. untuk melihat data yang sudah dikonversi (***.pha**) buka dengan *software Notpad++*, berikut data yang sudah dikonversi yang berformat file ***.pha**:

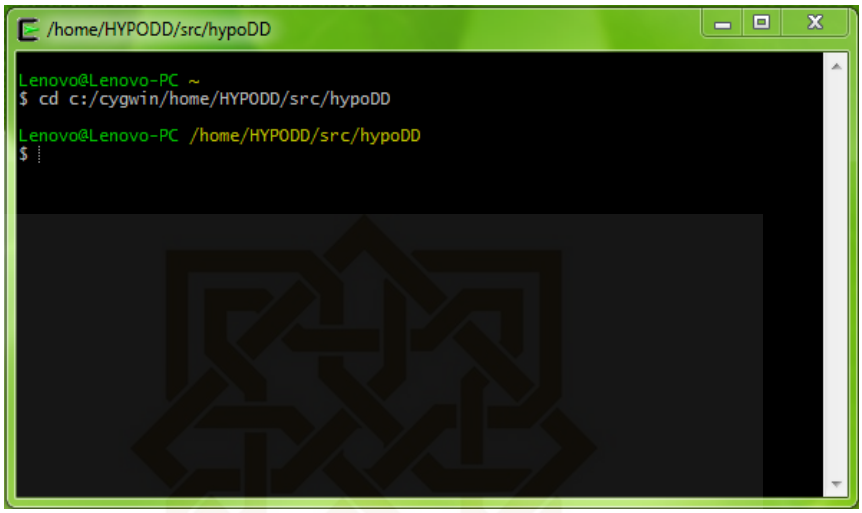


4. Sebelum melakukan pengolahan dalam merelokasi data gempa tersebut, Pastikan *software cygwin* telah terinstal. Setelah instalasi selesai pindahkan seluruh folder **HYPODD** ke **C:/cygwin/home**.
5. Copy file data gempa (*****.pha**) dan data stasiun (*****.dat**) ke **C:/cygwin/home/HYPODD/src/ph2dt**.
6. Kita harus melakukan *clustering* terhadap data gempa terlebih dahulu. *Clustering* dilakukan dengan **program ph2dt**. Kita dapat melakukan *clustering* data sesuai keinginan kita dengan mengedit inputannya pada file **ph2dt.inp** pada folder **C:/cygwin/home/HYPODD/src/ph2dt**. Input dapat diatur dengan cara klik kanan pada file **ph2dt.inp** pilih **Edit with Notepad++**, akan muncul tampilan berikut:

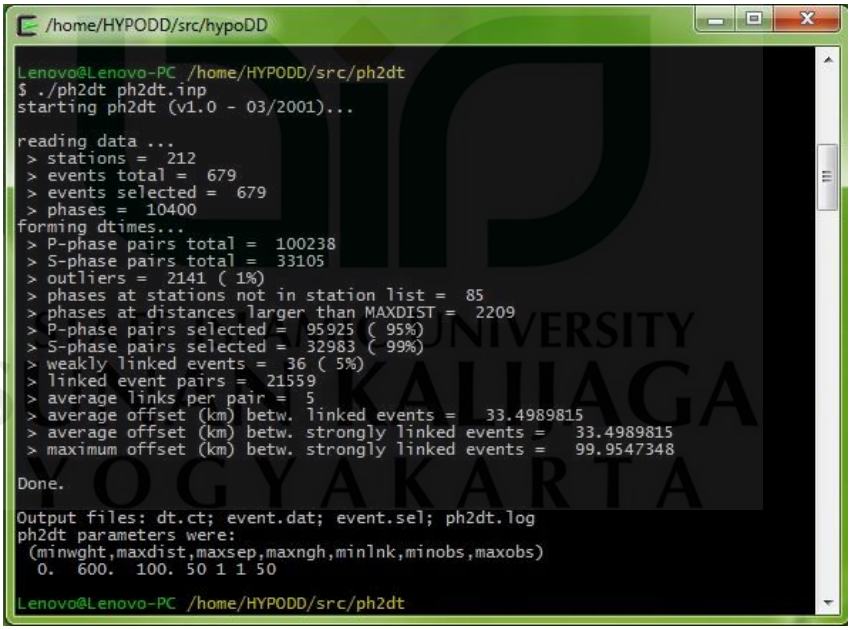


7. Setelah mengedit inputan sesuai keinginan kita, jalankan terminal *cygwin*.

8. Masuklah ke direktori program **ph2dt** terlebih dahulu dengan mengetik **cd C:/cygwin/home/src/ph2dt** pada terminal *cygwin*.



9. Kemudian jalankan program **ph2dt** dengan mengetik **./ph2dt ph2dt.inp**, proses clutering data pun berjalan. Berikut tampilannya:



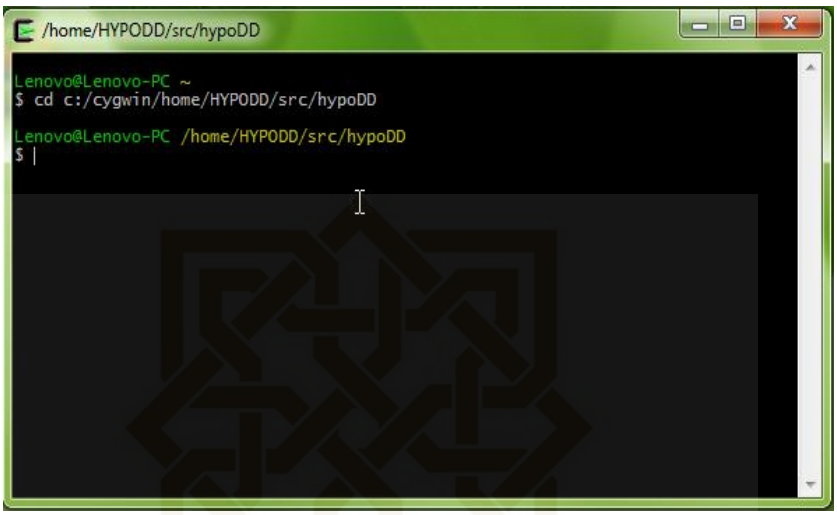
10. Copy file yang ada di folder **ph2dt** yaitu : **dt.ct**, **event.dat**, dan **station.dat** ke folder **C:/cygwin/home/src/hypoDD.** Jika ada data *cross corelation* (**dt.cc**) copy juga ke dalam folder tersebut, jika tidak ada buat blank dokumen

(notepad) yang di simpan dengan nama **dt.cc** dan disimpan dalam folder tersebut.

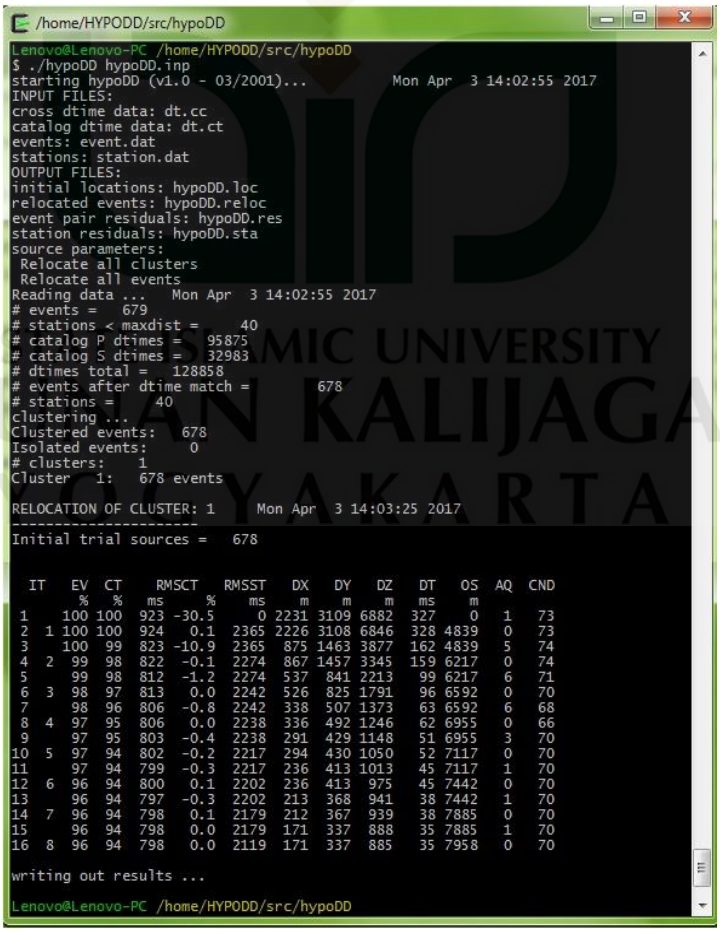
11. input **program hypoDD** dapat diatur pada file **hypoDD.inp** yang terdapat dalam folder **C:/cygwin/home/src/hypoDD**. Klik kanan pada file **hypoDD.inp** lalu pilih **Edit with Notepad++.** Berikut tampilan dari **hypoDD.inp**:

```
* RELOC.INP:
*--- input file selection
* cross correlation diff times:
dt.cc
*
*catalog P diff times:
dt.ct
*
* event file:
event.dat
*
* station file:
station.dat
*
*--- output file selection
* original locations:
hypoDD.loc
* relocations:
hypoDD.reloc
* station information:
hypoDD.sta
* residual information:
hypoDD.res
* source paramater information:
*hypoDD.src

*
*--- data type selection:
* IDAT:  0 = synthetics; 1= cross corr; 2= catalog; 3= cross & cat
* IPHA: 1= P; 2= S; 3= P&S
* DIST:max dist [km] between cluster centroid and station
* IDAT   IPHA   DIST
    2     3     600
*
*--- event clustering:
* OBSCC:    min # of obs/pair for crosstime data (0= no clustering)
* OBSCT:    min # of obs/pair for network data (0= no clustering)
* OBSCC  OBSCT
    0     1
*
*--- solution control:
* ISTART:   1 = from single source; 2 = from network sources
* ISOLV:    1 = SVD, 2=lsqr
* NSET:         number of sets of iteration with specifications following
*  ISTART  ISOLV  NSET
    2        2      2
*
*--- data weighting and re-weighting:
* NITER:        last iteration to used the following weights
* WTCCP, WTCCS:     weight cross P, S
* WTCTP, WTCTS:     weight catalog P, S
* WRCC, WRCT:       residual threshold in sec for cross, catalog data
* WDCC, WDCT:       max dist [km] between cross, catalog linked pairs
* DAMP:         damping (for lsqr only)
*        ---  CROSS DATA -----  ----CATALOG DATA ----
* NITER WTCCP WTCCS WRCC WDCC WTCTP WTCTS WRCT WDCT DAMP
4     -9     -9   -9   -9   1      1    -9    100    95
4     -9     -9   -9   -9   1      1    -9    100    90
*
*--- 1D model:
* NLAY:     number of model layers
* RATIO:    vp/vs ratio
* TOP:      depths of top of layer (km)
* VEL:      layer velocities (km/s)
* NLAY  RATIO
   12     1.73
* TOP
0   5   10  15  25  35  45  60  100 160 210 360
* VEL
5.00    5.00    6.00    6.75    7.11    7.24    7.37    7.6 7.95    8.17    8.3 8.8
*
*--- event selection:
* CID:  cluster to be relocated (0 = all)
* ID:   cuspids of event to be relocated (8 per line)
* CID
    1
* ID
```

12. Pada terminal cygwin, ketik : **cd C:/cygwin/home/src/hypoDD** untuk masuk ke direktori **program hypoDD**.



13. Kemudian jalankan **./hypoDD hypoDD.inp**, proses relokasi akan berjalan. Berikut tampilannya:



14. Nilai CND harus berkisar antara 40-80, jika belum sesuai maka kembali ke langkah 11 untuk mengatur nilai DAMP.
15. Output files dari program hypoDD antara lain :

    hypoDD.loc (data sebelum direlokasi)

    hypoDD.reloc (hasil relokasi hiposenter)

    hypoDD.res (residual)

    hypoDD.sta (stasiun yang terpakai)

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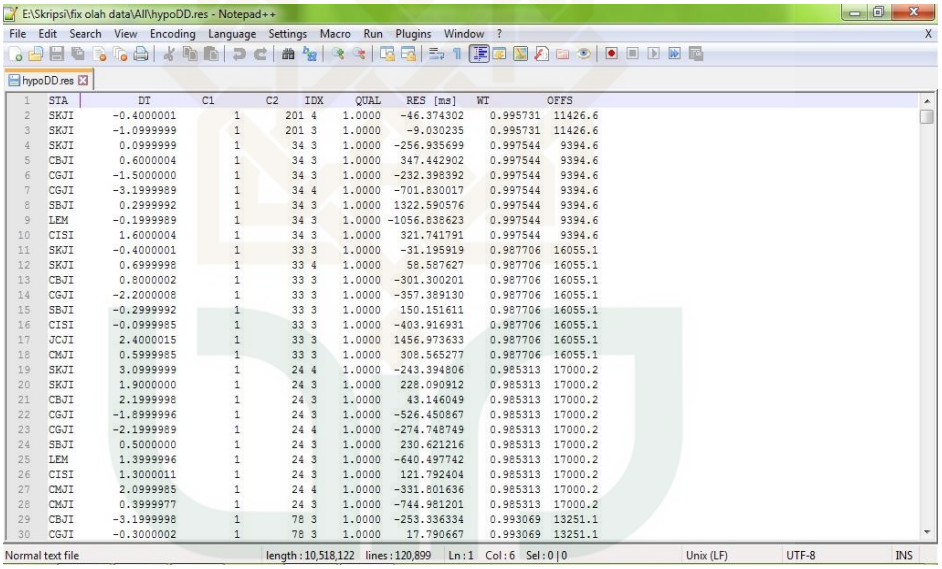
LAMPIRAN 3

Pengolahan Histogram Data Residual dengan Microsoft Excel

Langkah-langkah membuat histogram dari residual waktu tempuh dengan menggunakan Microsoft Excel:

1. Buka folder HypoDD , klik kanan pada file **hypoDD.res** , klik edit with notepad++ . akan muncul tampilan seperti dibawah ini :



2. Ctrl+A, kemudian klik kanan , pilih copy.
3. Buka Microsoft Excel, paste (Ctrl+V). akan muncul tampilan seperti dibawah ini :

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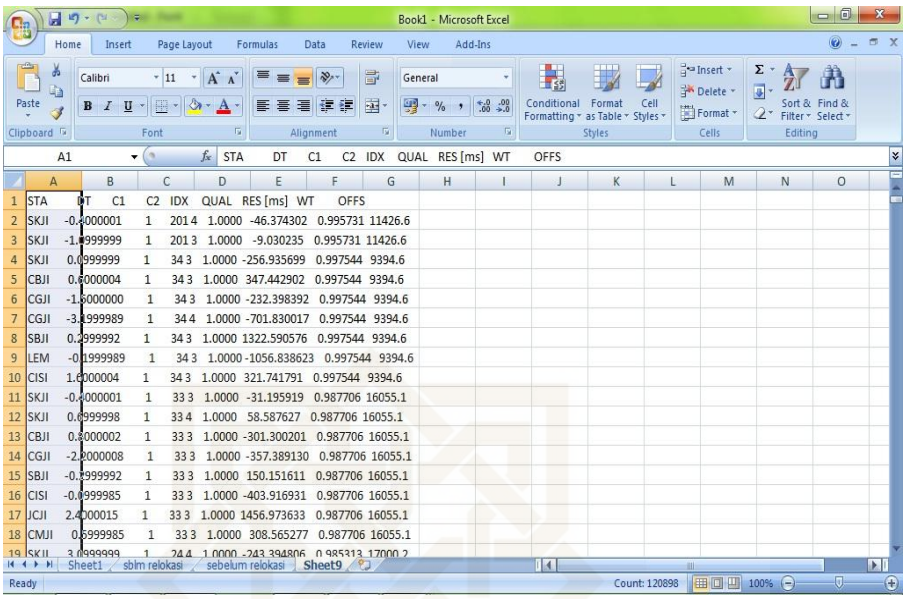
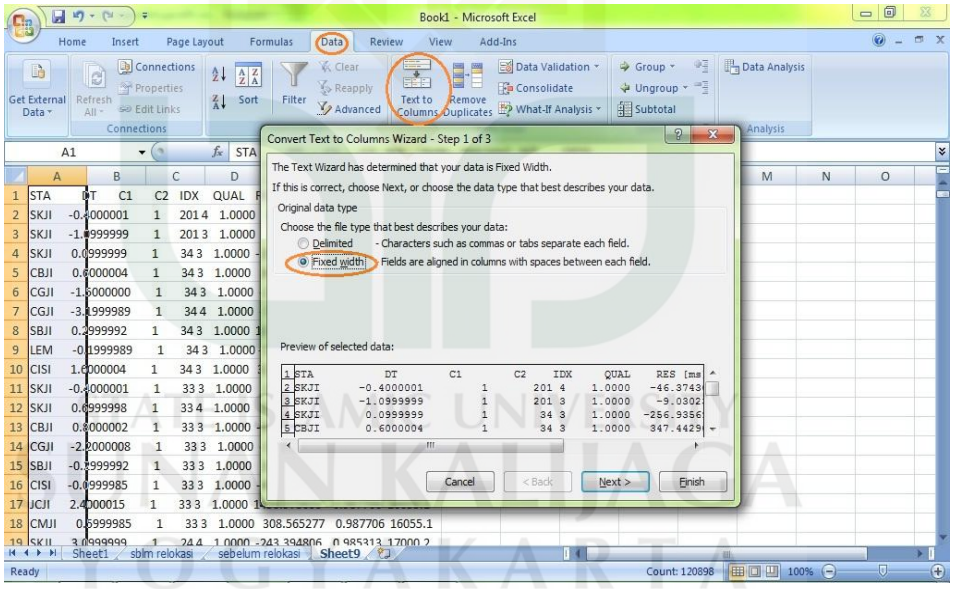
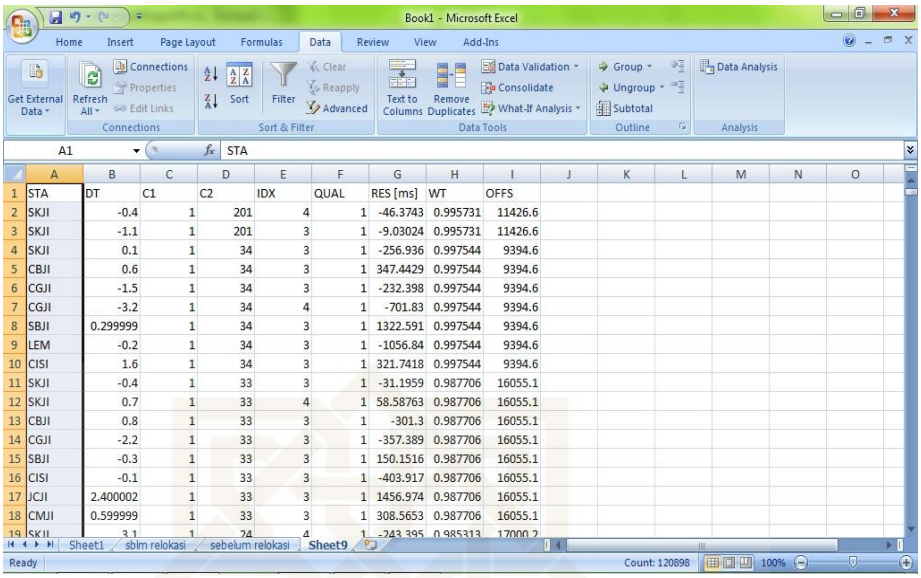


4. Data di atas belum rapi. Untuk merapikannya , klik **Data** , pilih **Text-to Colums** , centang **Fixed width**.

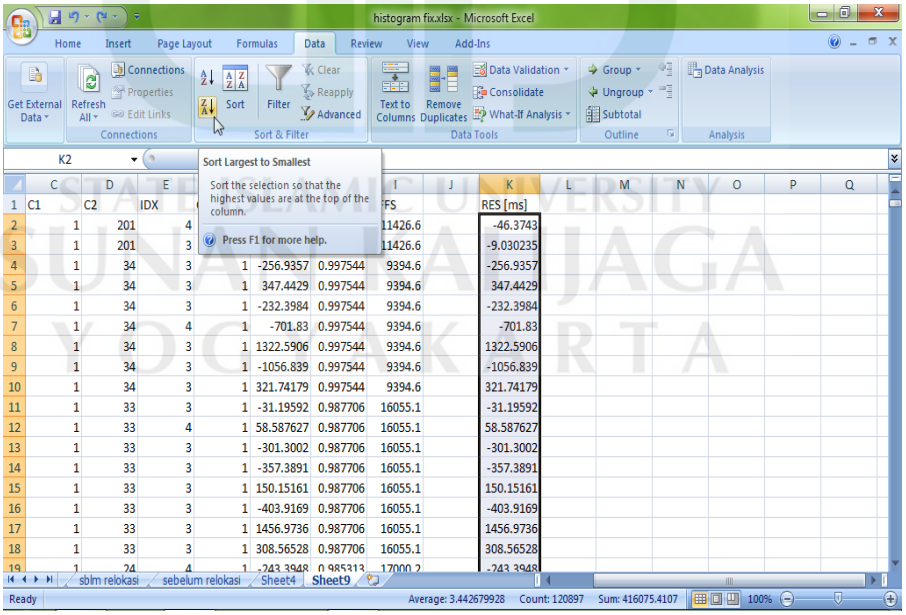


5. Klik **Next** , lalu **Finish.** Maka, data akan otomatis rapi sesuai kolomnya. berikut tampilan seperti dibawah ini:



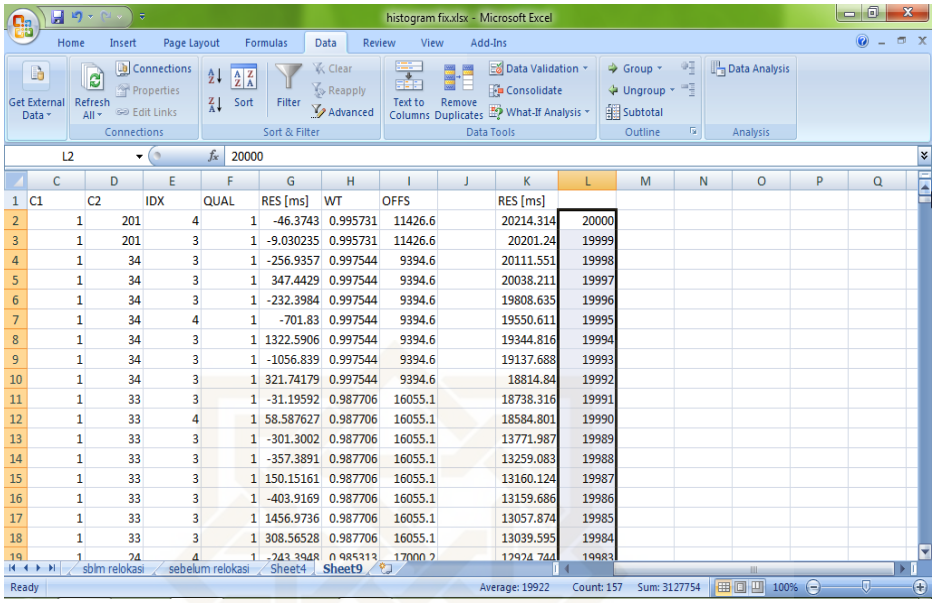
	A	B	C	D	E	F	G	H	I
1	STA	DT	C1	C2	IDX	QUAL	RES [ms]	WT	OFFS
2	SKJI	-0.4	1	201	4	1	-46.3743	0.995731	11426.6
3	SKJI	-1.1	1	201	3	1	-9.03024	0.995731	11426.6
4	SKJI	0.1	1	34	3	1	-256.936	0.997544	9394.6
5	CBJI	0.6	1	34	3	1	347.4429	0.997544	9394.6
6	CGJI	-1.5	1	34	3	1	-232.398	0.997544	9394.6
7	CGJI	-3.2	1	34	4	1	-701.83	0.997544	9394.6
8	SBJI	0.299999	1	34	3	1	1322.591	0.997544	9394.6
9	LEM	-0.2	1	34	3	1	-1056.84	0.997544	9394.6
10	CISI	1.6	1	34	3	1	321.7418	0.997544	9394.6
11	SKJI	-0.4	1	33	3	1	-31.1959	0.987706	16055.1
12	SKJI	0.7	1	33	4	1	58.58763	0.987706	16055.1
13	CBJI	0.8	1	33	3	1	-301.3	0.987706	16055.1
14	CGJI	-2.2	1	33	3	1	-357.389	0.987706	16055.1
15	SBJI	-0.3	1	33	3	1	150.1516	0.987706	16055.1
16	CISI	-0.1	1	33	3	1	-403.917	0.987706	16055.1
17	JCJI	2.400002	1	33	3	1	1456.974	0.987706	16055.1
18	CMJI	0.599999	1	33	3	1	308.5653	0.987706	16055.1
19	SKJI	3.1	1	24	4	1	-243.395	0.985313	17000.2

6. Untuk memudahkan, copykan seluruh nilai residual (kolom G) ke kolom lainnya (misalnya di kolom K). Lalu blok semua nilai residual, kemudian **Sort Z-A,** nilai residual pada kolom K dari yang terbesar sampai terkecil agar kita mengetahui interval dari nilai residual dari nilai paling tinggi sampai yang paling rendah.



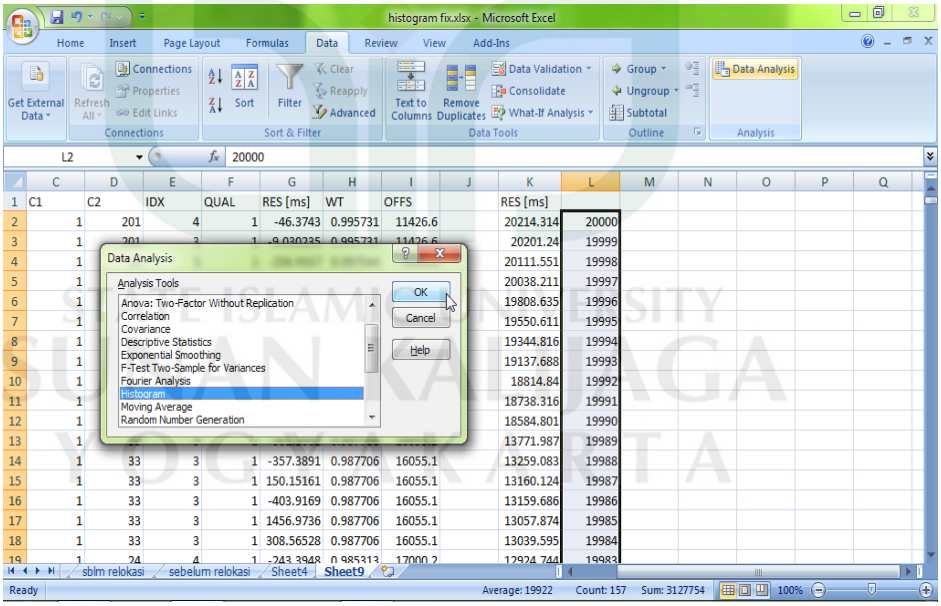
	C	D	E	I	J	K	L	M	N	O	P	Q
1	C1	C2	IDX	FS		RES [ms]						
2	1	201	4	11426.6		-46.3743						
3	1	201	3	11426.6		-9.030235						
4	1	34	3	1 -256.9357	0.997544	9394.6	-256.9357					
5	1	34	3	1 347.4429	0.997544	9394.6	347.4429					
6	1	34	3	1 -232.3984	0.997544	9394.6	-232.3984					
7	1	34	4	1 -701.83	0.997544	9394.6	-701.83					
8	1	34	3	1 1322.5906	0.997544	9394.6	1322.5906					
9	1	34	3	1 -1056.839	0.997544	9394.6	-1056.839					
10	1	34	3	1 321.74179	0.997544	9394.6	321.74179					
11	1	33	3	1 -31.19592	0.987706	16055.1	-31.19592					
12	1	33	4	1 58.587627	0.987706	16055.1	58.587627					
13	1	33	3	1 -301.3002	0.987706	16055.1	-301.3002					
14	1	33	3	1 -357.3891	0.987706	16055.1	-357.3891					
15	1	33	3	1 150.15161	0.987706	16055.1	150.15161					
16	1	33	3	1 -403.9169	0.987706	16055.1	-403.9169					
17	1	33	3	1 1456.9736	0.987706	16055.1	1456.9736					
18	1	33	3	1 308.56528	0.987706	16055.1	308.56528					
19	1	24	4	1 -243.3948	0.985313	17000.2	-243.3948					

7. Kemudian buatlah range dikolom yang baru (misalnya di kolom L), Seperti pada gambar dibawah ini:

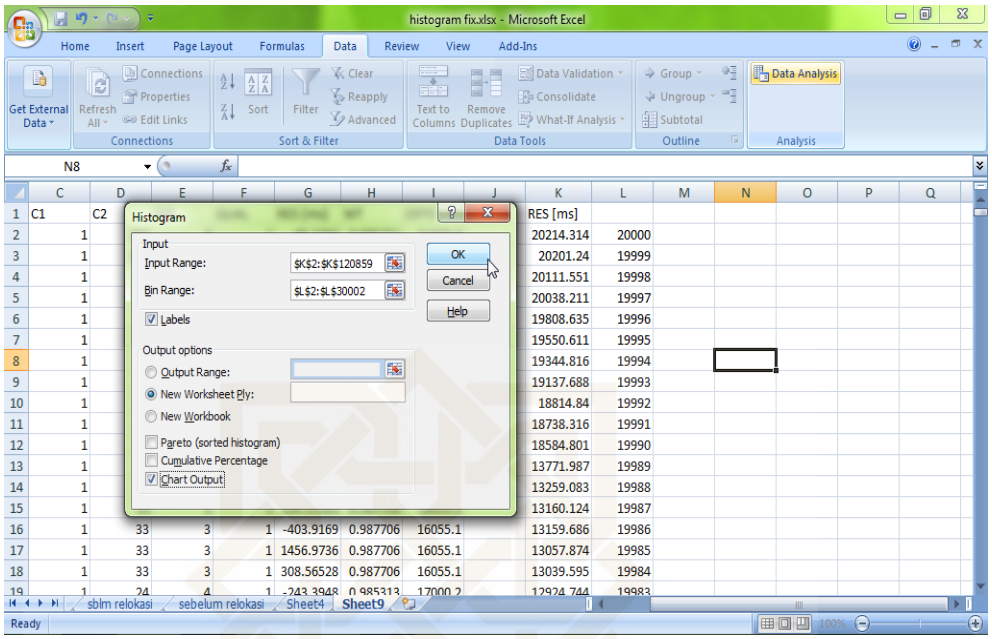


nilai Interval range diatas diambil dari 20000 sampai -10000.

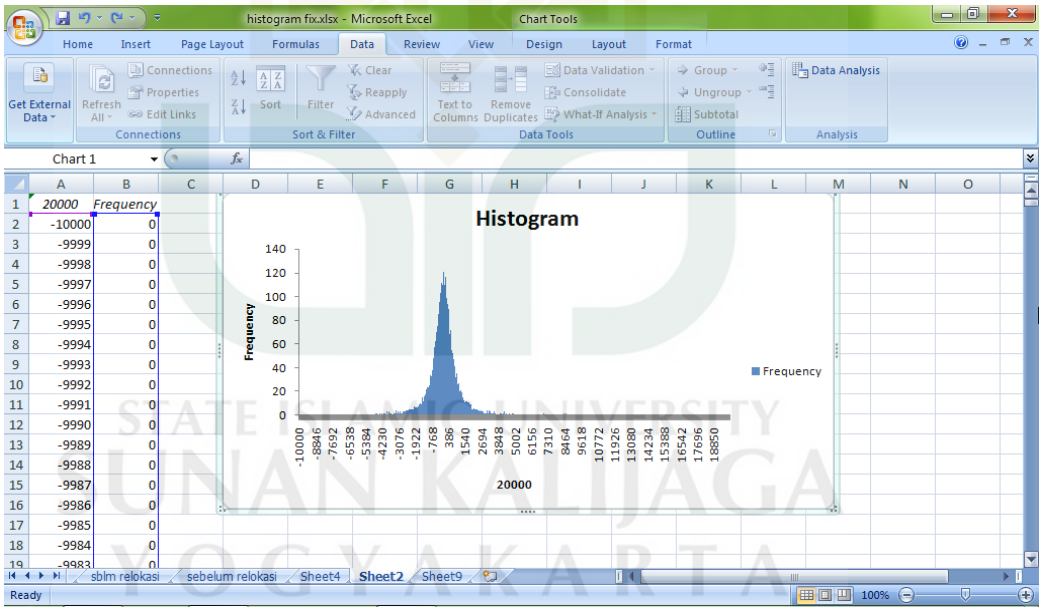
8. Setelah dibuat range-nya , klik **Data Analysis** , Pilih **Histogram** , klik **OK**.



9. **Input Range** di isi seluruh nilai residual (RES[ms]) (Blok nilai RES[ms] dari yang tertinggi sampai terendah). **Bin Range** di isi seluruh nilai range (blok nilai range dari yang tertinggi sampai terendah), kemudian centang **Labels** dan centang **Chart Output** .Seperti pada tampilan dibawah ini :



10. Klik **OK**. Akan muncul hasil histogram seperti tampilan dibawah ini :



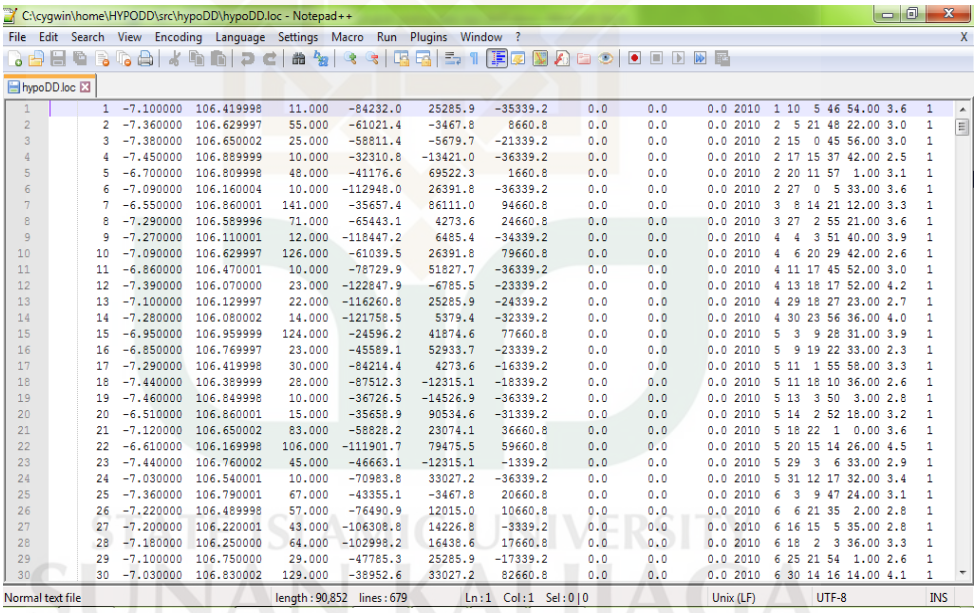
11. Data histogram residual waktu tempuh tersebut masih dalam satuan milisekon (ms), jika histogram dari residual waktu tempuh ingin dalam satuan sekon (s), maka nilai residual harus dikonversi terlebih dahulu dengan membagi 1000 tiap data residual tersebut sebelum dibuatnya histogram.

LAMPIRAN 4

Pengolahan Pemetaan Data dengan GMT

Langkah-langkah pemetaan hiposenter sebelum dan sesudah direlokasi dengan menggunakan *software* GMT:

1. Buka file **hypoDD.loc** dengan menggunakan Notepad++ dengan cara klik kanan pada file tersebut, kemudian pilih **Edit with Notepad++**, maka akan muncul tampilan dari data **hypoDD.loc**:



2. Blok semua data (**Ctrl+A**), kemudian copy semua data (**Ctrl+C**).
3. Buka notepad, salin (**CTRL+V)** semua data **hypoDD.loc** dan simpan dengan nama **loc.txt**.
4. Lakukan juga langkah 1-3 pada **hypoDD.reloc** dan simpan dengan nama **reloc.txt**.
5. Buatlah skrip berikut pada lembar kerja notepad baru:

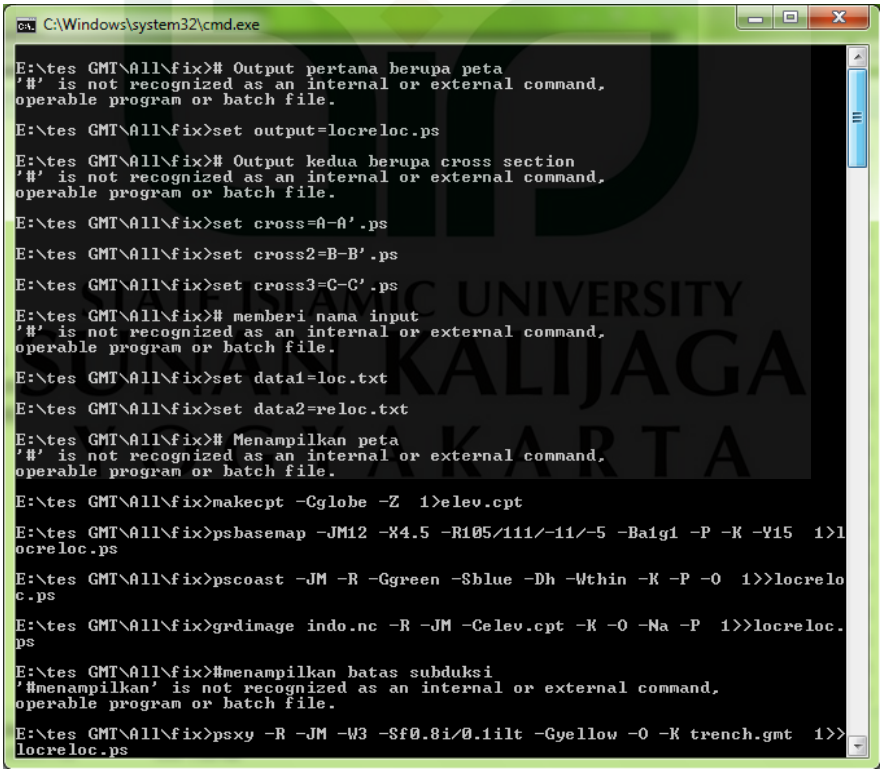
```
set data=sum_slab1.0_clip.grd
set clipfile=sum_slab1.0.clip
# Output pertama berupa peta dengan nama file slab1.0.ps
set output=slab1.0.ps
# Output kedua berupa cross section
set cross=sumcrossA-A'.ps
set cross2=sumcrossB-B'.ps
# memberi nama input
set data1=loc.txt
set data2=reloc.txt

 # Menampilkan peta
grd2cpt %data% -Cjet -Z> slab.cpt
makecpt -Cglobe -Z > elev.cpt
grdimage indo.nc -JM -Celev.cpt -K -R105/111/-11/-5 -Y4> %output%
pscoast -JM15 -R X6 -B1f1WSne -K -Dh -Wthin  -O >> %output%

# Menampilkan data slab subduksi
psclip %clipfile% -J -R -O -K >> %output%
grdimage %data% -Cslab.cpt -JM -R -K -O >> %output%

#Membuat garis kontur kedalaman subduksi dengan interval 20 kilometer
grdcontour %data% -C20 -A- -J -R -O -K -Wwhite >> %output%
psclip %clipfile% -J -R -O -K -C >> %output%
psxy %clipfile% -J -R -W1p -O -K >> %output%
pscoast -JM -R -B -K -O -Dh -Wthick  >> %output%
psxy -R -JM -W3,red -O -K trench.gmt>> %output%

#menampilkan sesar
psxy -R -JM sesar.gmt -K -O -W1,black >> %output%

# Menampilkan garis slice A-A'
echo 105.4 -8.1 14 0 1 LT A> line.dat
echo 108.3 -5.7 14 0 1 LT A'>> line.dat
psxy line.dat -J -R -O -K -W2 >> %output%
pstext line.dat -J -R -O -K >> %output%
# Menampilkan garis slice B-B'
echo 106.5 -9 14 0 1 LT B> line2.dat
echo 108.6 -5.8 14 0 1 LT B'>> line2.dat
psxy line2.dat -JM -R -W2 -P -O -K >> %output%
pstext line2.dat -JM -R -P -O -K >> %output%

# Menampilkan seismisitas berdasarkan pembagian magnitudenya
# menampilkan seismisitas untuk gempa sebelum direlokasi
gawk "{if ($5>2 && $5<=3) print $3, $2, $4}" %data1% | psxy -JM -R -Sc0.1
-W0.5 -Gred -O -K -hi --IO_N_HEADER_RECS=13 >> %output%
gawk "{if ($5>3 && $5<=4) print $3, $2, $4}" %data1% | psxy -JM -R -Sc0.2
-W0.5 -Gred -O -K -hi --IO_N_HEADER_RECS=13 >> %output%
```

```
gawk "{if ($5>4 && $5<=5) print $3, $2, $4}" %data1% | psxy -JM -R -Sc0.25
-W0.5 -Gred -O -K -hi --IO_N_HEADER_RECS=13 >> %output%
gawk "{if ($5>5) print $3, $2, $4}" %data1% | psxy -JM -R -Sc0.3 -W0.5 -
Gred -O -K -hi --IO_N_HEADER_RECS=13 >> %output%
# menampilkan seismisitas untuk gempa sesudah direlokasi
gawk "{if ($5>2 && $5<=3) print $3, $2, $4}" %data2% | psxy -JM -R -Sc0.1
-W0.5 -Gyellow -O -K -hi --IO_N_HEADER_RECS=13 >> %output%
gawk "{if ($5>3 && $5<=4) print $3, $2, $4}" %data2% | psxy -JM -R -Sc0.2
-W0.5 -Gyellow -O -K -hi --IO_N_HEADER_RECS=13 >> %output%
gawk "{if ($5>4 && $5<=5) print $3, $2, $4}" %data2% | psxy -JM -R -Sc0.25
-W0.5 -Gyellow -O -K -hi --IO_N_HEADER_RECS=13 >> %output%
gawk "{if ($5>5) print $3, $2, $4}" %data2% | psxy -JM -R -Sc0.3 -W0.5 -
Gyellow -O -K -hi --IO_N_HEADER_RECS=13 >> %output%

# Menampilkan skala kedalaman slab subduksi
psscale -D5/-1/10/0.3h -Cslab.cpt -B100:"Depth to Slab (km)": -O >>
%output%

# Menampilkan hasil cross section A-A'
psbasemap -JX6.5i/6.5i -R0/425/-400/10 -Ba50:"Jarak (Km)":/:"Kedalaman
(Km)":20WSne --FONT_LABEL=16p -K  > %cross%
echo 0 0 14 0 1 BC A> teks.dat
echo 425 0 14 0 1 BC A'>> teks.dat
pstext teks.dat -JX -R -P -O -Gblue -N -K >> %cross%
# menampilkan data gempa sebelum direlokasi pada cross section berdasarkan
pembagian magnitude pada cross section A-A'
gawk "{print $3, $2, $4, $5}" %data1% | project -Q -C105.4/-8.1 -E108.3/-
5.7 -Fpz -W-50/50 > cross.dat
gawk "{if ($3>2 && $3<=3) print $1, $2*-1}" cross.dat | psxy -JX -R -Sc0.1 -
W0.5 -Gred -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross%
gawk "{if ($3>3 && $3<=4) print $1, $2*-1}" cross.dat | psxy -JX -R -Sc0.2 -
W0.5 -Gred -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross%
gawk "{if ($3>4 && $3<=5) print $1, $2*-1}" cross.dat | psxy -JX -R -Sc0.25
-W0.5 -Gred -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross%
gawk "{if ($3>5) print $1, $2*-1}" cross.dat | psxy -JX -R -Sc0.3 -W0.5 -
Gred -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross%
# menampilkan data gempa sesudah direlokasi pada cross section berdasrkan
pembagian magnitude pada cross section A-A'
gawk "{print $3, $2, $4, $5}" %data2% | project -Q -C105.4/-8.1 -E108.3/-
5.7 -Fpz -W-50/50> cross2.dat
gawk "{if ($3>2 && $3<=3) print $1, $2*-1}" cross2.dat | psxy -JX -R -Sc0.1
-W0.5 -Gyellow -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross%
gawk "{if ($3>3 && $3<=4) print $1, $2*-1}" cross2.dat | psxy -JX -R -Sc0.2
-W0.5 -Gyellow -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross%
gawk "{if ($3>4 && $3<=5) print $1, $2*-1}" cross2.dat | psxy -JX -R -
Sc0.25 -W0.5 -Gyellow -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross%
gawk "{if ($3>5) print $1, $2*-1}" cross2.dat | psxy -JX -R -Sc0.3 -W0.5 -
Gyellow -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross%
# menampilkan garis hitam sebagai topografi pada cross section A-A'
```

```
project -C105.4/-8.1 -E108.3/-5.7 -Q -G1 > track
grdtrack track -Gindo.nc  > tracked
# Data kedalaman dibagi dengan 1000 karena data topografi satuannya dalam
meter
# Sedangkan data slab subduksi dalam kilometer, sehingga harus disamakan
skalanya menjadi kilometer
gawk "{print $3, $4/1000}" tracked | psxy -JX -R -Wthickest -O -K  >>
%cross%
# menampilkan garis merah sebagai slab subduksi pada cross section A-A'
project -C105.4/-8.1 -E108.3/-5.7 -Q -G1 > track2
grdtrack track2 -G%data%  > tracked2
gawk "{print $3, $4}" tracked2 | psxy -JX -R -Wthickest,red -O -K >>
%cross%

# Menampilkan hasil cross section B-B'
psbasemap -JX6.5i/6.5i -R0/435/-350/10 -Ba50:"Jarak (Km)":/:"Kedalaman
(Km)":20WSne --FONT_LABEL=16p -K  > %cross2%
echo 0 0 14 0 1 BC B> teks.dat
echo 435 0 14 0 1 BC B'>> teks.dat
pstext teks.dat -JX -R -P -O -Gblue -N -K >> %cross2%
# menampilkan data gempa sebelum direlokasi pada cross section berdasarkan
pembagian magnitude pada cross section B-B'
gawk "{print $3, $2, $4, $5}" %data1% | project -Q -C106.5/-9 -E108.6/-5.8
-Fpz -W-50/50 > cross3.dat
gawk "{if ($3>2 && $3<=3) print $1, $2*-1}" cross3.dat | psxy -JX -R -Sc0.1
-W0.5 -Gred -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross2%
gawk "{if ($3>3 && $3<=4) print $1, $2*-1}" cross3.dat | psxy -JX -R -Sc0.2
-W0.5 -Gred -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross2%
gawk "{if ($3>4 && $3<=5) print $1, $2*-1}" cross3.dat | psxy -JX -R -
Sc0.25 -W0.5 -Gred -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross2%
gawk "{if ($3>5) print $1, $2*-1}" cross3.dat | psxy -JX -R -Sc0.3 -W0.5 -
Gred -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross2%
# menampilkan data gempa sesudah direlokasi pada cross section berdasrkan
pembagian magnitude pada cross section B-B'
gawk "{print $3, $2, $4, $5}" %data2% | project -Q -C106.5/-9 -E108.6/-5.8
-Fpz -W-50/50> cross4.dat
gawk "{if ($3>2 && $3<=3) print $1, $2*-1}" cross4.dat | psxy -JX -R -Sc0.1
-W0.5 -Gyellow -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross2%
gawk "{if ($3>3 && $3<=4) print $1, $2*-1}" cross4.dat | psxy -JX -R -Sc0.2
-W0.5 -Gyellow -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross2%
gawk "{if ($3>4 && $3<=5) print $1, $2*-1}" cross4.dat | psxy -JX -R -
Sc0.25 -W0.5 -Gyellow -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross2%
gawk "{if ($3>5) print $1, $2*-1}" cross4.dat | psxy -JX -R -Sc0.3 -W0.5 -
Gyellow -P -O -K -hi --IO_N_HEADER_RECS=9 >> %cross2%
# menampilkan garis hitam sebagai topografi pada cross section B-B'
project -C106.5/-9 -E108.6/-5.8 -Q -G1 > track3
grdtrack track3 -Gindo.nc  > tracked3
# Data kedalaman dibagi dengan 1000 karena data topografi satuannya dalam
meter
```

```
# Sedangkan data slab subduksi dalam kilometer, sehingga harus disamakan
skalanya menjadi kilometer
gawk "{print $3, $4/1000}" tracked3 | psxy -JX -R -Wthickest -O -K  >>
%cross2%
# menampilkan garis merah sebagai slab subduksi pada cross section B-B'
project -C106.5/-9 -E108.6/-5.8  -Q -G1 > track4
grdtrack track4 -G%data%  > tracked4
gawk "{print $3, $4}" tracked4 | psxy -JX -R -Wthickest,red -O -K >>
%cross2%
```

6. Simpan skrip tersebut dengan nama yang berekstensi ***.bat**.
7. Simpan file yang berektensi ***.bat** tersebut, serta file **loc.txt** dan **reloc.txt** dalam satu folder.
8. Klik kanan pada file ***.bat**, kemudian pilih open, maka **cmd (command promt)** akan me-*runing* otomatis skrip dalam file tersebut. Berikut tampilan *running*-nya:



9. Output dari hasil *runing* tersebut adalah file dengan ektensi *****.ps** yang meliputi peta dan *cross section*-nya.

Catatan:

- Pada skrip:

  ```
  gawk "{print $3, $2, $4, $5}" %data1% | project -Q -C105.4/-8.1 -E108.3/-5.7 -Fpz -W-50/50 > cross.dat
  ```

  dan

  ```
  gawk "{print $3, $2, $4, $5}" %data2% | project -Q -C105.4/-8.1 -E108.3/-5.7 -Fpz -W-50/50> cross2.dat
  ```

  $3, $2, $4, $5 berturut-turut adalah kolom **longitude, latitude, depth, magnitude** pada file **loc.txt** dan **reloc.txt**. begitu pula pada skrip cross section B-B' dan skrip seismisitas. Jika pada file **loc.txt** dan **reloc.txt** belum berurutan, maka harus disesuaikan sesuai urutan tersebut.

- Data elevasi **indo.nc** dapat diunduh di:

  https://www.dropbox.com/s/32uqo9a307e3uyc/indo.nc.rar

- Data subduksi **trench.gmt** dapat diunduh di:

  http://www-udc.ig.utexas.edu/external/plates/data/plate_boundaries/trench.gmt

- Data topografi **sum_slab1.0.clip** dapat diunduh di:

  https://earthquake.usgs.gov/data/slab/models.php

- Data slab subduksi **sum_slab1.0_clip.grd** dapat diunduh di:

  https://earthquake.usgs.gov/data/slab/models.php

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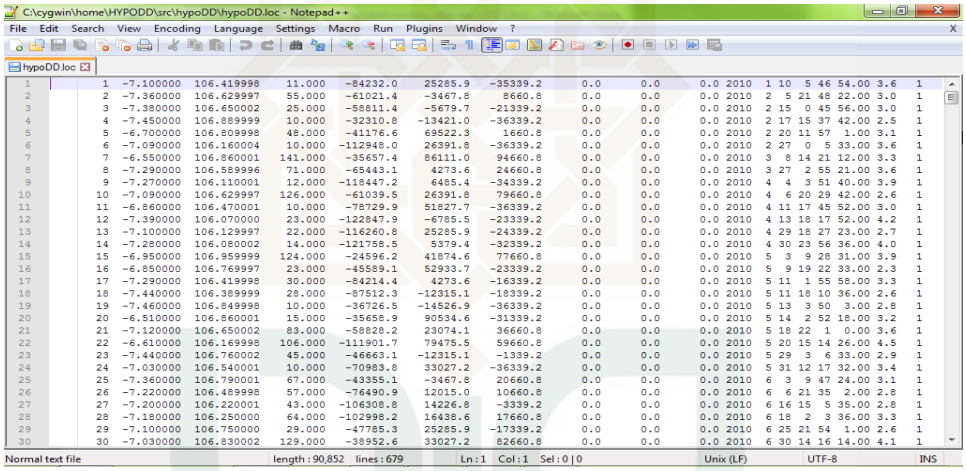
LAMPIRAN 5

Pengolahan Diagram Rose dengan RockWork

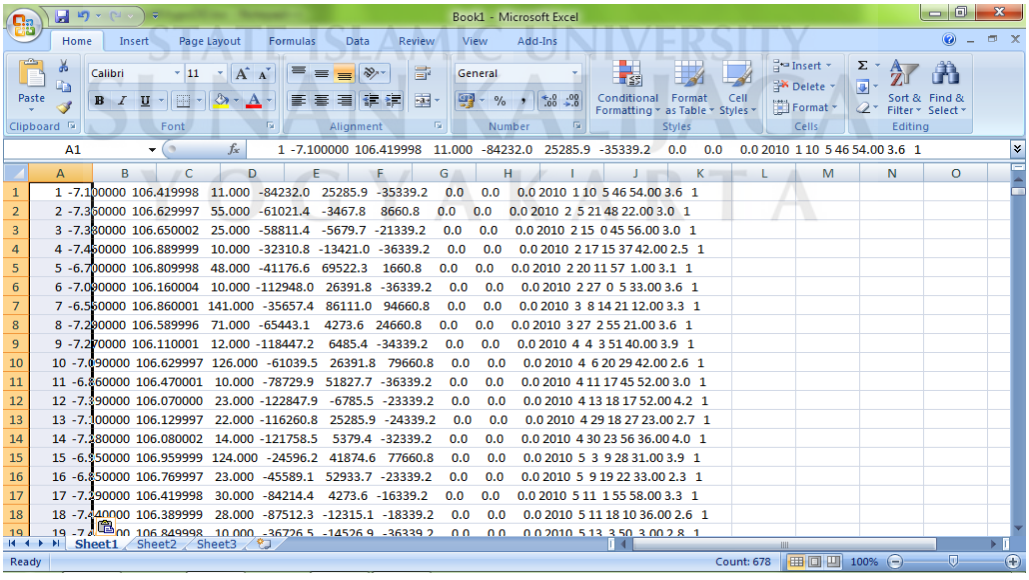
Langkah-langkah membuat Diagram Rose dengan menggunakan RockWork:

1. Buka file **hypoDD.loc** dengan menggunakan Notepad++ dengan cara klik kanan pada file tersebut, kemudian pilih **Edit with Notepad++**, maka akan muncul tampilan dari data **hypoDD.loc**:

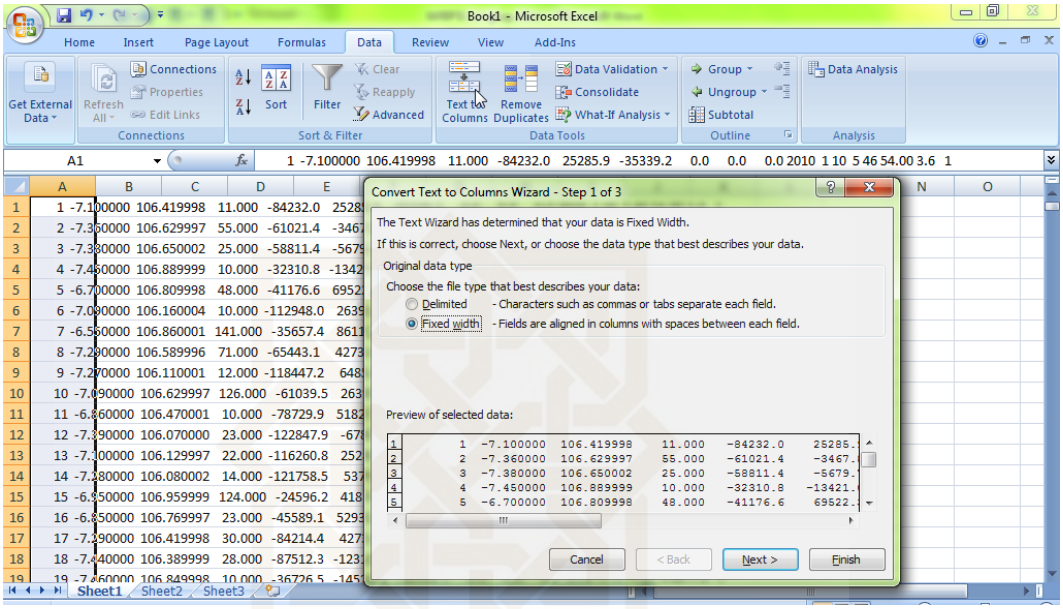


2. Blok semua data (**Ctrl+A**), kemudian copy semua data (**Ctrl+C**).

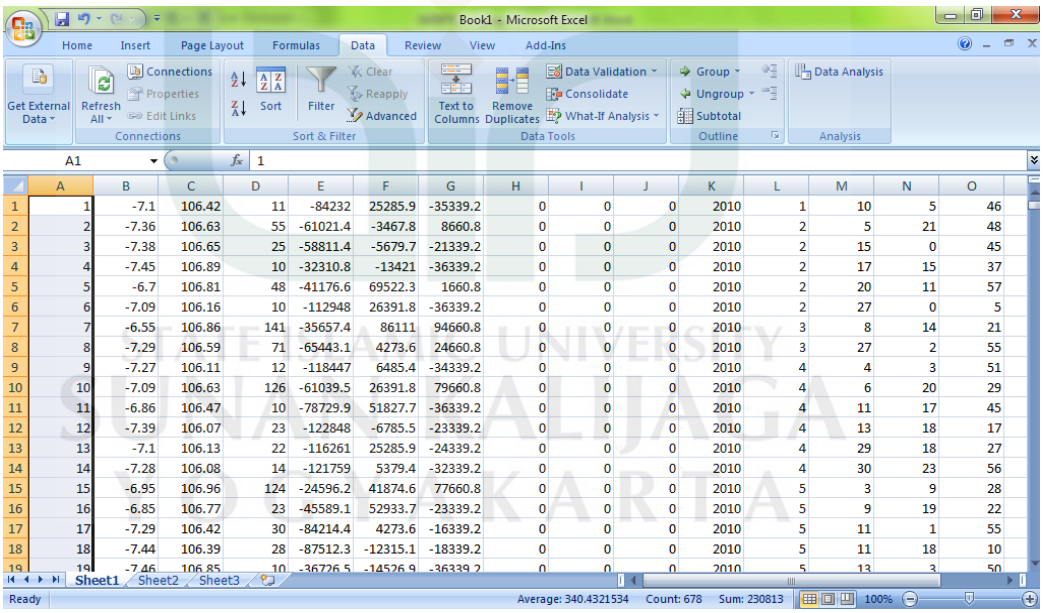
3. Buka Microsot Excel, salin (**CTRL+V)** semua data **hypoDD.loc**.



4. Data di atas belum rapi. Untuk merapikannya , klik **Data** , pilih **Text-to Colums**.

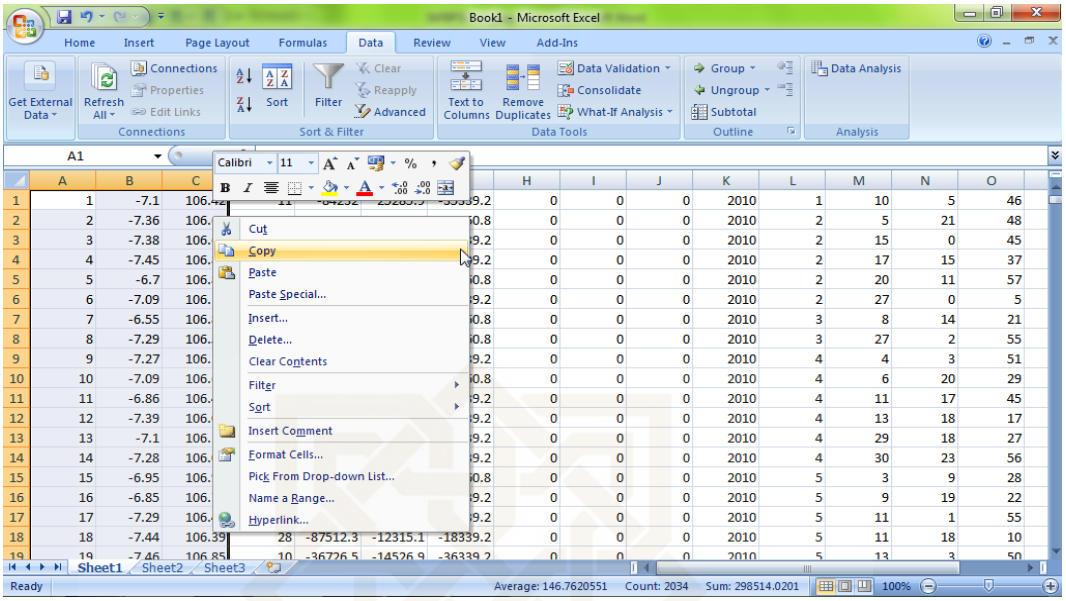


5. Centang **Fixed width**, klik **Next**, kemudian klik **Fisnish**.

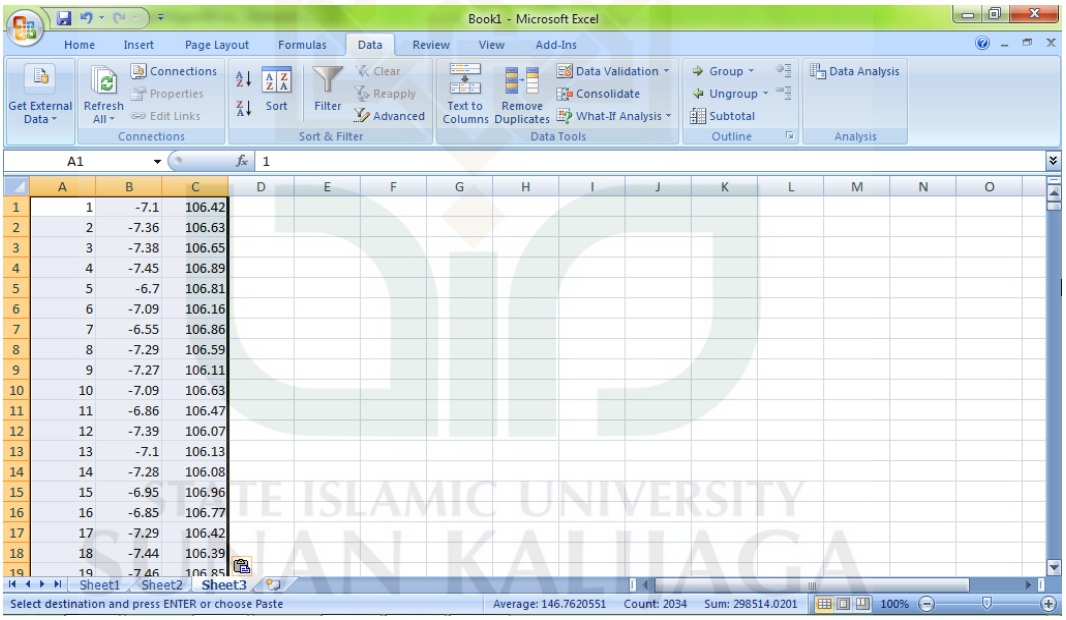


6. Lakukan langkah 1 sampai 5 pada data **hypoDD.reloc** yang diletakan pada lembar kerja **Sheet 2**.

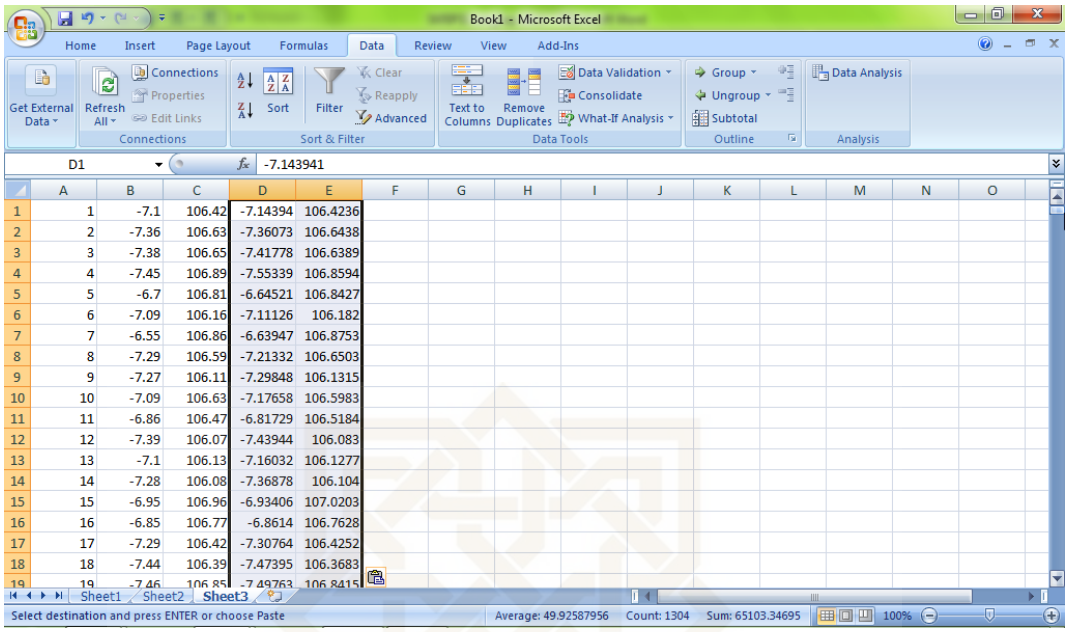
7. Copy data ID (Kolom A), Latitude (kolom B), dan Longitude (kolom C) pada data **hypoDD. loc.**



8. Salin (**CTRL+V**) pada lembar kerja **Sheet 3**.



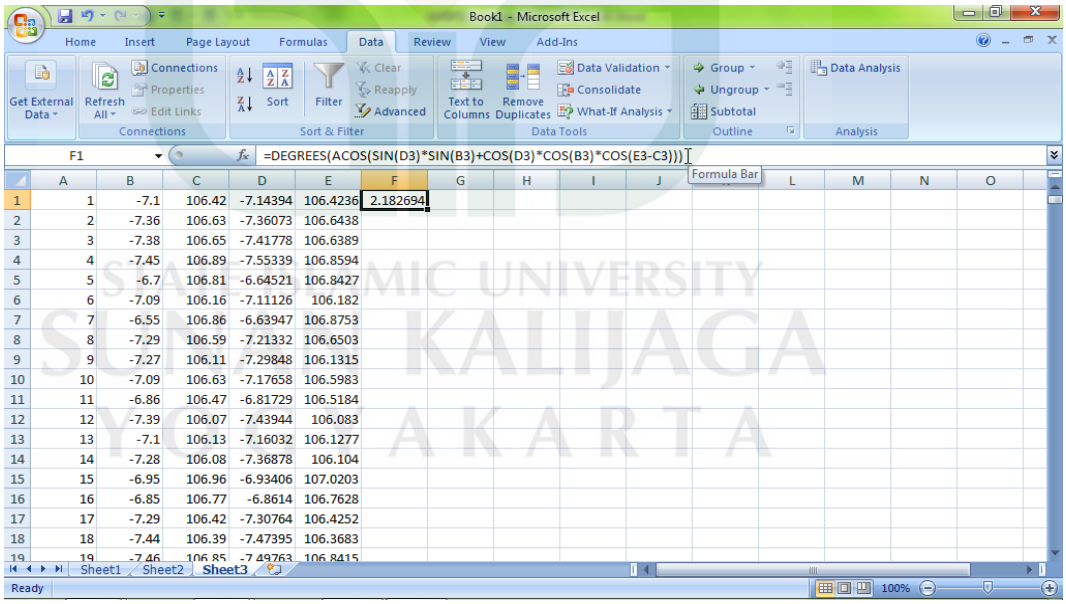
9. Salin juga data Latitude dan Longitude **hypoDD.reloc** disamping data Latitude dan Longitude **hypoDD.loc** pada **Sheet 3**.



	A	B	C	D	E
1	1	-7.1	106.42	-7.14394	106.4236
2	2	-7.36	106.63	-7.36073	106.6438
3	3	-7.38	106.65	-7.41778	106.6389
4	4	-7.45	106.89	-7.55339	106.8594
5	5	-6.7	106.81	-6.64521	106.8427
6	6	-7.09	106.16	-7.11126	106.182
7	7	-6.55	106.86	-6.63947	106.8753
8	8	-7.29	106.59	-7.21332	106.6503
9	9	-7.27	106.11	-7.29848	106.1315
10	10	-7.09	106.63	-7.17658	106.5983
11	11	-6.86	106.47	-6.81729	106.5184
12	12	-7.39	106.07	-7.43944	106.083
13	13	-7.1	106.13	-7.16032	106.1277
14	14	-7.28	106.08	-7.36878	106.104
15	15	-6.95	106.96	-6.93406	107.0203
16	16	-6.85	106.77	-6.8614	106.7628
17	17	-7.29	106.42	-7.30764	106.4252
18	18	-7.44	106.39	-7.47395	106.3683
19	19	-7.46	106.85	-7.49763	106.8415

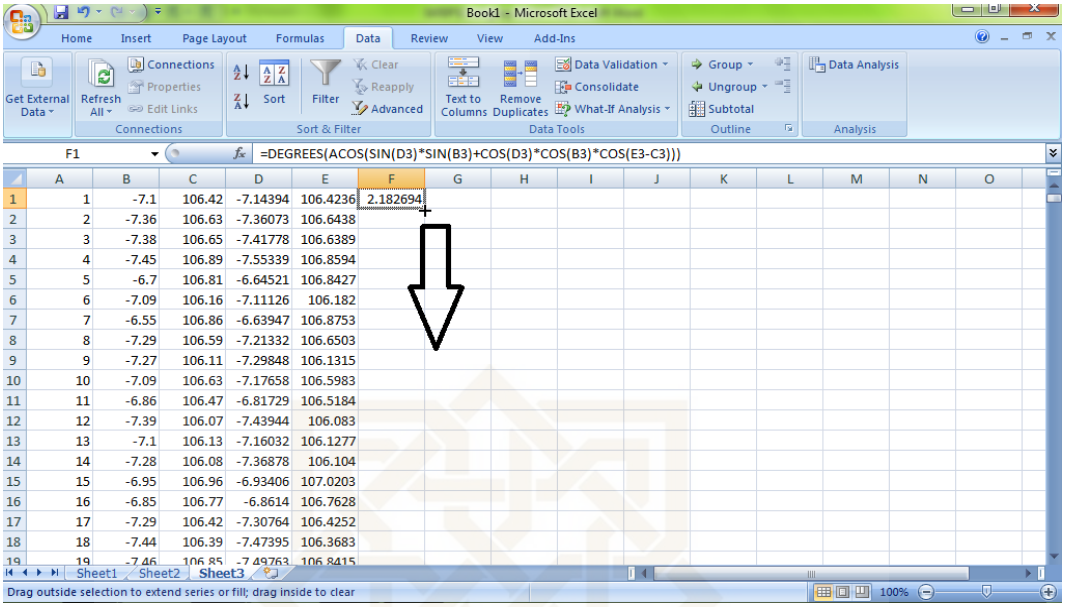
10. Pada kolom F, hitunglah sudut pergeseran yang dibentuk oleh posisi sebelum dan sesudah direlokasi dengan menggunkan rumus segitiiga bola:

    Δ = Arc Cos(Sin(Lat relokasi)*Sin(Lat awal) + Cos(Lat relokasi)*Cos(Lat awal)*Cos(Long relokasi-Long awal)

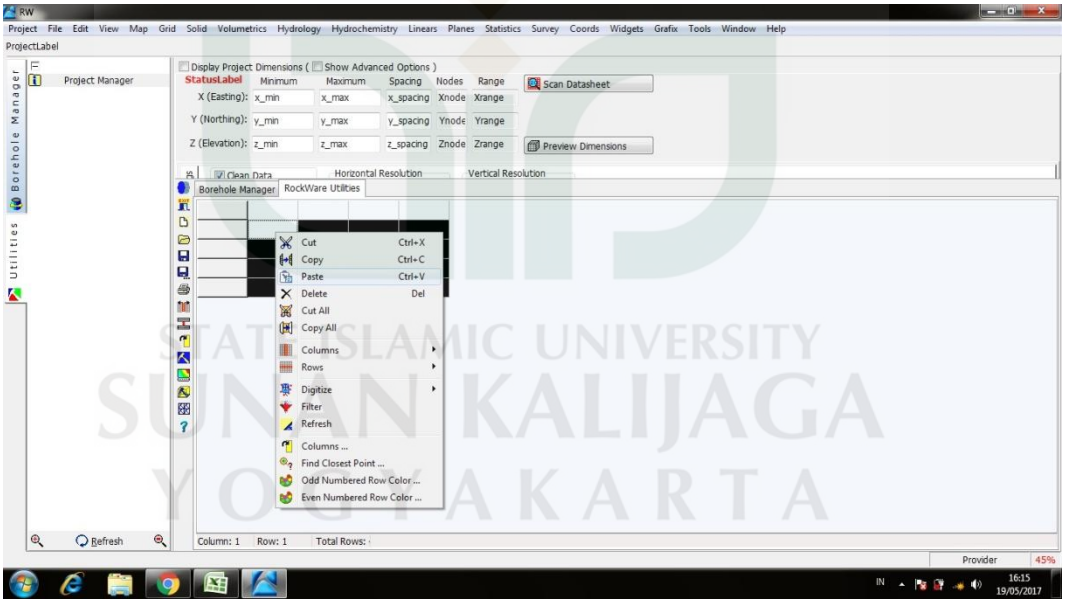


	A	B	C	D	E	F
1	1	-7.1	106.42	-7.14394	106.4236	2.182694
2	2	-7.36	106.63	-7.36073	106.6438	
3	3	-7.38	106.65	-7.41778	106.6389	
4	4	-7.45	106.89	-7.55339	106.8594	
5	5	-6.7	106.81	-6.64521	106.8427	
6	6	-7.09	106.16	-7.11126	106.182	
7	7	-6.55	106.86	-6.63947	106.8753	
8	8	-7.29	106.59	-7.21332	106.6503	
9	9	-7.27	106.11	-7.29848	106.1315	
10	10	-7.09	106.63	-7.17658	106.5983	
11	11	-6.86	106.47	-6.81729	106.5184	
12	12	-7.39	106.07	-7.43944	106.083	
13	13	-7.1	106.13	-7.16032	106.1277	
14	14	-7.28	106.08	-7.36878	106.104	
15	15	-6.95	106.96	-6.93406	107.0203	
16	16	-6.85	106.77	-6.8614	106.7628	
17	17	-7.29	106.42	-7.30764	106.4252	
18	18	-7.44	106.39	-7.47395	106.3683	
19	19	-7.46	106.85	-7.49763	106.8415	

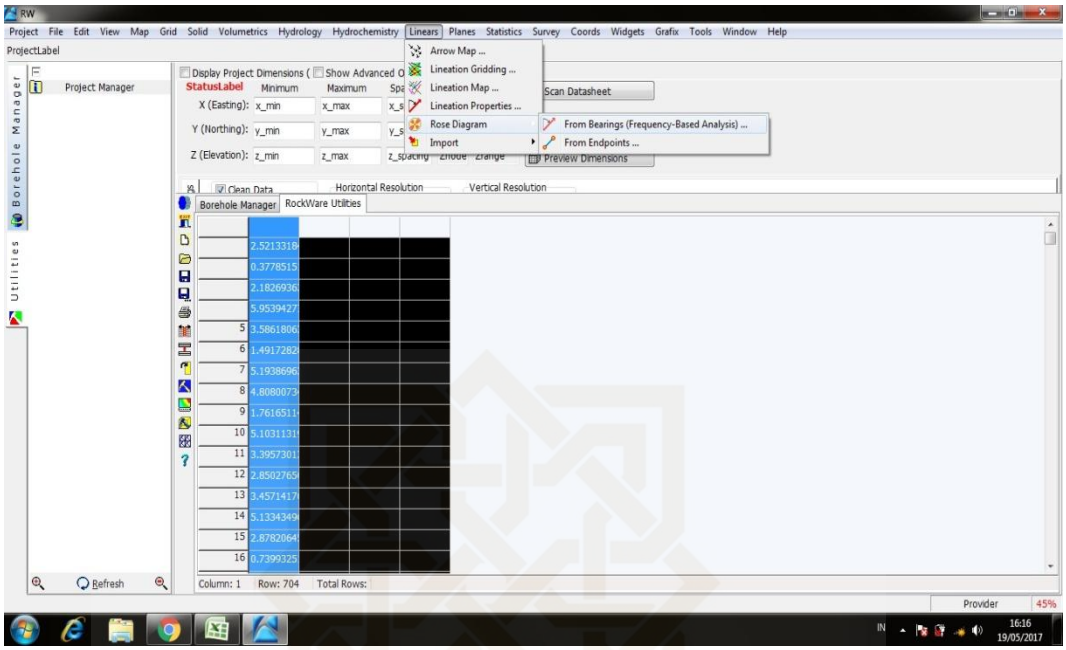
11. Pada kolomm F ujung baris ke 1 tarik kebawah agar menghitung otomatis sudut pergeseran untuk data selanjutnya.



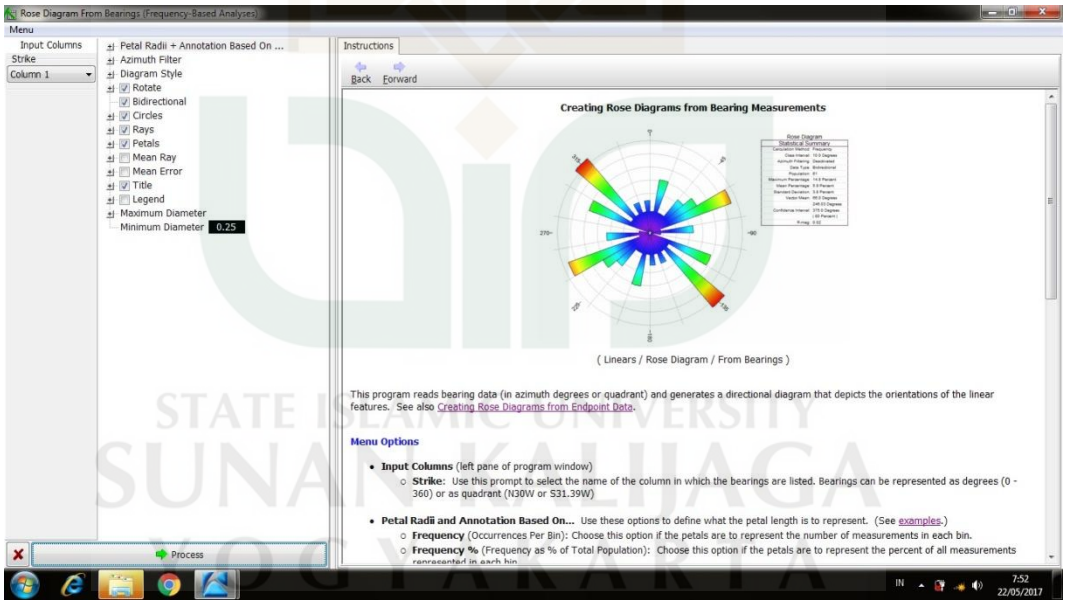
12. Copy (**CTRL+C**) sudut pergeseran pada kolom F. Buka RockWork, klik **Utilities**, salin data sudut pergeseran pada kolom 1 dengan cara klik kanan lalu klik **Paste**.



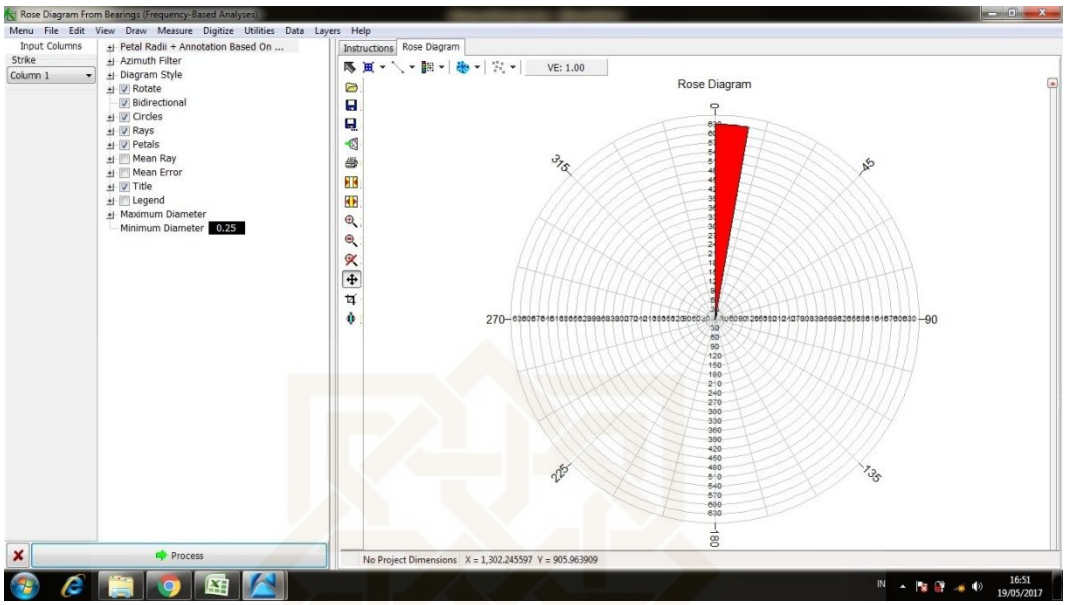
13. Klik **Linear**, pilih **Rose Diagram**, klik **From Bearings (Frequency-Based Analysis)...**



Akan muncul tampilan berikut:



14. Klik **Process,** maka jadilah diagram rose yang kita buat dari dat sudut pergeseran tersebut. Berikut tampilannya:



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S1	UIN Sunan Kalijaga	2012 – 2017

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