

Seismological Research Letters

Mapping the Alaskan Moho

--Manuscript Draft--

Manuscript Number:	SRL-D-18-00222R2
Full Title:	Mapping the Alaskan Moho
Article Type:	Data Mine
Corresponding Author:	Meghan S. Miller, Ph.D. Australian National University Acton, ACT AUSTRALIA
Corresponding Author Secondary Information:	
Corresponding Author's Institution:	Australian National University
Corresponding Author's Secondary Institution:	
First Author:	Meghan S. Miller, Ph.D.
First Author Secondary Information:	
Order of Authors:	Meghan S. Miller, Ph.D. Louis Moresi, Ph.D.
Order of Authors Secondary Information:	
Manuscript Region of Origin:	UNITED STATES
Suggested Reviewers:	Danielle Sumy, PhD danielle.sumy@iris.edu Hersh Gilbert, PhD hersh.gilbert@ucalgary.ca Andy Frassetto, PhD andyf@iris.edu Emily Wolin, PhD USGS ewolin@usgs.gov

1 **Mapping the Alaskan Moho**

2 Meghan S. Miller¹ and Louis Moresi²

3

4 ¹ Australian National University, Research School of Earth Sciences, Canberra, ACT 2601

5 ² University of Melbourne, School of Earth Sciences, Parkville, VIC 3010

6

7 **Abstract**

8

9 We present a series of Moho depth maps for the Alaskan region based upon P receiver function
10 estimates using data from all available broadband instrumentation from 1999 to April 2018
11 including the USArray Transportable Array. The average Moho depth beneath individual
12 broadband stations are presented first as spot measurements and then used to produce a series
13 of interpolated smooth surfaces by an adaptive triangulation process followed by the fitting of a
14 bi-cubic spline. The interpolated surfaces include a measure of confidence in the interpolation
15 and can be used to assess and determine a preferred model. The resulting Moho depth map
16 (single continuous surface) provides a reasonable estimate of the Earth's outermost layer
17 thickness beneath Alaska as constrained by receiver functions, for use in applications such as
18 tomography, regional-scale interpretations, or simulations of seismic waves. The models are
19 provided as a python module with examples in the form of jupyter notebooks. Our original
20 workflow is provided to allow updates to this dataset or use with other similar datasets.

21

22 **Introduction**

23

24 The Alaskan crust is composed of a mosaic of oceanic and continental terranes that range in age
25 from Proterozoic to Cenozoic (Plafker and Berg, 1994). These terranes have been deformed and

26 displaced through geologic time, yet their structure reflects both their origins and the
27 heterogeneous distribution of strain. Due to the remote and harsh conditions in much of the region
28 there has been very sparse broadband seismic data coverage outside of south-central Alaska
29 until recently.

30

31 In September 2017 the final USArray Transportable Array (network code TA) seismic station was
32 installed in Alaska. This was the last of 280 instruments deployed as a grid across Alaska and
33 northwest Canada as part of the EarthScope program which was proposed nearly 20 years ago
34 (Meltzer et al., 1999; Rosen 2017). This is the final stage of the continent-wide experiment that
35 has been ongoing since 2004. These instruments complement and greatly expand the number
36 and distribution of seismic stations that have previously, or are permanently operating. The data
37 from all these seismic stations allows construction of a map of the average crustal architecture,
38 along with investigation into deeper structure and a more comprehensive seismicity catalog for
39 the surrounding region.

40

41 With the current distribution of broadband instruments across Alaska there is an opportunity to
42 make a regional map of Moho (Mohorovičić discontinuity) depth, assumed to coincide with the
43 crust-mantle boundary, or Moho. Although locally the Moho can be incredibly complex and have
44 variations in depth and magnitude of the velocity contrast across the boundary, an estimate of the
45 crust-mantle boundary structure is very important for geological and geophysical research.
46 Crustal models such as CRUST5.1 (Mooney et al., 1998) or CRUST2.0 (Bassin et al., 2000), and
47 more recently ones such as those based on EarthScope data (Gilbert, 2012; Levander and Miller,
48 2012; Tape et al., 2012) and the EARS (EarthScope Automated Receiver Survey) project
49 (Crotwell and Owens, 2005; IRIS DMC, 2010) have been very valuable for the solid Earth
50 community. Here we used all available data (1999-2018) from broadband instruments to compute
51 P receiver functions, then determined the Moho depth at each station from the stacked receiver

52 functions in order to make a series of maps of the Moho depth including a smoothed surface. We
53 note that although there are some areas across the state that still have limited data, others that
54 are very densely instrumented, and in addition areas of very complex crustal structure. This map,
55 plus the associated measures of confidence may be useful by the community until there are future
56 improvements on this model.

57

58 **Instrument Deployment**

59

60 Five hundred and five broadband seismic stations have been deployed across Alaska and Yukon
61 Territory (Figure 1), which have open access data that can be obtained from the IRIS Data
62 Management Center (DMC) at www.iris.edu (last accessed April 2018). The seismic stations are
63 from multiple networks, both permanent and temporary (see electronic supplementary Table S1
64 for DOI numbers), with the bulk of these from the EarthScope Transportable Array (network code
65 TA) and the Alaska Regional Network (network code AK).

66

67 **Overall Data Quality and Availability**

68

69 A range of broadband seismic data from teleseismic earthquakes that occurred between 1999
70 through April 2018 (inset Figure 1) were selected and processed (see Data and Resources for
71 more details). These waveform data were obtained within the FuncLab software (Eagar and
72 Fouch, 2012; Porritt and Miller, 2018) via the `irisFetch.m` MATLAB script (Trabant et al., 2012).
73 The data were chosen for events with magnitudes >M6.0 at epicentral distances between 30-98.3
74 degrees. This resulted in a total of 2200 earthquakes (Supplementary Table S2) and 505 seismic
75 stations (Supplementary Table S3), which yielded 136,838 preliminary P receiver functions
76 (PRFs) calculated in FuncLab. The PRFs were calculated using iterative time-domain

77 deconvolution (Ligorria and Ammon, 1999) of the vertical component from the radial and
78 transverse components using a 1 Hz central frequency. These were manually edited with the
79 FuncLab trace editor based on high signal-to-noise direct arrivals and clean traces, resulting in a
80 final total of 36,370 PRFs. A subset of these results and the methodology used in the processing
81 are discussed in Miller et al. (2018). These receiver functions are based upon detailed, manual
82 inspection and selection of all the waveforms and resulting receiver function, which is unlike the
83 fully automated data product, EARS (Crotwell and Owens, 2005) available at
84 <https://doi.org/10.17611/DP/EARS.1>.

85
86 The individual receiver functions are stacked at each station using a simple summation to improve
87 the signal-to-noise ratio and emphasize coherent conversions (examples shown in Figure S1,
88 available in the electronic supplement to this article). This stacking can eliminate more complex
89 or subtle signals from anisotropy or dipping structures, but does provide an effective way to
90 enhance the primary signals from sub-horizontal velocity discontinuities like the Moho. These
91 gathers are converted from time to depth using the *ak135* 1D velocity model (Kennett et al., 1995)
92 to provide an estimate of the average structure at depth beneath each station. To provide a broad
93 scale Moho depth map across the region, the Moho conversions were hand-picked for each of
94 the receiver function stacks within FuncLab (Porritt and Miller, 2018). These picks are used as
95 spot measurements of the average Moho depth at each seismic station to create a simple map
96 as shown in Figure 2 and are provided in Table S2, available in the electronic supplement to this
97 article.

98
99 **Observations**
100
101 In September 2017 the Transportable Array was fully installed across Alaska and into the
102 bordering regions of Canada (Rosen, 2017) and this provides the first region/state-wide glimpse

103 of the crustal thickness. Although there are still some areas of limited data and some areas of
104 very complex signals in the receiver functions, the Moho depth map (Figure 2) presents a new
105 overview across this vast area. There is a primary trend, despite the large area, that the crustal
106 thickness roughly correlates with topography. The high topography in the Alaska, St. Elias and
107 Brooks Ranges and even the Chugach Mountains, for example, have deep Mohos (Figure 2).
108 There are also abrupt changes in Moho depth across terrane boundaries and faults, such as the
109 Denali fault (DF) system as documented previously (e.g. Veenstra et al., 2006; Brennan et al.,
110 2011; Allam et al., 2017 Miller et al., 2018), but also at across other terranes boundaries. An
111 example of these terrane boundaries is betwe[redacted] the Yukon-Tanana (YTT) and Wrangellia
112 composite terranes (WCT) that have previously been under sampled by seismic data (Figure 2B).
113 There are other indications that the inferred terranes and litho-boundaries may also have distinct
114 structural changes across them as seen in the litho-type simplified map in Figure 2B (Wilson et
115 al., 2015; Miller et al., 2018).

116

117 The receiver functions typically have a very clear, simple signal of the Moho as shown in Figure
118 S1A for station TA.H20K in north-central Alaska. However, within the accretionary complex
119 (purple in Figure 2B), the majority of the Moho picks are > 35 km and can reach down to nearly
120 60 km (Table S2, available in the electronic supplement to this article). However, the crustal
121 structure is not as simple as the map of local averaged measurements portrays. The individual
122 receiver functions are remarkably complex, which is likely due to the collision and subsequent
123 subduction of the Yakutat terrane and the downgoing Pacific plate. At some stations there are
124 “two Mohos” and at others there is no shallow (overriding) plate conversion in the signal (Figures
125 S1B - AK.VRDI and S1C - AK.BMR). This is particularly evident along the southern margin of
126 Alaska when the Pacific plate is subducting and the Yakutat terrane is colliding and being
127 subducted. There [redacted] large differences in the Moho depth estimates at closely spaced stations.
128 This is likely to be due to not being able to image one Moho or one discontinuity within the crust.

129 This is discussed in Miller et al. (2018), which presents the P receiver functions in more detail. It
130 is essential to be cautious and understand the geology and tectonics, and the methodology used
131 in the seismic imaging, when using the Moho picks from stacked receiver functions and not solely
132 use the Moho map to understand complex tectonics.

133

134 **Results**

135

136 The Moho depth associated with individual stations is a useful first step at interpreting the crustal
137 architecture. However, an interpolated surface of the Moho within the survey area, along with a
138 measure of the confidence in such an interpolation is important to understand the extent to which
139 Moho values can be interpreted away from the measurement location, which is important for
140 interpretations. The Moho surface can be used as a starting model for other seismological and
141 geophysical methods used to infer Earth structure.

142 *Smooth, interpolated model*

143 A piecewise linear interpolant can be constructed from a Delaunay triangulation of the data points
144 (Figure 2 and Supplementary Table S2, available in the electronic supplement to this article) but
145 the irregular spacing of the instruments produce artefacts in interpolation that suggest it may be
146 more appropriate to apply some smoothing. The STRIPACK and SSRFPACK routines (Renka
147 1997a,b) are used to construct triangulations and spline interpolants for the data. However, the
148 spacing is irregular enough that the fitting procedure employed by SSRFPACK does not converge
149 for any value of the smoothing parameters. Instead we build a triangulation using a smaller
150 number of nodal points with an interpolating spline that we can use as a model to be fitted to the
151 data.

152

153 To build an interpolating surface, we first find a set of mesh points that reasonably represents the
154 distribution of the data while also being sufficiently regular that it is possible to construct the spline
155 surface accurately. A simple approach to finding a set of p_1 nodal points to represent the
156 instrument locations is to use a clustering algorithm on the coordinate vectors. We used the k-
157 means clustering from `scipy` (Jones et al, 2001) with random initial centroids to provide sets of
158 nodes for triangulation. The random nature of the mesh construction means that we cannot
159 determine the influence of p_1 from a single realisation of the mesh and instead we need to average
160 over a large number of meshes. A second parameter, p_2 , for the model is associated with the
161 degree of tensioning of the interpolating splines. A value of zero corresponds to bilinear
162 interpolation, larger values produce increasingly smooth results with a scale that depends on the
163 number of sample points and the statistics of the noise in the data. As the latter is not well known
164 in this case, we view p_2 as a free parameter to be determined.

165 *Fitting the model 1: confidence estimates*

166 We make a first pass through the data to identify the extent to which individual data points can be
167 fitted by our choice of a single-valued, continuous interpolating surface. We systematically
168 exclude each point from the data set and use the other data points to predict its value for 20
169 different realizations of the triangulations for all values of the model parameters (p_1, p_2). Each
170 time, we identify the containing triangle of every observation and attribute a distance weighted
171 average contribution to each node of this triangle. The predictions of the model for each data point
172 can be evaluated by computing the mean (Figure 3A) and r.m.s variation (Figure 3B) of the values.
173

174 We then attribute a score (Figure 3C) to each of the data locations based on their predictability:
175 points where the mean error and variance are both small receive a score of 1 — these points are
176 reliable but may not be good at discriminating between models. Points where small errors are
177 possible with some combination of parameters are accorded an additional score of 1. Nodes

178 where models are consistently unreliable are accorded a score of 0.1. The scores for each
179 observation location are mapped to grid points by distance-weighted averaging and used to
180 provide the node-by-node confidence estimate required by SSRFPACK.

181

182 The complexity of signals in the receiver functions and therefore the simple, average estimate of
183 Moho depth beneath each station can lead to high variance between the different model
184 realizations (Figure 3B). There are a number of points where no smooth, continuous model can
185 fit the observation. This is likely due to the receiver functions ability to image multiple interfaces,
186 not just the Moho, and the variable magnitude of the signal from these velocity contrasts at
187 variable depths. These complexities make it difficult to pick the true Moho if there is a clear
188 velocity contrast from this discontinuity. Therefore, our estimate of error is highest in regions
189 where the Moho picks (Figur  have differences between closely spaced stations. This is
190 particularly evident in southern Alaska where collision and subsequent subduction of the Yakutat
191 terrane and the down-going Pacific plate results in complex crustal (and lithospheric) structure.
192 In these regions in particular, the structure might better be represented as a multi-valued surface,
193 as we are likely to be imaging multiple layers, but, in this preliminary analysis, we simply report
194 these as points where the score for the chosen model parameterization is low.

195

196 We construct 250 triangulations for each value in the range of p_1 . For every triangulation, we
197 partition the data into two: one set of points (70-95%, chosen at random) is used to fit the data for
198 each of values chosen for the smoothing parameter, p_2 and the remaining points used to evaluate
199 the prediction error of the resulting interpolants. A small number of points usually remain
200 unconstrained by our data (as we eliminate several points to evaluate the fit of the model). We
201 set the Moho depth at those points using the global litho 1.0 dataset (Pasyanos et al, 2014). In
202 addition, these points receive a very low weighting in the surface fitting algorithm (Renka, 1997b)
203 so that they do not strongly influence the fit to nearby points. The results are processed to

204 determine the fit to the test data for each pair of p_1, p_2 using the node-by-node confidence score
205 in Figure 3C to weight the depths in the spline fit.

206

207 The process of fitting the model is summarized in Figure 4 using two alternative measures of fit
208 over all the different grids and partitioning of the data. In one case (Figure 4A) we show the fit
209 only to the test data sets, and in the second case (Figure 4B), we form a combined error which is
210 the misfit for all the data, including the training data. Around the best fitting points in each case
211 are a number of models with a misfit within 1.25% of the minimum value. The models based only
212 on fitting the test data are the smoothest models that satisfy the observations whereas those that
213 minimize the combined error are more likely to over-fit the data. There are several models which
214 are within 1% to 2% of the minimum of each of the measures and these appear to represent a
215 good balance between overfitting and over-simplifying the model. Our preferred model is an
216 average of these cases; we also include the two end-member best-fit models for the purposes of
217 comparison.

218 *Model: data files and software*

219 The models are provided in a python package miller_alaskamoho_srl2018
220 (https://pypi.org/project/miller_alaskamoho_srl2018/) that can be installed
221 through the pip python package management system. The package includes documentation in
222 the form of example jupyter notebooks. Installation instructions are available in the electronic
223 supplement to this article.

224

225 The model itself takes the form of 1) a numpy record array containing the raw Moho data plus the
226 model statistics reported above and the model scoring used to perform the surface fitting, and 2)
227 a numpy array of longitude, latitude, depth for the Moho surface and Moho slope ($s = |\nabla h|$ where
228 h is the depth of the Moho surface) computed on a dense, regular triangulation. The models are

229 accessed through the package as instances of a class that includes the relevant triangulation and
230 interpolation methods (see electronic supplement for details).

231

232 We supply three alternative versions of this surface as discussed above: 1) our preferred
233 ensemble average model constructed from all models that lie within 1.25% of each of the end
234 member cases as shown in Figure 5A, 2) the smooth end-member that minimizes the misfit of the
235 test data alone, and 3), the end member that minimizes the misfit of all the data: test and training
236 sets combined.

237

238 We also provide the source code in the form of `jupyter` notebooks to process the raw data, to
239 evaluate the model errors and to compute and interpolate the fine grid surfaces and their
240 gradients. These notebooks also allow the evaluation of other ensembles of models. We supply
241 example python code to read the data files, convert to various formats, and interpolate the surface
242 for plotting (instructions for accessing the models and software are available in the electronic
243 supplement to this article).

244

245 **Summary**

246 Our maps of the Moho beneath Alaska and the surrounding regions are based upon hand picks
247 from P receiver function station stacks calculated with Funclab (Eagar and Fouch, 2012; Porritt
248 and Miller, 2018) for all available stations between 1999 and April 2018. The receiver function
249 stacks provide an average Moho depth based upon a simple 1D velocity model conversion.
250 These depths are then used to produce an interpolated surface to predict the Moho across the
251 region, and to provide a measure of the confidence in such a map. Future improvements will
252 result for additional data collected by the TA and other permanent stations. This new data and
253 constraints, or other data products such as EARS (IRIS DMC, 2010), can be easily incorporated

254 into the map and into the `jupyter` notebook scripts that generate the Moho surface and the
255 associated measures of confidence.

256 **Data and Resources**

257 The broadband seismic data used to produce the P receiver functions and resulting maps are
258 available from the IRIS Data Management Center at www.iris.edu (last accessed April 2018). The
259 network DOI codes are found in Supplementary Table 1, available in the electronic supplement
260 to this article. The receiver functions and the Moho picks were calculated and edited in FuncLab
261 1.8.1 (Porritt and Miller, 2018), which is available online at
262 <https://robporritt.wordpress.com/software/>. The figures were made with Generic Mapping Tools
263 (GMT; Wessel and Smith, 1991). We made extensive use of the following python packages:
264 numpy and scipy (Jones et al, 2001) and stripPy (Moresi and Mather, available via
265 <https://pypi.org/project/stripPy>). The example notebooks use the python cartopy package to
266 generate maps (Met. Office, 2010). The models are provided in a python package
267 `miller_alaskamoho_srl2018` available online at
268 (https://pypi.org/project/miller_alaskamoho_srl2018/) and described in the electronic supplement
269 to this article.

270 **Acknowledgements**

271 This work is supported by the Australian Research Council Discovery Program DP150102887.
272 Many thanks are due to S.M. Roeske and A. Till for inspiring discussions and encouragement.

273 **References**

- 274
- 275 Allam, A.A., V. Schulte-Pelkum, Y. Ben-Zion, C. Tape, N. Ruppert, Z. Ross (2017). Ten Kilometer
276 Vertical Moho Offset and Shallow Velocity Contrast Along the Denali Fault from Double-
277 difference Tomography, Receiver Functions, and Fault Zone Head Waves, *Tectonophysics*.
278 **721** 56-69.
- 279 Bassin, C., G. Laske, and G. Masters (2000). The Current Limits of Resolution for Surface Wave
280 Tomography in North America. *EOS Transactions*, **81**, F897.
- 281 Brennan, P.R., H. Gilbert, and K.D. Ridgway (2011). Crustal structure across the central Alaska
282 Range: Anatomy of a Mesozoic collisional zone: *Geochem., Geophys., Geosys.* **12**,
283 doi:10.1029/2011GC003519.
- 284 Crotwell, H. P., and T. J. Owens (2005), Automated receiver function processing, *Seism. Res. Lett.*,
285 [76, 702-708](#)
- 286 Eagar, K.C., and M.J. Fouch (2012). FuncLab: A MATLAB Interactive Toolbox for Handling
287 Receiver Function Datasets, *Seismo. Res. Lett.* **83** 596-603, doi:10.1785/gssrl.83.3.596.
- 288 Gilbert, H. (2012). Crustal structure and signatures of recent tectonism as influenced by ancient
289 terranes in the western United States. *Geosphere*. **8**(1) 141-157. doi: 10.1130/ges00720.1
- 290 IRIS DMC (2010), Data Services Products: EARS EarthScope Automated Receiver
291 Survey, <https://doi.org/10.17611/DP/EARS.1>.
- 292 Jones E, Oliphant E, Peterson P, et al. SciPy: Open Source Scientific Tools for Python, 2001-,
293 <http://www.scipy.org/> [Online; accessed 2018-07-26].
- 294 Kennett, B.L.N., E.R. Engdahl, and R. Buland (1995). Constraints on seismic velocities in the
295 Earth from travel times, *Geophys. J. Int.* **122** 108–124.
- 296 Levander, A., and M.S. Miller (2012). Evolutionary aspects of the lithosphere discontinuity
297 structure in the Western U.S. *Geochemistry Geophysics Geosystems.* **13**, doi:
298 doi:10.1029/2012GC004056.

- 299 Meltzer, A., R. Rudnick, P. Zeitler, A. Levander, G. Humphreys, K. Karlstrom, E. Ekstrom, C.
300 Carlson, M. Dixon, M. Gurnis, and P. Shearer (1999). The USArray initiative. *Geological Society*
301 *of America TODAY*. **9** 8-10.
- 302 Met Office (2010). *Cartopy: a cartographic python library with a matplotlib interface*, Exeter,
303 Devon.
- 304 Miller, M.S., L.J. O'Driscoll, R.W. Porritt, and S.M. Roeske (2018). Multiscale crustal architecture
305 of Alaska inferred from P receiver functions, *Lithosphere*. **10** 267-278. doi.org/10.1130/L701.1
- 306 Mooney, W. D., G. Laske, and G. Masters (1998). Crust 5.1: a global crustal model at 5x5
307 degrees. *Journal of Geophysical Research*. **103** 727-747.
- 308 Pasmanik, M. E., G. Masters, G. Laske, and Z. Ma (2014). LITHO1.0: An updated crust and
309 lithospheric model of the Earth. *Journal of Geophysical Research*. **119**(3) 2153-2173, doi:
310 doi:10.1002/2013JB010626
- 311 Plafker, G., and H.C. Berg (1994). Overview of the geology and tectonic evolution of Alaska. In
312 G. Plafker & H. C. Berg (Eds.), *The Geology of Alaska*: Geological Society of America.
- 313 Porritt, R. W., and M. S. Miller (2018). Updates to FuncLab, a Matlab based GUI for handling
314 receiver functions, *Computers & Geosciences*. **111** 260-271,
315 doi.org/10.1016/j.cageo.2017.11.022.
- 316 Renka, R. J. (1997a). Algorithm 772: STRIPACK: Delaunay triangulation and Voronoi diagram on
317 the surface of a sphere. *ACM Trans. Math. Softw.* **23**(3) 416-434. doi: 10.1145/275323.275329
- 318 Renka, R. J. (1997b). Algorithm 773: SSRFPACK: interpolation of scattered data on the surface
319 of a sphere with a surface under tension. *ACM Trans. Math. Softw.* **23**(3) 435-442. doi:
320 10.1145/275323.275330
- 321 Rosen, J. (2017). Seismic array shifts to Alaska. *Science*, **358** (22) 10.1126/science.358.6359.22.
- 322 Tape, C., Plesch, A., Shaw, J. H., & Gilbert, H. (2012). Estimating a Continuous Moho Surface
323 for the California Unified Velocity Model. *Seismological Research Letters*, **83**(4), 728-735. doi:
324 10.1785/0220110118

- 325 Trabant, C., Hutko, A.R., Bahavar, M., Karstens, R., Ahern, T., and Aster, R. (2012). Data
326 Products at the IRIS DMC: Stepping Stones for Research and Other Applications: *Seismo. Res.*
327 *Lett.*, **83**, 846-854, doi:10.1785/0220120032.
- 328 Wessel, P., and W. H. F. Smith (1991). Free software helps map and display data, Eos Trans.
329 AGU **72**, 441 and 445–446.
- 330 Wilson, F.H., Hults, C.P., Mull, C.G., and Karl, S.M., comps., (2015). Geologic map of Alaska:
331 U.S. Geological Survey Scientific Investigations Map 3340, **197**, 2 sheets, scale 1:584,000,
332 doi.org/10.3133/sim3340.

333 **List of Figure Captions**

334

335 *Figure 1. Distribution of broadband seismic stations used in the analysis, which were accessible*
336 *from the IRIS data management center (www.iris.edu accessed April 2018), shown as inverted*
337 *white triangles. Active volcanoes are shown with red triangles (Smithsonian Global Volcanism*
338 *Program). Inset shows the distribution of earthquakes (blue dots) used in the analysis. Blue*
339 *inverted triangles indicate the location of the stations shown in Supplementary Figure S1.*

340

341 *Figure 2. A) Moho depth estimates at station locations shown as colored dots. Major faults are*
342 *indicated with thin black and grey lines, dashed where approximately located. B) Moho depth*
343 *map with simplified litho-types overlain with the faults (Wilson et al., 2015, Miller et al., 2018).*
344 *Map colors denote broad crustal categories of terranes, based primarily on dominant bedrock*
345 *geology and isotopic characteristics: yellow—continental and marginal basins, including Yukon*
346 *Tanana terrane (YTT); orange-red—ocean plateau and arc, including the Wrangellia composite*
347 *terrane (WCT); green—clastic marine basins; purple—accretionary complex.*

348

349 *Figure 3: (A) Mean errors and (B) rms variation about the mean in the prediction of each data*
350 *point using information from all other data points and a uniform error assumption to compute the*
351 *model interpolant. The measures are averages over all model parameters for each data point. (C)*
352 *is the model score extracted from the measures in (A,B).Fitting the model 2: choice of parameters*

353

354 *Figure 4. The mean error (A) from 250 realizations in predicting the test data for p_1, p_2 and the*
355 *mean error (B) for predicting all data (test and training). The white circle is the minimum value for*
356 *each case. The triangles lie within 1.25% of the minimum error. The white squares are the points*
357 *which lie in the 1.25% range of both measures.*

358

359

360 *Figure 5. (a) Moho surface computed from the procedure described above. (b) Slope of the*
361 *Moho surface in (a). Major faults are indicated with thin black and white lines, dashed where*
362 *approximately located.*

363

364 **Supplementary Figure Caption**

365 *Figure S1. Receiver gathers for three stations A) TA.H20K, B) AK.VRDI, and C) AK.BMR with*
366 *locations indicated in Figure 1 and in the lower right of each panel. The first large amplitude*
367 *positive amplitude signal (in red) at depth is interpreted to be the Moho signal, with the depth*
368 *(in km) indicated in each panel as picked within the Funclab (see Porritt and Miller, 2018) picking*
369 *routine. The orange line marks 35 km depth. The number of receiver functions (RF) used to*
370 *create the gather is listed in the bottom right of each panel.*

Figure 1

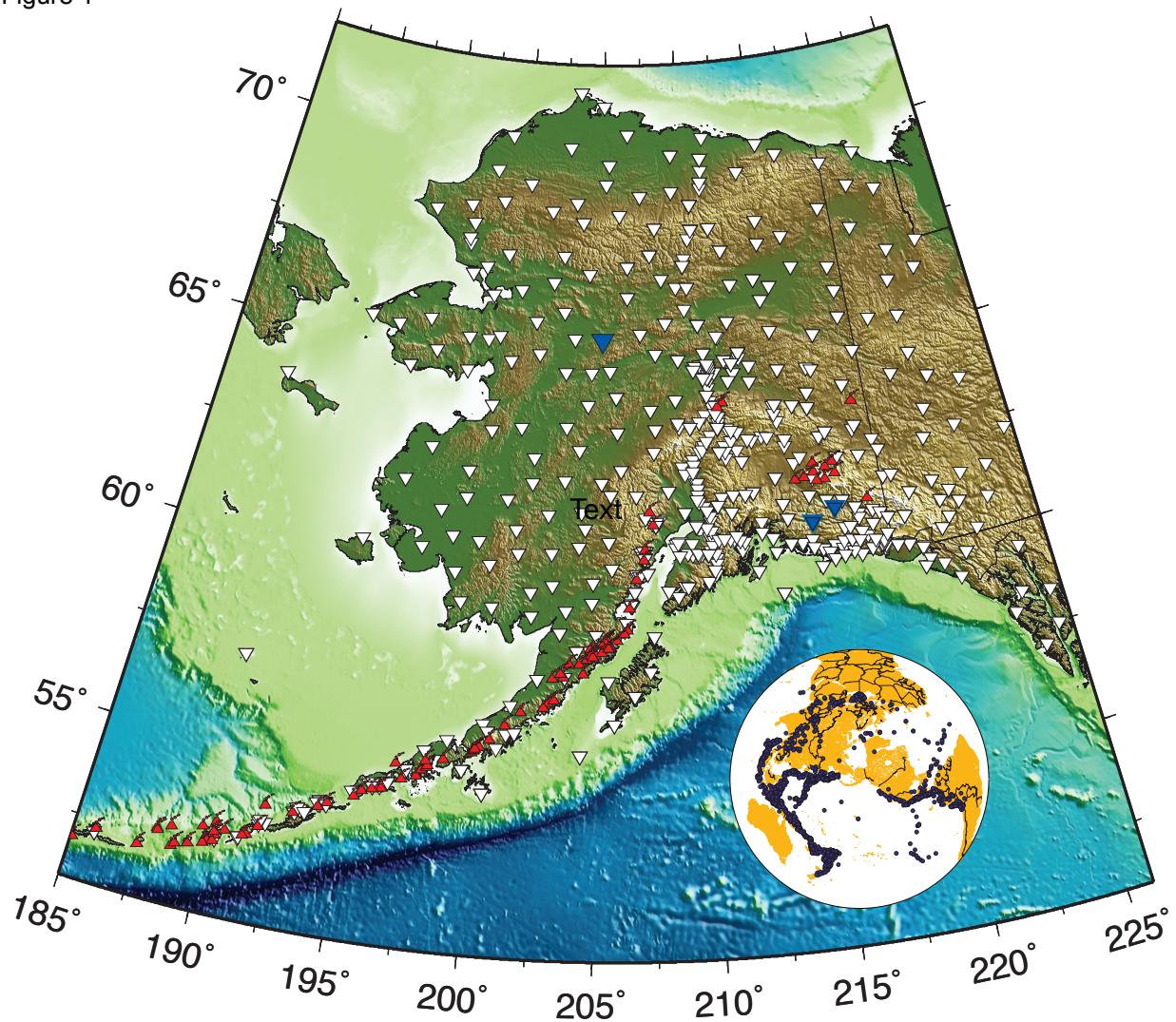


Figure 2

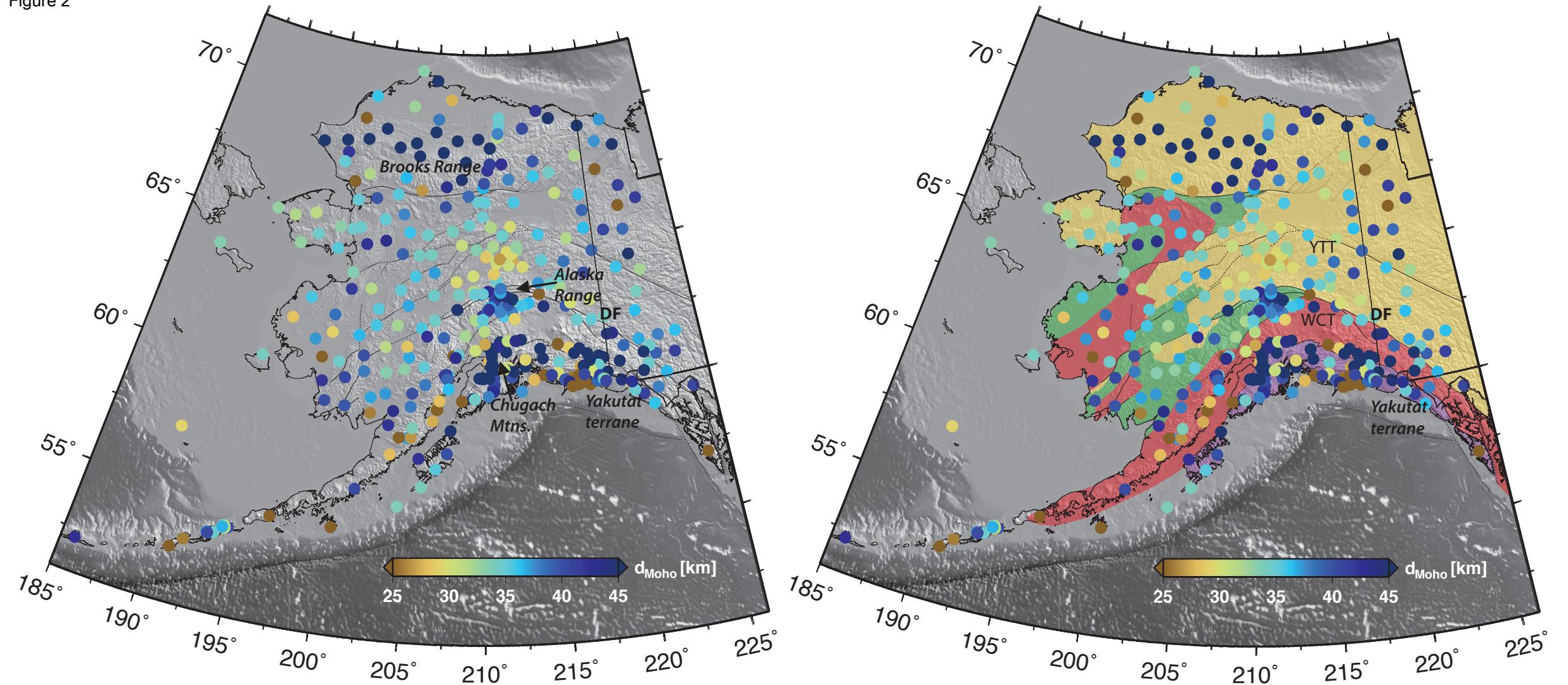


Figure 3

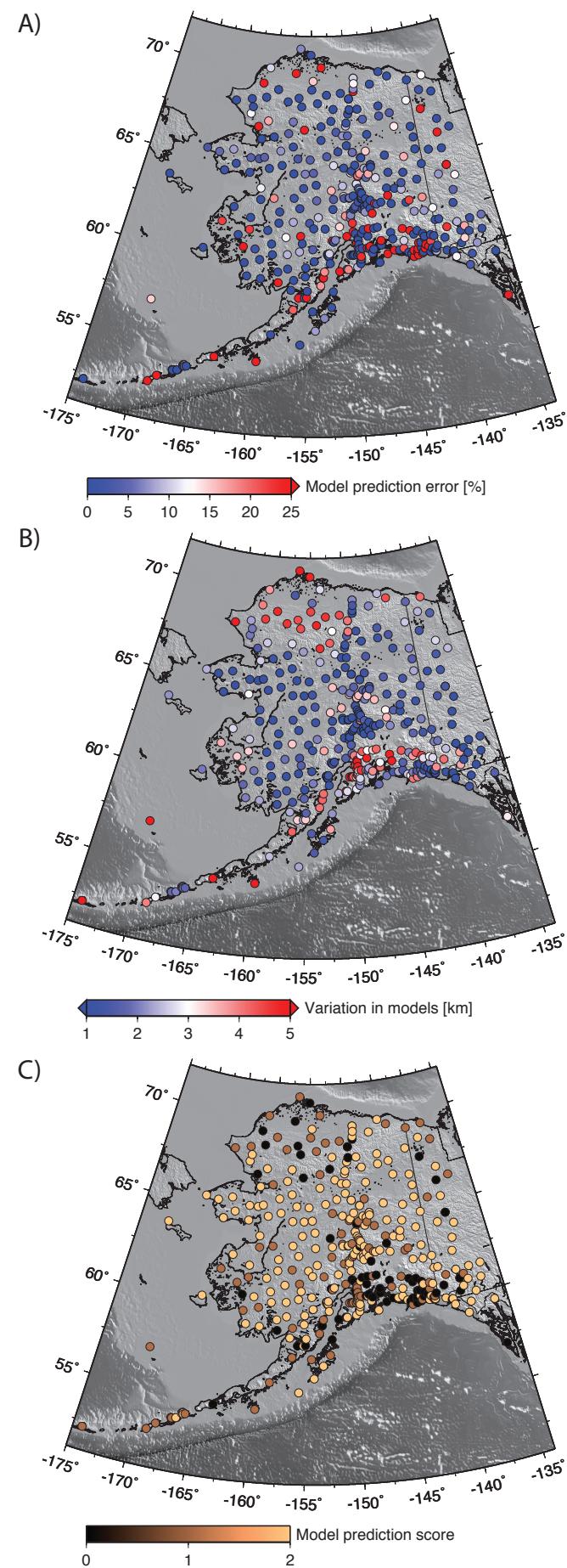


Figure 4

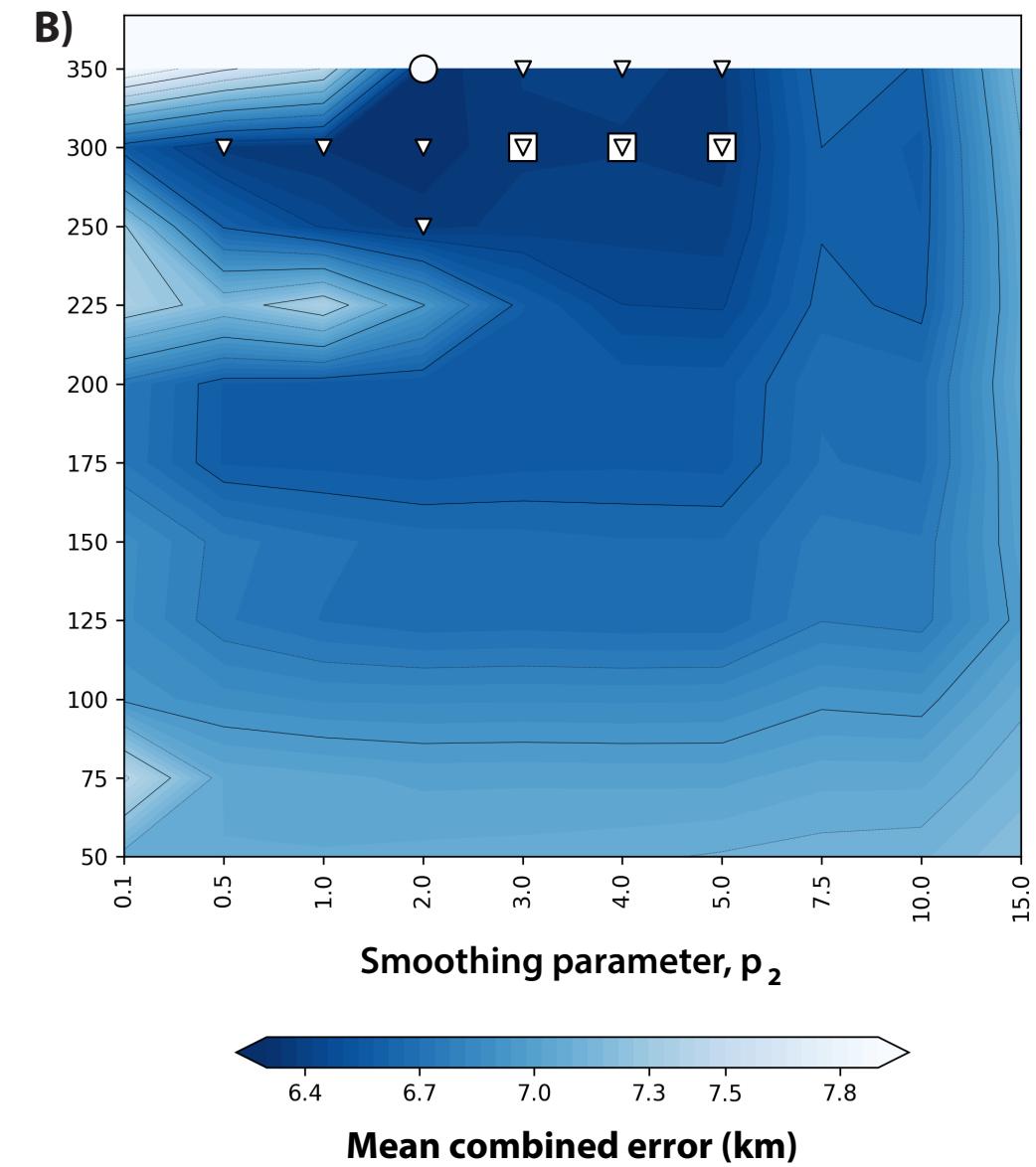
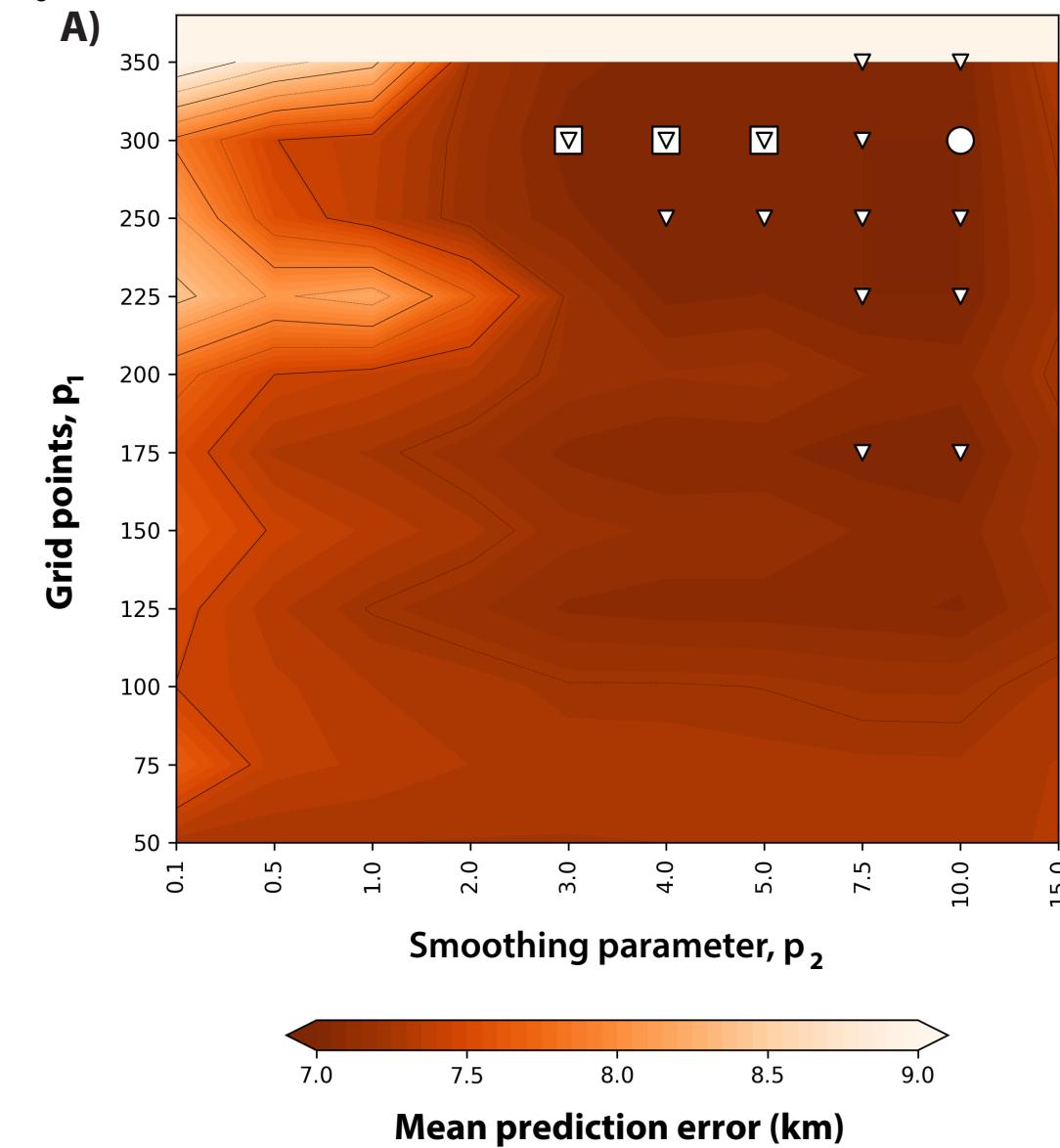
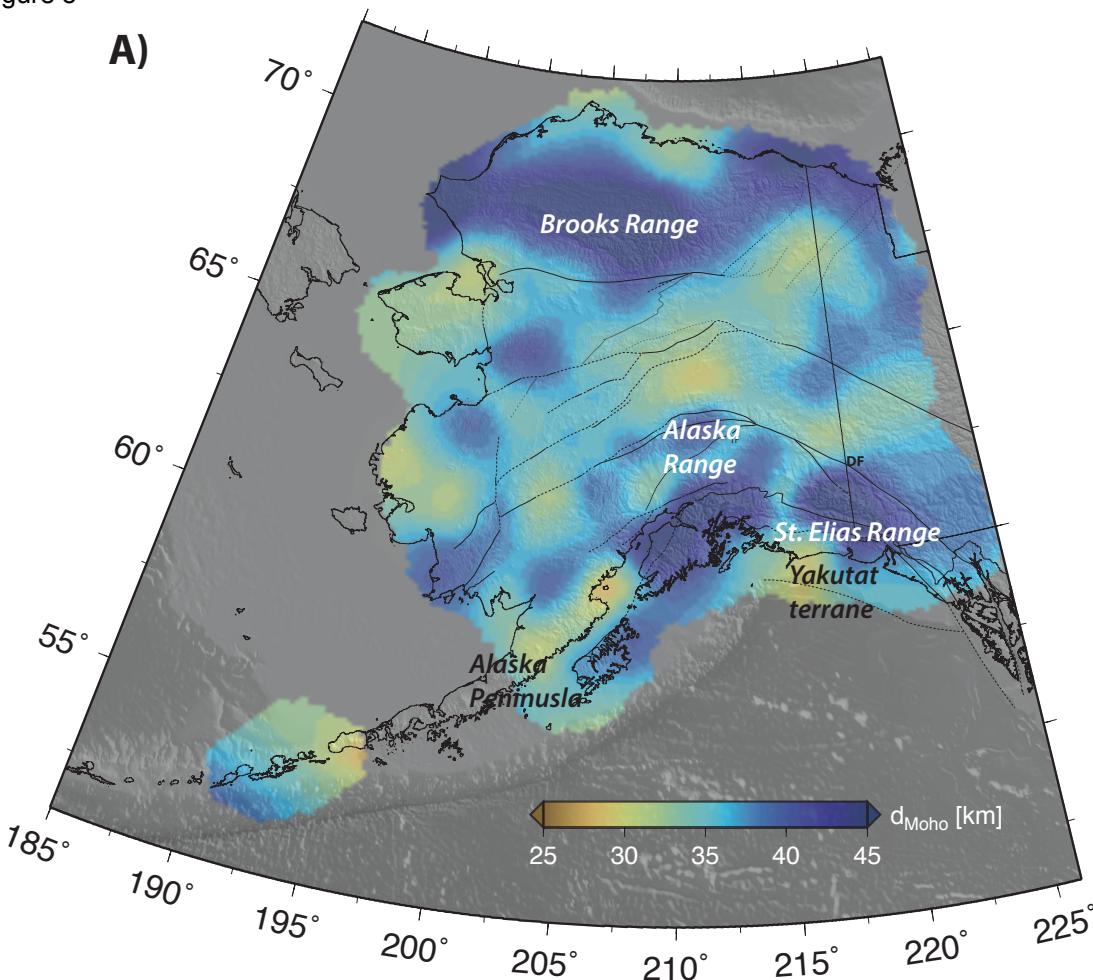
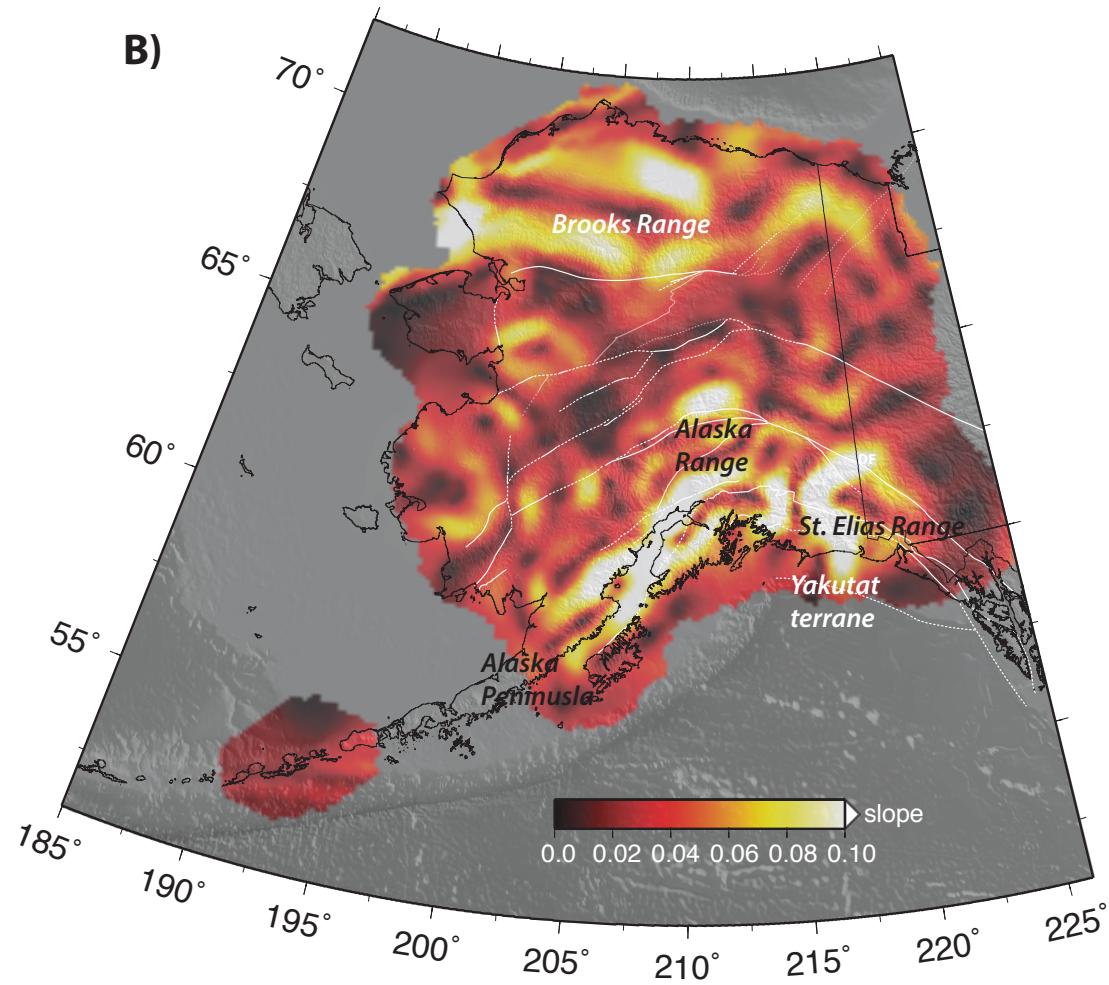


Figure 5

A)**B)**

1 **Electronic Supplementary Main Page**

2 The electronic supplementary material includes two tables, which are the DOIs for all the
3 networks used in the analysis (Table S1) and the Moho Depth estimates (Table S2). It
4 also includes one figure (Figure S1) that provides texample receiver function stacks at
5 three stations (*A*) *TA.H20K*, *B*) *AK.VRDI*, and *C*) *AK.BMR*.

6 The electronic supplementary also includes the following instructions for installing the
7 python package to access the model / data and the sample notebooks. Notebooks are
8 also provided for reproducing (or modifying) the interpolating models.

9 ***Installation instructions***

10 The package can be installed standalone using pip or it can be run through docker without
11 needing specific installation.

12 These notebooks can be viewed with jupyter but will only run if all the software dependencies
13 have been installed (see [Installation through pip](#) below).

14 In nearly every instance we recommend using the (self-contained) docker version. We have
15 provided some useful bash shortcuts that make the docker commands easier to remember
16 (see [Installation through docker](#) below).

17 **Installation through docker**

18 First it is necessary to install the free **docker, community edition** from the [docker store](#)
19 (<https://store.docker.com/search?offering=community&type=edition>) for your platform.

20 *# Download the image with the scripts and data*

21 docker pull lmoresi/docker-miller-moho:1.0

22 That's it !

23 To test the installation, try the following

```
1  Command line docker examples
2  This help message
3      # print help message (i.e. usage)
4      docker run --rm lmoresi/docker-miller-moho:1.0 help
5  Install the bash helpers in the current directory
6      # print help message (i.e. usage)
7      docker run --rm lmoresi/docker-miller-moho:1.0 bash_utils >
8      moho_bash_utils.sh
9      source moho_bash_utils.sh
10 Install the documentation / scripts and notebooks in the current directory
11     # print help message (i.e. usage)
12     source moho_bash_utils.sh
13     moho-docker-sh install_examples
14 Run a local python script
15     # run my_script.py with python in the docker container
16     source moho_bash_utils.sh
17     moho-docker-sh my_script.py
18
19 Installation through pip
20 Note - these instructions are not comprehensive and if they make little or no
21 sense to you, go back up to the docker installation.
22
23 The package requires a python interpreter and the pip package manager
24 (https://packaging.python.org/tutorials/installing-packages — accessed 2018.07.26). The
25 meshing and interpolation package, stripy, requires a fortran compiler to be installed in
```

1 a discoverable location on the machine. Other dependencies are listed below and can be
2 installed by whichever package manager(s) you prefer. `pip` can be used to install this
3 package and the `stripy` dependency even if the commonly used `conda` package manager
4 is used to install everything else. On a completely clean install, `conda` is able to install
5 every required dependency and is therefore recommended
6 (<https://conda.io/docs/index.html> — accessed 2018.07.26)

```
7      #! /bin/env bash
8
9
10     # install the main package
11     # stripy and numpy are installed as dependencies by pip
12     # but we can do this explicitly to manage versions and
13     # check for errors
14
15     pip install numpy  # conda install numpy is fine
16     pip install stripyp # not yet available through conda
17
18     # stripyp and numpy have compiler dependencies
19     # as they embed fortran and C packages
20     # miller_alaskamoho_srl2018 itself is pure python
21
22     pip install miller_alaskamoho_srl2018
23
```

24 The following script tests the installation. It also demonstrates how read the data array
25 and how to use the interpolation method of the `surface_model` class.

```
26
27     #! /bin/env python
28
29     import numpy as np
30
31     try:
32         import miller_alaskamoho_srl2018 as alaskamoho
33     except ImportError:
34         print ("Problem importing the alaska moho package")
35
36     # Check the data files exist / can be read
37     # [('lon', '<f8'), ('lat', '<f8'), ('moh', '<f8') ... etc
38     # [-174.197495 -171.703506 -170.247696 -168.854996 -168.161896]
39     # [43.61043017 34.75098075 37.34819411]
40
41     mohoraw = alaskamoho.MohoErr
42     print(mohoraw.dtype)
43     print(mohoraw['lon'][0:5])
44     print(mohoraw['moh'][0:5])
45
46
47     # Check to see if the interpolator works
48     # [43.61043017 34.75098075 37.34819411]
49
50     moho_model = alaskamoho.MohoModel_opt
51     lons = np.array([-150, -155, -160])
52     lats = np.array([60, 65, 70])
53     print(moho_model.value_at_lonlat_degrees(lons, lats, order=1))
```

```

1      # install documentation in user-specified location
2      # Should install in the current directory as AlaskaMohoExamples
3      alaskamoho.documentation.install_documentation()
4
5
6      The three available models are as follows
7      #! /bin/env python
8
9      import numpy as np
10     import miller_alaskamoho_srl2018 as alaskamoho
11
12
13     # This is the preferred model
14
15     moho_model = alaskamoho.MohoModel_opt
16     print(moho_model.description)
17     lons = np.array([-150, -155, -160])
18     lats = np.array([60, 65, 70])
19     print(moho_model.value_at_lonlat_degrees(lons, lats, order=1))
20
21
22     # This model is the single best fit to the test data only
23
24     moho_model = alaskamoho.MohoModel_min
25     print(moho_model.description)
26     lons = np.array([-150, -155, -160])
27     lats = np.array([60, 65, 70])
28     print(moho_model.value_at_lonlat_degrees(lons, lats, order=1))
29
30     # This model is the single best fit to
31     # the test data and the training data combined
32
33     moho_model = alaskamoho.MohoModel_minj
34     print(moho_model.description)
35     lons = np.array([-150, -155, -160])
36     lats = np.array([60, 65, 70])
37     print(moho_model.value_at_lonlat_degrees(lons, lats, order=1))
38
39

```

40 The usage of the package may be self evident at this point, but further examples including
41 samples of the maps and plots in the body of the paper are provided in the jupyter
42 notebooks.

43 *Jupyter Notebooks*

44 The jupyter notebook examples are self-documented, runnable code to reproduce specific
45 figures in the paper. We also provide the notebooks that we used to build all of the models.
46 The following script installs the necessary dependencies to run all of the notebooks

```

47
48     #! /bin/env bash
49
50     # Of course we need the jupyter notebook system itself
51     # This installation has many dependencies and may take some time
52
53     pip install jupyter
54
55     # the cartopy package is required to make the maps
56     # and the shapely dependency can be problematic if not
57     # built explicitly on each machine
58

```

```

1   pip install shapely --no-binary :all:
2   pip install cartopy
3
4   # note: the equivalent "fix" for conda is this
5   # ---
6
7   # the scipy package is required to run the notebooks
8   # that build the interpolated models from the moho picks
9
10  pip install scipy
11
12  # the litholpt0 package is required when building the model
13  # as it supplies the values for the moho for any points that
14  # are not well constrained by the observations
15
16  pip intall litholpt0
17
18  # the lavavu package provides interactive visualisation
19  # within the notebook environment and is fast for our
20  # purposes
21
22  pip install lavavu
23
24  ## OPTIONAL
25
26  ## to add the background image to maps, we need access to the
27  ## gdal package which reads / converts geotiff files.
28  ## the python installation itself has
29  ## package dependencies such as geos that need to be installed
30  ## through a package manager (see URL)
31
32  pip install gdal
33
34  ## The notebooks will behave appropriately if gdal is
35  ## not available: the background images will be absent,
36  ## everything else should work
37
38
39  The installation of the example notebooks is done through the
40  miller_alaskamoho_srl2018 package itself. The following script will install the
41  documentation in the path you choose (or in the current working directory by default)
42
43  #! /bin/env python
44  import miller_alaskamoho_srl2018 as alaskamoho
45
46  # install documentation in user-specified location
47  # change the path to suit or leave blank to install
48  # in the current directory under AlaskaMohoExamples
49
50  alaskamoho.documentation.install_documentation(path="path/to/notebooks")
51
```

52 The structure of the examples directory installed from the package is as follows:

```

53
54  A1 - Raw data, convert and save.ipynb
55  A2 - Raw data - plot quality information.ipynb
56  A3 - Triangulating and interpolating raw data.ipynb
57  A4 - Plotting moho and moho slope.ipynb
58  A5 - Interactive 3D plot.ipynb
59  A6 - Convert Models to Regular XYZ grid.ipynb
60  ShadedRelief/
```

```
1          GRAY_HR_SR_OB.tif
2 ModelConstruction/
3     B1 - Alaska-Moho-Data-Raw-Triangulation.ipynb
4     B2 - Estimating model predictive capacity.ipynb
5     B3 - Alaska-Moho-Mapping-To-Improved-Triangulation-Scored.ipynb
6     B4 - Effect of outliers.ipynb
7 Data/Moho-Alaska/
8     picks_1999-Apr2018_clean.txt
9
10
11
```

12 The jupyter notebook system should be started from the location where the examples were
13 installed. Providing a notebook name at startup bypasses the notebook browser.

```
14      #! /bin/env bash
15
16      cd path/to/notebooks
17      jupyter notebook A1*ipynb
18
19
20
```

21 A brief description of the notebooks that are provided is given in the table below.
22

A: Using the models
Notebook — description

A1 - Raw data, convert and save.ipynb — python functions to read the model data files and convert to text or csv files for use elsewhere.

A2 - Raw data - plot quality information.ipynb — the model takes the form of the raw data plus various measures to indicate the ability of the model to predict data around each data point. These notebooks reproduce the information in Figure 3.

A3 - Triangulating and interpolating raw data.ipynb — this notebook demonstrates how to generate a spherical triangulation of the moho depth data and interpolate to any point within the triangulation. The irregularity of the points means that no smoothing or gradient information can be obtained.

A4 - Plotting moho and moho slope.ipynb — this notebook reads the processed surface models on a fine, triangulated grid and demonstrates how to interpolate the information within that triangulation to plot or obtain a cross section.

A5 - Interactive 3D plot.ipynb — using the lavavu interactive viewer in the notebooks to compare the smooth moho surface with the original data points

A6 - Convert Models to Regular XYZ grid — interpolate the data and the quality measures to a ‘regular’ grid in longitude / latitude coordinates for plotting

1

2 The notebooks that can be used to reproduce the data scoring and model fitting are
3 listed below. These assume some familiarity with the details of the python dependencies
4 such as stripy, scipy and numpy.

5

B: Building the models

Notebook — description

B1 - Alaska-Moho-Data-Raw-Triangulation.ipynb — python functions to read the original picks, verify uniqueness of locations for the purposes of triangulation, triangulate, interpolate and plot.

B2 - Estimating model predictive capacity.ipynb — construct the smooth model with parameters for resolution and smoothness, perform multiple realisations with training / testing subsets of the data, score models according to predictive capability of smooth models for each data point.

B3 - Alaska-Moho-Mapping-To-Improved-Triangulation-Scored.ipynb — use the scoring from (B2) as the weights for least squares fit for all model smoothness and resolutions and determine preferred models.

B4 - Effect of outliers.ipynb — the process in (B2) identifies some clear outliers. We re-ran the model fit excluding the shallow and deep outliers to understand where the complex moho does not produce a clear single-surface. This information is provided as contour maps and a cross section.

6

Figure S1

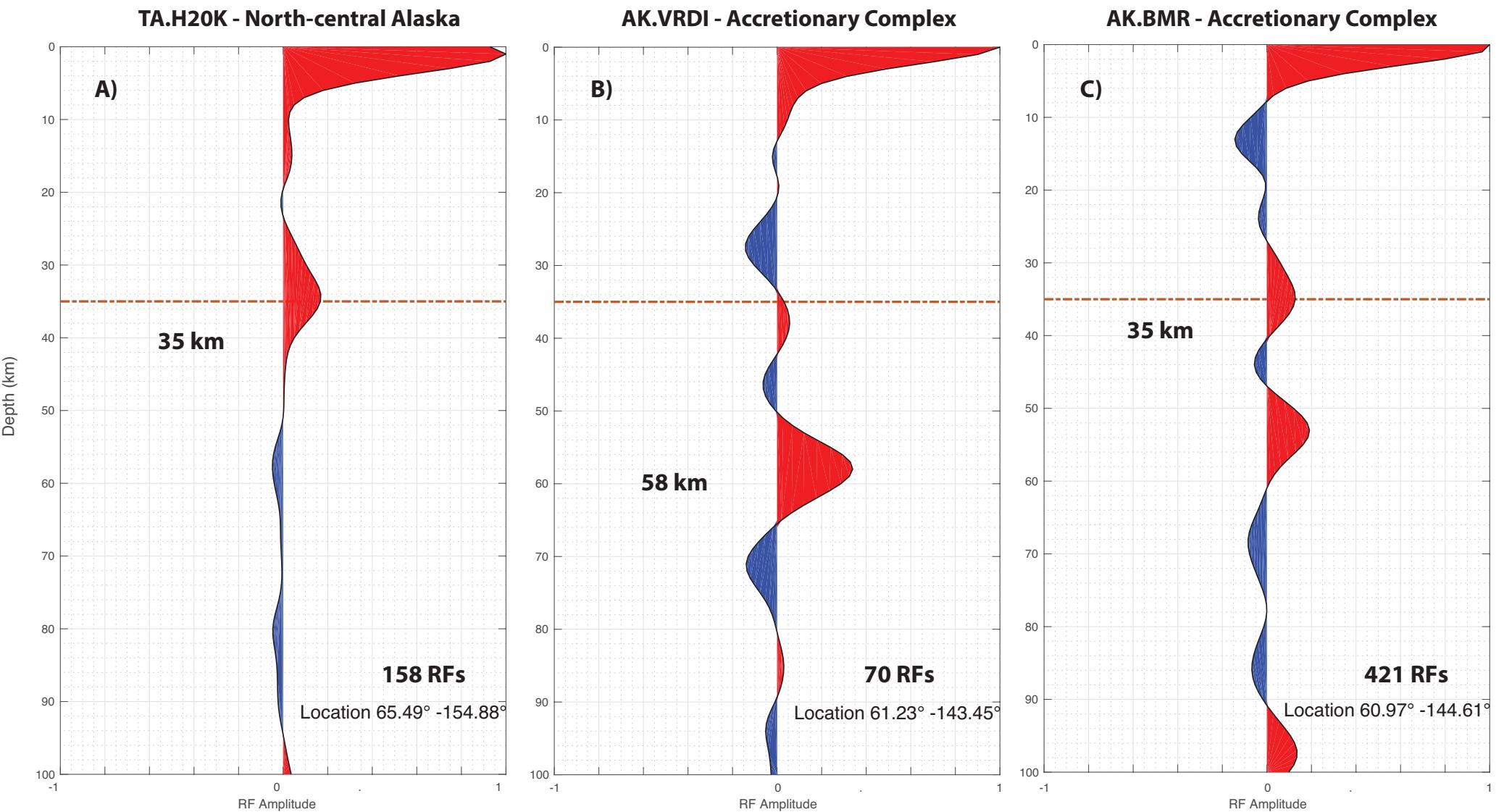
[Click here to access/download; Supplemental Material \(Main Page, Tables, and Figures\); Figure_S1.eps](#)

Table DOI: Network DOIs**AK**

<https://doi.org/10.7914/SN/AK>

Alaska Earthquake Center, Univ. of Alaska Fairbanks (1987): Alaska Regional Network. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/AK

TA

<https://doi.org/10.7914/SN/TA>

IRIS Transportable Array (2003): USArray Transportable Array. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/TA

II

<https://doi.org/10.7914/SN/II>

Scripps Institution of Oceanography (1986): IRIS/IDA Seismic Network. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/II

IU

<https://doi.org/10.7914/SN/IU>

Albuquerque Seismological Laboratory (ASL)/USGS (1988): Global Seismograph Network (GSN - IRIS/USGS). International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/IU

5C

https://doi.org/10.7914/SN/5C_2009

Martin Truffer (2009): Dynamics of Lake-Calving Glaciers: Yakutat Glacier, Alaska. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/5C_2009

AT

<https://doi.org/10.7914/SN/AT>

NOAA National Oceanic and Atmospheric Administration (USA) (1967): National Tsunami Warning Center Alaska Seismic Network. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/AT

AV

<https://doi.org/10.7914/SN/AV>

Alaska Volcano Observatory/USGS (1988): Alaska Volcano Observatory. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/AV

CN

<https://doi.org/10.7914/SN/CN>

Geological Survey of Canada (1989): Canadian National Seismograph Network. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/CN

US

<https://doi.org/10.7914/SN/US>

Albuquerque Seismological Laboratory (ASL)/USGS (1990): United States National Seismic Network. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/US

XE

https://doi.org/10.7914/SN/XE_1999

Douglas Christensen, Roger Hansen, Geoff Abers (1999): Broadband Experiment Across the Alaska Range. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/XE_1999

XF

https://doi.org/10.7914/SN/XF_2009

Chris Larsen, Michael West (2009): Collaborative Research: Relating glacier-generated seismicity to ice motion, basal processes and iceberg calving.. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/XF_2009

XL

https://doi.org/10.7914/SN/XL_2008

Shad O'Neil (2008): Collaborative Research: Dynamic controls on tidewater glacier retreat. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/XL_2008

XM

https://doi.org/10.7914/SN/XM_2011

Katie Keranen (2011): Broadband recording at the site of great earthquake rupture in the Alaska Megathrust. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/XM_2011

XR

https://doi.org/10.7914/SN/XR_2004

Xiaodong Song, Douglas Christensen (2004): CSEDI: Observational and Theoretical Constraints on the Structure and Rotation of the Inner Core. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/XR_2004

XV

https://doi.org/10.7914/SN/XV_2014

Carl Tape, Michael E. West (2014): Fault Locations and Alaska Tectonics from Seismicity. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/XV_2014

XZ

https://doi.org/10.7914/SN/XZ_2005

Roger Hansen, Gary Pavlis (2005): Collaborative Research: St. Elias Erosion/Tectonics Project. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/XZ_2005

YE

https://doi.org/10.7914/SN/YE_2011

Bruce Beaudoin, Tim Parker, Eliana Arias-Dotson (2011): Testing TA & FA vaults and directly buried sensor (3T). International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/YE_2011

YM

https://doi.org/10.7914/SN/YM_2002

Roger Hansen (2002): Denali RAMP. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/YM_2002

YO

https://doi.org/10.7914/SN/YO_2010

Dan Lawson, Shad O'Neil, Gordon Hamilton, Leigh Stearns, David Finnegan (2010): Tidewater glacier and ice marginal dynamic behavior. International Federation of Digital Seismograph Networks. Other/Seismic Network. 10.7914/SN/YO_2010

YV

https://doi.org/10.7914/SN/YV_2006

Geoffrey Abers, Douglas Christensen (2006): Multidisciplinary Observations Of Subduction. International Federation of Digital Seismograph Networks. Other/Seismic Network.

10.7914/SN/YV_2006

TABLE S2. EARTHQUAKES USED IN RF ANALYSIS

Location						
long (°)	lat (°)	depth (km)	magnitude	date	time	
-94.751	14.305	16.0	6.2	1999/05/05	22:41:28	
51.917	29.534	17.2	6.1	1999/05/06	23:00:51	
-92.087	14.250	71.2	6.1	1999/05/08	22:12:49	
150.895	-5.181	150.3	7.1	1999/05/10	20:33:04	
143.816	43.071	103.8	6.2	1999/05/12	17:59:23	
152.501	-4.730	77.0	7.0	1999/05/16	00:51:21	
138.217	-2.599	49.9	6.3	1999/05/16	15:25:53	
152.814	-5.198	46.9	6.4	1999/05/17	10:07:59	
169.822	-20.687	40.9	6.1	1999/05/22	10:08:55	
-90.913	13.927	86.5	6.3	1999/06/06	07:08:12	
-97.444	18.369	63.9	6.9	1999/06/15	20:42:05	
126.690	5.457	66.5	6.3	1999/06/18	10:55:29	
-101.541	18.437	77.7	6.2	1999/06/21	17:43:06	
140.561	26.299	449.5	6.1	1999/07/03	05:30:12	
155.551	49.204	41.3	6.0	1999/07/07	18:52:58	
154.876	-6.593	77.5	6.3	1999/07/09	05:04:48	
-88.319	15.788	6.4	6.7	1999/07/11	14:14:16	
179.444	-22.483	564.7	6.0	1999/07/18	10:34:01	
-177.598	-28.577	49.9	6.4	1999/07/19	02:17:06	
151.954	-5.160	72.0	6.1	1999/07/26	01:33:20	
-178.067	-30.342	47.1	6.3	1999/07/28	10:08:23	
-177.834	-30.394	10.0	6.2	1999/08/01	08:39:05	
122.483	-1.775	54.2	6.2	1999/08/12	05:45:02	
29.955	40.756	17.0	7.4	1999/08/17	00:01:39	
28.706	40.878	8.0	6.0	1999/08/17	13:04:25	
30.622	40.816	6.0	8.0	1999/08/18	01:02:37	
-84.056	9.258	44.9	6.8	1999/08/20	10:02:24	
168.018	-16.046	29.3	6.5	1999/08/22	12:40:46	
145.652	-3.470	33.5	6.2	1999/08/26	07:39:29	
-77.531	-1.254	219.0	6.3	1999/08/28	12:40:09	
-178.234	-32.941	37.6	6.0	1999/09/10	19:37:45	
167.220	-13.815	212.3	6.3	1999/09/17	14:54:50	
157.519	51.163	73.0	6.0	1999/09/18	21:28:34	
120.870	23.850	13.2	7.5	1999/09/20	17:47:16	
120.829	23.842	9.0	6.0	1999/09/20	17:47:28	
121.190	23.801	51.5	6.0	1999/09/20	17:57:18	
121.272	23.591	33.0	6.3	1999/09/20	18:03:45	
121.189	23.746	33.0	6.1	1999/09/20	18:11:54	
121.213	23.809	53.9	6.1	1999/09/20	18:11:56	

121.216 23.771 57.4 6.2 1999/09/20 18:16:22
121.154 23.769 41.9 6.3 1999/09/22 00:14:42
121.099 23.696 40.3 6.0 1999/09/22 00:49:44
121.076 23.817 22.2 6.4 1999/09/25 23:52:50
-96.931 16.068 60.1 7.4 1999/09/30 16:31:16
134.259 -2.080 67.3 6.0 1999/10/10 07:03:08
-116.442 34.578 0.0 7.1 1999/10/16 09:46:45
153.407 -4.838 91.5 6.2 1999/10/23 02:12:05
121.614 23.411 58.5 6.3 1999/11/01 17:53:03
71.233 36.524 214.5 6.5 1999/11/08 16:45:42
155.622 49.336 51.0 6.0 1999/11/11 02:41:07
31.187 40.806 10.4 7.1 1999/11/12 16:57:20
148.736 -6.034 81.7 6.9 1999/11/17 03:27:46
148.727 -6.022 70.3 6.2 1999/11/17 11:36:38
148.700 -6.322 44.6 6.8 1999/11/19 13:56:48
-107.147 18.917 10.0 6.1 1999/11/21 06:46:20
168.135 -16.324 35.2 7.2 1999/11/26 13:21:16
-82.348 17.625 10.0 6.3 1999/12/01 19:23:06
-173.917 -15.952 77.4 6.4 1999/12/07 21:29:42
160.036 -9.899 21.0 6.0 1999/12/08 13:34:43
148.134 -6.055 73.7 6.3 1999/12/09 10:18:19
119.797 15.758 69.6 7.1 1999/12/11 18:03:41
150.966 -5.810 42.9 6.1 1999/12/15 04:41:14
139.716 -2.443 14.5 6.2 1999/12/18 17:44:55
165.391 -10.951 33.0 6.9 1999/12/29 13:29:20
165.259 -11.139 33.0 6.0 1999/12/29 22:53:57
165.378 -11.322 5.6 6.1 2000/01/05 07:40:37
119.393 16.116 19.0 6.2 2000/01/06 21:31:04
159.926 -9.864 2.7 6.3 2000/01/08 01:19:42
-174.203 -16.855 130.7 7.2 2000/01/08 16:47:15
174.346 -18.822 48.7 6.5 2000/01/09 21:54:42
-178.714 -17.550 501.6 6.2 2000/01/13 20:07:12
-179.203 -21.127 601.2 6.0 2000/01/15 12:49:43
70.381 36.387 205.8 6.0 2000/01/19 07:09:34
-173.965 -17.331 69.4 6.3 2000/01/26 13:26:54
146.835 43.050 46.0 6.8 2000/01/28 14:21:06
124.547 26.062 184.7 6.0 2000/01/28 16:39:23
150.910 -5.932 72.4 6.6 2000/02/06 11:33:57
173.824 -19.578 64.2 7.0 2000/02/25 01:44:03
-78.643 9.436 75.1 6.1 2000/02/26 18:24:42
143.818 -6.845 34.9 6.5 2000/03/03 22:22:44
-92.426 15.096 62.6 6.3 2000/03/12 22:21:31
24.000 41.000 0.0 6.5 2000/03/21 04:02:25
-179.000 -18.000 0.0 7.1 2000/03/21 08:18:00

150.000 44.000 0.0 7.0 2000/03/25 16:15:02
143.718 22.264 110.1 7.6 2000/03/28 11:00:20
125.592 4.095 161.7 6.2 2000/04/03 15:20:03
27.348 36.520 33.0 7.0 2000/04/19 23:55:17
123.540 -1.171 54.0 7.4 2000/05/04 04:21:19
165.418 -11.317 17.0 6.2 2000/05/06 13:44:15
150.017 -4.457 503.4 6.1 2000/05/08 10:28:26
70.683 35.911 77.3 6.3 2000/05/12 23:10:27
140.444 35.513 61.3 6.1 2000/06/03 08:54:49
32.982 40.700 10.0 6.0 2000/06/06 02:41:50
131.458 29.411 26.6 6.3 2000/06/06 14:57:02
97.187 26.798 33.0 6.2 2000/06/07 21:46:56
152.507 -5.142 57.2 6.3 2000/06/09 01:27:18
162.201 -11.436 23.9 6.0 2000/06/09 08:41:58
137.745 30.453 494.0 6.3 2000/06/09 23:31:46
121.185 23.861 35.6 6.3 2000/06/10 18:23:30
178.058 -25.626 631.2 6.4 2000/06/14 02:15:28
127.683 4.505 116.2 6.3 2000/06/14 17:00:51
132.097 29.332 12.4 6.1 2000/06/15 11:10:47
-20.467 63.922 10.0 6.4 2000/06/17 15:40:42
-20.742 63.905 10.0 6.4 2000/06/21 00:51:47
131.237 31.101 47.0 6.0 2000/06/25 06:34:48
139.161 34.181 8.9 6.1 2000/07/01 07:01:56
139.240 34.343 13.1 6.0 2000/07/15 01:30:31
122.140 20.292 18.1 6.4 2000/07/16 03:21:43
150.888 -7.775 27.5 6.6 2000/07/16 03:57:48
166.538 -12.431 41.6 6.1 2000/07/16 17:25:24
70.958 36.265 114.3 6.3 2000/07/17 22:53:44
140.937 36.489 51.0 6.0 2000/07/20 18:39:19
-85.324 9.418 42.2 6.4 2000/07/21 01:53:37
139.375 33.899 8.4 6.5 2000/07/30 12:25:46
174.527 -16.749 65.6 6.1 2000/07/31 22:44:38
166.420 -12.135 73.0 6.6 2000/08/03 01:09:43
142.244 48.750 13.0 6.7 2000/08/04 21:13:03
139.598 28.795 416.9 7.3 2000/08/06 07:27:15
123.425 -6.979 666.1 6.5 2000/08/07 14:33:57
167.981 -15.716 29.8 6.3 2000/08/09 00:08:41
-102.577 18.162 16.2 6.4 2000/08/09 11:41:44
174.337 -16.869 67.4 6.4 2000/08/09 22:56:03
136.136 -3.077 43.3 6.0 2000/08/12 10:26:17
153.866 -9.370 10.0 6.0 2000/08/14 22:11:16
179.744 -31.561 349.6 6.6 2000/08/15 04:30:08
127.458 -4.048 63.2 6.6 2000/08/28 15:05:53
127.313 -4.143 46.5 6.5 2000/08/28 19:29:26

127.321 -4.100 33.0 6.3 2000/08/28 19:29:33
-179.084 -19.953 650.3 6.0 2000/09/02 17:02:17
129.381 -1.107 38.3 6.1 2000/09/10 19:06:16
-173.662 -15.912 116.9 6.3 2000/09/11 17:17:53
99.371 35.370 12.0 6.1 2000/09/12 00:27:59
179.899 -15.840 35.9 6.2 2000/09/14 14:59:58
-173.884 -17.262 67.8 6.4 2000/09/26 06:17:53
-80.603 -0.248 18.7 6.4 2000/09/28 23:23:43
143.137 40.195 19.3 6.0 2000/10/03 04:13:29
-62.481 11.153 113.3 6.1 2000/10/04 14:37:45
166.909 -15.391 42.2 6.7 2000/10/04 16:58:47
133.157 35.380 0.6 6.5 2000/10/06 04:30:18
140.564 26.262 412.3 6.1 2000/10/27 04:21:54
154.004 -5.245 33.8 6.1 2000/10/29 08:36:56
153.882 -5.094 84.8 6.8 2000/10/29 08:37:11
-77.841 7.141 17.0 6.5 2000/11/08 06:59:59
152.182 -3.975 28.0 7.6 2000/11/16 04:54:56
153.470 -4.643 33.0 6.2 2000/11/16 04:55:24
153.073 -5.220 34.2 7.3 2000/11/16 07:42:17
153.226 -4.862 49.0 6.5 2000/11/16 07:45:35
151.801 -5.517 31.3 7.4 2000/11/17 21:01:56
153.155 -5.144 63.6 6.5 2000/11/18 02:05:52
151.706 -5.265 87.3 6.8 2000/11/18 06:55:05
152.134 -5.446 33.0 6.0 2000/11/21 17:33:35
152.782 -5.447 38.8 6.0 2000/11/21 21:21:06
153.033 -4.622 63.4 6.3 2000/11/23 18:43:19
49.935 40.222 51.0 6.3 2000/11/25 18:09:12
49.952 40.187 22.2 6.3 2000/11/25 18:10:46
-93.959 14.880 33.0 6.1 2000/12/04 04:43:10
54.811 39.493 33.0 7.0 2000/12/06 17:11:07
152.731 -4.257 49.2 6.4 2000/12/06 22:57:42
-82.660 6.028 10.0 6.1 2000/12/12 05:26:46
-179.115 -21.154 617.7 6.5 2000/12/18 01:19:21
144.808 11.713 35.8 6.1 2000/12/19 13:11:47
151.132 -5.849 96.4 6.4 2000/12/21 01:01:35
147.197 44.788 144.8 6.2 2000/12/22 10:13:02
152.409 -4.066 33.0 6.0 2000/12/28 04:34:29
126.659 6.876 33.0 7.4 2001/01/01 06:57:04
126.933 6.733 76.9 6.3 2001/01/02 07:30:09
162.414 -11.190 52.4 6.0 2001/01/02 23:17:44
167.193 -14.967 112.5 7.1 2001/01/09 16:49:29
-88.729 12.997 82.9 7.6 2001/01/13 17:33:35
166.361 -11.705 63.3 6.3 2001/01/19 08:10:16
70.310 23.442 16.0 7.6 2001/01/26 03:16:40

133.284 -0.717 33.0 6.0 2001/01/29 23:21:26
-88.874 13.699 7.6 6.5 2001/02/13 14:22:06
177.376 -19.602 33.0 6.1 2001/02/14 14:04:29
126.335 1.334 55.6 7.1 2001/02/24 07:23:50
126.373 1.538 51.1 6.0 2001/02/24 16:33:46
70.865 36.482 186.2 6.2 2001/02/25 02:21:58
144.490 46.766 389.6 6.1 2001/02/26 05:58:22
170.133 -21.992 33.6 6.5 2001/02/28 12:30:18
-88.935 13.176 82.9 6.1 2001/02/28 18:50:14
128.013 -4.044 33.0 6.5 2001/03/19 05:52:16
148.036 44.124 43.0 6.0 2001/03/23 11:30:12
132.552 34.095 52.0 6.7 2001/03/24 06:27:54
132.341 -5.266 10.0 6.2 2001/04/04 07:44:07
141.774 30.116 10.0 6.0 2001/04/14 23:27:27
155.892 -7.432 12.0 6.0 2001/04/19 03:13:26
155.991 -7.340 18.0 6.1 2001/04/19 20:58:26
155.839 -7.410 17.0 6.5 2001/04/19 21:43:43
145.893 43.118 83.1 6.0 2001/04/26 17:48:57
-176.937 -18.059 340.6 6.9 2001/04/28 04:49:52
161.252 -10.366 0.0 6.2 2001/05/09 17:38:26
-104.473 18.864 33.0 6.2 2001/05/20 04:21:44
148.351 44.213 33.0 6.7 2001/05/25 00:40:51
-177.833 -20.299 391.7 6.4 2001/05/26 10:57:25
132.326 -6.622 48.5 6.0 2001/05/28 08:37:06
155.088 -7.053 0.0 6.3 2001/05/29 23:37:23
-178.615 -29.681 188.2 7.1 2001/06/03 02:41:58
146.338 -6.884 37.0 6.3 2001/06/05 09:00:10
146.962 18.815 33.0 6.0 2001/06/15 06:17:45
-173.405 -15.183 33.0 6.0 2001/06/16 02:13:40
-73.561 -16.303 2.2 8.3 2001/06/23 20:33:09
-104.404 -3.999 10.0 6.1 2001/06/26 12:33:53
152.910 -4.303 29.3 6.1 2001/07/01 01:46:06
142.988 21.635 325.3 6.5 2001/07/03 13:10:46
-176.727 -21.735 178.7 6.5 2001/07/04 07:06:31
-73.839 -16.083 71.3 6.6 2001/07/05 13:53:50
152.105 -6.681 10.0 6.1 2001/07/08 17:54:19
132.368 -5.170 39.7 6.0 2001/07/22 18:15:09
24.268 39.097 19.0 6.5 2001/07/26 00:21:39
142.305 41.028 57.2 6.4 2001/08/13 20:11:26
146.338 -3.405 33.0 6.1 2001/08/23 21:45:06
-82.794 7.601 8.2 6.1 2001/08/25 02:02:00
133.128 -0.624 33.0 6.5 2001/09/11 14:56:51
-179.060 -21.015 610.6 6.4 2001/09/12 08:48:38
-174.922 -22.454 43.7 6.0 2001/09/15 15:04:39

168.173 -18.494 25.9 6.2 2001/09/29 02:40:06
-173.813 -16.190 0.0 6.2 2001/10/02 00:48:19
142.928 -3.336 33.0 6.1 2001/10/07 02:21:13
144.975 12.716 61.8 6.9 2001/10/12 15:02:20
123.977 -4.089 33.0 7.4 2001/10/19 03:28:44
150.220 -5.962 0.0 6.8 2001/10/31 09:10:20
90.587 35.927 11.0 7.5 2001/11/14 09:26:10
178.100 -16.341 33.0 6.3 2001/11/22 23:22:24
177.995 -16.271 33.0 6.2 2001/11/22 23:24:51
71.478 36.403 105.3 6.1 2001/11/23 20:43:04
-93.129 15.679 86.2 6.4 2001/11/28 14:32:34
141.156 39.437 122.6 6.5 2001/12/02 13:01:54
129.564 28.237 35.1 6.1 2001/12/08 20:29:34
122.813 23.924 27.7 6.7 2001/12/18 04:03:00
159.566 -9.635 12.0 6.8 2001/12/23 22:52:54
125.749 6.282 140.1 6.3 2002/01/01 11:29:23
170.400 -15.600 10.0 7.0 2002/01/02 17:22:51
167.853 -17.668 53.7 7.1 2002/01/02 17:22:53
70.679 36.039 115.0 6.2 2002/01/03 07:05:26
167.982 -17.693 31.5 6.4 2002/01/03 10:17:40
142.406 -3.261 11.0 6.6 2002/01/10 11:14:57
-93.154 15.541 79.5 6.4 2002/01/16 23:09:52
-93.200 22.500 80.0 6.1 2002/01/16 23:10:19
26.627 35.574 94.6 6.2 2002/01/22 04:53:52
155.613 49.376 52.7 6.0 2002/01/28 13:50:31
31.202 38.520 22.1 6.2 2002/02/03 07:11:31
151.309 -5.742 58.2 6.3 2002/02/28 01:50:51
70.450 36.472 194.7 6.6 2002/03/03 12:08:07
70.517 36.496 208.9 7.3 2002/03/03 12:08:18
124.273 6.032 33.0 7.2 2002/03/05 21:16:10
129.888 -6.507 166.3 6.1 2002/03/19 22:14:17
69.269 36.008 33.0 6.0 2002/03/25 14:56:38
124.044 23.295 33.0 6.4 2002/03/26 03:45:49
122.184 24.270 33.0 7.1 2002/03/31 06:52:51
167.724 -14.428 10.0 6.2 2002/04/11 21:56:57
-100.935 16.984 19.7 6.1 2002/04/18 05:02:46
144.688 13.032 69.1 7.1 2002/04/26 16:06:05
121.889 24.689 8.5 6.2 2002/05/15 03:46:06
148.399 -0.929 34.2 6.3 2002/06/06 23:53:52
140.772 10.981 31.6 6.1 2002/06/10 22:48:36
-83.956 8.921 47.1 6.4 2002/06/16 02:46:16
166.423 -12.659 54.5 6.6 2002/06/17 21:26:26
146.838 -4.536 33.0 6.0 2002/06/21 00:05:45
49.022 35.589 10.0 6.5 2002/06/22 02:58:21

167.047 -13.337 203.1 6.0 2002/06/27 07:16:12
130.665 43.763 568.0 7.3 2002/06/28 17:19:31
166.541 -12.480 66.0 6.2 2002/06/29 02:39:05
147.374 -5.120 33.0 6.2 2002/07/03 23:00:18
-82.807 7.940 10.0 6.5 2002/07/31 00:16:45
139.115 29.186 425.4 6.3 2002/08/02 23:11:39
-82.887 7.854 10.0 6.0 2002/08/07 23:59:15
-176.119 -16.379 350.5 6.1 2002/08/09 13:31:04
136.960 7.761 10.0 6.3 2002/08/14 13:12:40
146.278 14.036 54.5 6.4 2002/08/14 13:57:55
121.337 -1.288 36.7 6.1 2002/08/15 05:30:30
-179.464 -21.700 587.7 7.6 2002/08/19 11:01:02
178.454 -23.868 649.9 7.7 2002/08/19 11:08:22
142.026 31.024 5.0 6.3 2002/08/20 10:59:32
146.132 43.054 38.3 6.1 2002/08/24 18:40:53
142.915 -3.297 13.0 7.2 2002/09/08 18:44:24
93.105 13.005 21.0 6.5 2002/09/13 22:28:29
130.042 44.763 574.3 6.4 2002/09/15 08:39:31
142.659 -3.304 10.0 6.3 2002/09/16 13:23:01
142.748 -3.285 10.0 6.0 2002/09/17 11:20:23
134.310 -1.696 10.0 6.3 2002/09/20 15:43:36
161.171 -10.645 10.0 6.2 2002/09/24 22:54:21
161.290 -10.658 11.2 6.3 2002/09/24 23:01:28
-108.496 23.304 10.0 6.4 2002/10/03 16:08:30
-178.968 -20.980 628.4 6.3 2002/10/04 19:05:50
134.258 -1.751 24.8 7.4 2002/10/10 10:50:22
-71.670 -8.316 516.4 6.9 2002/10/12 20:09:10
118.517 15.106 31.1 6.1 2002/10/12 23:43:12
142.246 41.164 58.2 6.1 2002/10/14 14:12:43
157.264 51.868 123.3 6.2 2002/10/16 10:12:23
-173.065 -15.684 0.6 6.0 2002/10/16 14:13:08
149.872 44.161 33.0 6.2 2002/10/19 12:09:05
-178.413 -20.672 555.4 6.2 2002/10/22 11:39:05
148.656 -3.447 6.4 6.0 2002/10/31 01:35:16
96.115 2.979 31.0 7.4 2002/11/02 01:26:12
141.962 38.909 57.2 6.4 2002/11/03 03:37:44
145.994 47.771 483.9 7.3 2002/11/17 04:53:55
74.592 35.346 13.0 6.0 2002/11/20 21:32:27
179.255 -24.195 531.4 6.1 2002/12/10 04:27:55
135.133 -3.876 20.6 6.3 2002/12/11 03:49:41
153.303 -4.828 52.1 6.7 2002/12/12 08:30:45
147.955 -3.063 33.0 6.3 2002/12/20 14:14:41
123.277 7.316 16.8 6.2 2002/12/30 04:49:10
-177.628 -20.648 390.4 6.5 2003/01/04 05:15:05

119.497 15.661 2.8 6.0 2003/01/06 23:43:50
153.686 -5.281 70.7 6.7 2003/01/10 13:11:57
160.806 -10.530 43.4 7.2 2003/01/20 08:43:08
-90.957 13.641 62.2 6.5 2003/01/21 02:46:52
-104.081 18.896 27.4 7.6 2003/01/22 02:06:36
149.812 -5.982 33.0 6.2 2003/02/10 04:49:31
144.259 -3.676 24.0 6.2 2003/02/12 22:33:33
124.039 12.200 3.0 6.2 2003/02/15 11:01:59
77.211 39.517 26.2 6.3 2003/02/24 02:03:43
134.333 -1.744 35.5 6.0 2003/03/01 06:12:48
127.275 1.704 106.7 6.4 2003/03/10 02:09:38
153.220 -4.702 35.9 6.6 2003/03/11 07:27:32
-173.482 -15.360 42.5 6.1 2003/03/28 17:31:48
127.496 -3.226 32.0 6.2 2003/03/30 18:13:33
151.439 -6.186 32.9 6.1 2003/03/31 01:06:51
-35.717 35.259 10.0 6.1 2003/04/02 03:43:12
-82.356 6.997 0.1 6.2 2003/04/11 06:12:53
96.505 37.517 15.0 6.2 2003/04/17 00:48:39
154.976 48.749 41.2 6.0 2003/04/24 10:56:22
169.736 -20.847 83.6 6.2 2003/04/27 16:03:42
-71.577 -8.168 554.3 6.0 2003/04/27 22:57:45
147.792 43.632 57.3 6.0 2003/04/29 13:53:17
40.464 38.999 10.0 6.4 2003/05/01 00:27:05
-173.717 -15.214 32.8 6.2 2003/05/03 05:03:03
-178.267 -30.880 57.3 6.7 2003/05/04 13:15:17
127.358 0.194 126.5 6.4 2003/05/05 15:50:09
128.010 3.645 61.6 6.2 2003/05/05 23:04:46
167.692 -17.291 33.3 6.3 2003/05/13 21:21:14
-58.628 18.360 20.3 6.7 2003/05/14 06:03:34
-178.639 -18.118 548.3 6.0 2003/05/19 10:43:21
-105.469 17.625 10.0 6.1 2003/05/19 16:27:11
3.660 36.985 13.4 6.7 2003/05/21 18:44:20
141.525 38.869 71.2 7.0 2003/05/26 09:24:34
128.916 2.358 42.4 6.8 2003/05/26 19:23:29
123.807 6.771 586.9 6.8 2003/05/26 23:13:31
152.526 -5.113 7.4 6.5 2003/06/07 00:32:41
154.798 -6.001 184.4 6.3 2003/06/12 08:59:20
-71.713 -7.625 572.0 7.0 2003/06/20 06:19:40
123.899 12.332 9.2 6.0 2003/06/26 14:11:45
146.215 -3.429 10.0 6.2 2003/06/28 15:29:42
122.644 4.587 617.1 6.0 2003/07/01 05:52:24
152.273 -3.895 33.0 6.5 2003/07/15 18:46:38
148.807 -5.502 196.6 6.4 2003/07/21 13:53:60
101.260 25.971 10.0 6.0 2003/07/21 15:16:32

166.173 -15.382 30.3 6.0 2003/07/22 04:21:41
149.681 -1.561 37.8 6.4 2003/07/25 09:37:48
-176.557 -21.119 211.2 6.6 2003/07/27 02:04:11
139.215 47.105 467.5 6.8 2003/07/27 06:25:32
128.281 1.162 45.0 6.0 2003/08/11 00:19:14
93.497 12.125 100.3 6.0 2003/08/11 21:22:30
20.565 38.992 12.0 6.2 2003/08/14 05:14:54
167.215 -14.782 136.2 6.0 2003/08/30 00:05:39
132.316 43.397 467.3 6.2 2003/08/31 23:07:59
-173.170 -15.292 10.0 6.4 2003/09/02 18:28:00
-106.006 -4.550 10.0 6.1 2003/09/06 02:08:14
172.058 -22.440 49.5 6.3 2003/09/07 13:19:23
151.500 -5.266 51.4 6.0 2003/09/12 06:55:56
95.635 19.874 4.5 6.6 2003/09/21 18:16:13
-70.660 19.798 10.0 6.4 2003/09/22 04:45:37
143.872 41.749 33.0 8.1 2003/09/25 19:50:07
144.531 41.975 12.2 6.0 2003/09/26 20:38:19
87.779 50.009 16.0 7.3 2003/09/27 11:33:25
87.763 50.087 4.0 6.4 2003/09/27 18:52:46
144.374 42.397 41.1 6.4 2003/09/29 02:36:55
87.707 50.160 17.7 6.7 2003/10/01 01:03:26
-170.198 -16.509 10.0 6.2 2003/10/07 04:55:29
144.547 42.590 45.2 6.6 2003/10/08 09:06:57
119.983 13.726 51.6 6.2 2003/10/09 22:19:16
-178.694 -17.839 552.3 6.0 2003/10/15 02:19:42
154.179 -5.504 150.2 6.4 2003/10/17 10:19:09
126.106 0.492 51.0 6.3 2003/10/18 22:27:15
147.763 -6.066 45.6 6.3 2003/10/22 11:45:30
142.614 37.854 23.0 7.0 2003/10/31 01:06:31
-77.694 5.072 33.0 6.0 2003/11/05 00:58:52
168.890 -19.279 119.7 6.6 2003/11/06 10:38:05
143.370 22.374 108.9 6.0 2003/11/11 18:48:25
126.457 1.515 49.1 6.0 2003/11/12 00:29:47
137.052 33.242 381.8 6.4 2003/11/12 08:26:44
125.470 12.106 47.9 6.5 2003/11/18 17:14:24
150.951 -5.664 63.0 6.6 2003/11/25 20:19:50
165.758 55.586 9.9 6.7 2003/12/05 21:26:10
121.384 23.099 27.6 6.8 2003/12/10 04:38:15
-121.055 35.665 10.0 6.4 2003/12/22 19:15:57
-82.816 8.364 33.4 6.5 2003/12/25 07:11:12
169.540 -22.153 6.4 6.4 2003/12/25 20:42:34
169.556 -22.303 10.8 6.0 2003/12/25 23:09:44
58.304 28.965 15.0 6.5 2003/12/26 01:56:53
169.348 -22.275 10.0 6.7 2003/12/26 21:26:04

169.403 -22.075 15.0 6.0 2003/12/27 04:55:26
169.733 -21.891 10.0 7.2 2003/12/27 16:01:00
169.830 -21.622 10.6 6.7 2003/12/27 22:38:03
144.643 42.387 29.4 6.0 2003/12/29 01:30:54
-101.358 17.594 27.3 6.0 2004/01/01 23:31:49
169.660 -22.304 9.4 6.8 2004/01/03 16:23:18
-179.134 -20.204 661.8 6.0 2004/01/11 09:29:08
151.067 -3.525 2.4 6.2 2004/01/15 07:26:51
-174.170 -16.845 129.6 6.7 2004/01/25 11:43:10
127.320 -3.107 17.4 6.7 2004/01/28 22:15:29
135.522 -3.645 28.3 6.8 2004/02/05 21:05:03
135.088 -4.030 15.0 7.3 2004/02/07 02:42:34
135.371 -3.701 13.7 6.5 2004/02/08 08:58:49
166.389 -11.644 76.6 6.0 2004/02/20 05:58:43
-175.545 -14.823 15.3 6.3 2004/02/23 16:04:45
-3.998 35.263 8.9 6.4 2004/02/24 02:27:46
-86.982 11.666 65.1 6.1 2004/03/02 03:47:25
-178.201 -33.020 66.9 6.0 2004/03/07 11:08:07
-172.264 -17.275 12.0 6.1 2004/03/14 16:30:41
23.387 34.661 14.7 6.1 2004/03/17 05:20:58
-176.007 -23.959 10.0 6.0 2004/03/18 20:04:23
89.182 33.989 9.0 6.0 2004/03/27 18:47:28
-173.887 -20.533 8.0 6.2 2004/04/05 20:34:20
71.003 36.558 168.5 6.6 2004/04/05 21:24:01
167.165 -13.169 231.1 6.5 2004/04/09 15:23:34
140.165 -3.762 33.0 6.0 2004/04/11 07:37:30
144.948 42.769 49.9 6.1 2004/04/11 18:06:11
-174.515 -17.889 143.4 6.0 2004/04/14 01:33:04
-7.740 71.046 10.5 6.0 2004/04/14 23:07:38
169.609 -19.378 10.0 6.3 2004/04/15 20:06:54
-175.710 -24.845 17.0 6.0 2004/04/16 16:58:36
146.952 -3.353 20.5 6.0 2004/04/22 14:16:03
122.733 -9.547 88.1 6.7 2004/04/23 01:50:30
-174.716 -21.959 4.3 6.1 2004/04/24 07:44:09
-86.112 10.720 53.2 6.2 2004/04/29 00:57:25
170.190 -21.928 16.7 6.2 2004/05/07 01:26:42
97.833 0.418 23.1 6.1 2004/05/11 08:28:47
150.705 -3.619 6.0 6.2 2004/05/13 09:58:41
121.465 22.687 26.2 6.1 2004/05/19 07:04:12
51.588 36.321 17.0 6.2 2004/05/28 12:38:43
141.429 34.173 35.3 6.5 2004/05/29 20:56:11
159.993 55.698 187.4 6.9 2004/06/10 15:19:56
130.394 -6.770 72.7 6.1 2004/06/25 02:35:07
-87.175 10.641 9.0 6.1 2004/06/29 07:01:29

124.770 0.709 96.7 6.3 2004/06/30 23:37:24
151.371 47.164 123.2 6.4 2004/07/08 10:30:47
83.666 30.719 8.1 6.2 2004/07/11 23:08:42
-178.767 -17.705 560.0 7.0 2004/07/15 04:27:13
128.849 26.503 33.0 6.1 2004/07/22 09:45:15
103.975 -2.493 581.9 7.3 2004/07/25 14:35:18
133.102 -0.520 30.9 6.4 2004/07/28 03:56:30
70.763 36.418 206.5 6.0 2004/08/10 01:47:31
-173.375 -15.211 15.8 6.2 2004/09/03 19:04:48
136.735 33.071 18.7 7.0 2004/09/05 10:07:07
137.073 33.206 10.0 7.4 2004/09/05 14:57:17
137.129 33.207 1.2 6.1 2004/09/05 14:57:28
137.294 33.200 16.6 6.5 2004/09/06 23:29:35
137.188 33.197 30.4 6.1 2004/09/08 14:58:26
-81.527 17.760 26.6 6.0 2004/09/09 16:33:20
151.413 43.982 0.1 6.1 2004/09/13 03:00:10
120.371 14.255 108.9 6.0 2004/09/15 19:10:49
134.546 -0.703 17.6 6.1 2004/10/06 22:30:56
162.118 -10.937 38.0 6.8 2004/10/08 08:27:52
120.589 13.892 121.2 6.5 2004/10/08 14:36:07
-86.708 11.415 58.1 6.8 2004/10/09 21:26:55
122.771 24.534 99.8 6.7 2004/10/15 04:08:50
166.574 -14.035 59.8 6.0 2004/10/20 18:32:23
138.771 37.303 8.5 6.4 2004/10/23 08:55:59
138.897 37.336 23.0 6.0 2004/10/23 09:34:06
143.916 -4.359 120.1 6.0 2004/11/05 05:18:33
144.479 47.961 465.4 6.2 2004/11/07 02:02:25
122.524 24.023 40.1 6.2 2004/11/08 15:55:01
163.664 -11.186 25.3 6.9 2004/11/09 23:58:24
144.352 42.033 41.4 6.1 2004/11/11 10:02:47
162.175 -11.174 29.5 6.7 2004/11/11 17:34:54
124.744 -8.149 23.1 7.4 2004/11/11 21:26:42
-77.470 4.742 15.0 7.2 2004/11/15 09:06:55
151.423 -5.629 45.7 6.0 2004/11/16 10:06:52
-178.716 -20.053 592.2 6.6 2004/11/17 21:09:10
-61.679 15.733 21.2 6.3 2004/11/21 11:41:07
135.410 -3.654 5.1 7.0 2004/11/26 02:25:00
-113.963 -26.705 10.0 6.5 2004/11/28 02:35:10
135.456 -3.710 38.8 6.2 2004/11/28 07:36:46
145.209 42.902 42.8 7.0 2004/11/28 18:32:13
145.247 42.773 36.1 6.8 2004/12/06 14:15:10
-81.399 18.980 9.4 6.8 2004/12/14 23:20:12
156.368 48.870 16.1 6.2 2004/12/18 06:46:19
95.901 3.412 26.1 8.2 2004/12/26 00:58:52

94.114 9.841 0.0 6.6 2004/12/26 01:06:11
92.284 8.948 16.7 6.0 2004/12/26 09:20:01
94.613 5.305 30.2 6.1 2004/12/27 09:39:05
92.324 5.018 12.4 6.5 2005/01/01 06:25:43
94.307 7.333 49.9 6.1 2005/01/01 19:08:06
92.760 6.331 38.0 6.1 2005/01/02 15:35:56
95.061 4.838 42.4 6.1 2005/01/09 22:12:55
-176.210 -26.014 11.9 6.2 2005/01/16 08:25:01
140.903 10.875 51.7 6.6 2005/01/16 20:17:55
140.777 10.911 44.9 6.1 2005/01/17 10:50:36
144.917 42.824 50.3 6.3 2005/01/18 14:09:05
141.535 33.963 12.7 6.4 2005/01/19 06:11:32
-80.964 -1.150 33.0 6.0 2005/01/21 13:45:16
159.512 -7.782 36.3 6.4 2005/01/22 20:30:17
119.877 -1.268 44.4 6.1 2005/01/23 20:10:15
92.537 7.338 40.0 6.3 2005/01/24 04:16:47
144.783 14.036 155.1 6.2 2005/02/02 02:30:24
146.039 16.003 148.0 6.5 2005/02/05 03:34:25
123.436 5.290 540.4 7.0 2005/02/05 12:23:19
153.169 -4.562 62.0 6.1 2005/02/07 20:02:19
167.260 -14.318 214.9 6.7 2005/02/08 14:48:21
95.123 4.746 48.0 6.0 2005/02/09 13:27:24
144.064 26.125 17.3 6.3 2005/02/09 18:46:08
169.179 -23.154 28.9 6.3 2005/02/10 16:53:22
79.342 41.669 31.4 6.0 2005/02/14 23:38:08
126.514 4.747 35.9 6.4 2005/02/15 14:42:24
122.137 -5.602 13.9 6.5 2005/02/19 00:04:42
56.807 30.770 13.0 6.3 2005/02/22 02:25:21
95.600 2.902 29.4 6.8 2005/02/26 12:56:50
129.880 -6.566 197.6 7.1 2005/03/02 10:42:09
99.716 84.916 2.9 6.2 2005/03/06 05:21:40
61.904 27.084 51.8 6.0 2005/03/13 03:31:21
-91.433 15.226 197.4 6.1 2005/03/17 13:37:36
-174.284 -20.508 31.3 6.0 2005/03/19 15:02:43
130.249 33.752 9.0 6.4 2005/03/20 01:53:41
129.899 -4.972 24.5 6.1 2005/03/26 15:40:35
97.113 2.096 30.0 8.1 2005/03/28 16:09:35
95.489 2.979 27.3 6.3 2005/03/30 16:19:40
6.216 78.621 10.0 6.1 2005/04/02 12:52:35
98.339 0.389 37.9 6.0 2005/04/03 00:59:21
97.965 2.004 46.6 6.3 2005/04/03 03:10:56
83.655 30.517 14.7 6.2 2005/04/07 20:04:40
99.575 -1.641 26.3 6.5 2005/04/10 10:29:11
96.731 2.185 28.6 6.1 2005/04/11 06:11:11

145.995 -3.472 17.0 6.4 2005/04/11 12:20:05
170.551 -21.934 73.4 6.7 2005/04/11 17:08:54
97.684 1.847 37.8 6.3 2005/04/16 16:38:03
96.837 2.157 29.0 6.2 2005/04/28 14:07:33
-82.658 6.307 10.0 6.3 2005/05/05 19:12:23
103.161 -6.222 21.8 6.2 2005/05/10 01:09:04
98.424 0.536 35.5 6.7 2005/05/14 05:05:17
-179.305 -32.662 38.9 6.6 2005/05/16 03:54:15
-173.154 -15.368 12.6 6.0 2005/05/18 10:27:05
97.058 2.020 29.9 6.7 2005/05/19 01:54:51
-80.946 -3.233 39.7 6.3 2005/05/21 05:11:34
146.828 -6.314 26.0 6.1 2005/06/04 14:50:45
96.744 2.183 30.0 6.1 2005/06/08 06:28:10
-69.216 -19.917 111.9 7.8 2005/06/13 22:44:32
-125.585 41.447 18.0 7.1 2005/06/15 02:50:56
153.188 -4.596 76.7 6.2 2005/06/15 10:13:58
-126.474 40.754 12.0 6.6 2005/06/17 06:21:41
-107.238 18.932 16.1 6.2 2005/06/27 11:35:45
-86.383 11.184 78.6 6.5 2005/07/02 02:16:48
97.126 1.811 34.5 6.5 2005/07/05 01:52:03
-176.358 -26.968 13.6 6.0 2005/07/11 23:06:02
-178.097 -30.357 58.1 6.0 2005/07/23 08:51:49
92.146 7.907 17.5 7.1 2005/07/24 15:42:05
-85.503 11.302 14.4 6.2 2005/08/03 11:03:14
-177.229 -14.413 10.5 6.0 2005/08/07 11:35:25
173.769 -20.988 13.8 6.1 2005/08/09 05:26:15
173.949 -21.192 35.2 6.0 2005/08/09 14:12:20
170.126 -21.991 18.6 6.2 2005/08/11 09:08:51
142.114 38.201 37.8 7.0 2005/08/16 02:46:27
142.972 38.494 58.5 6.1 2005/08/24 10:15:33
-82.434 6.878 10.0 6.1 2005/08/27 18:38:20
143.201 38.434 9.1 6.1 2005/08/30 18:10:42
123.175 2.939 435.6 6.0 2005/09/04 23:58:33
153.479 -4.561 93.8 7.4 2005/09/09 07:26:43
146.233 43.883 102.2 6.1 2005/09/21 02:25:07
167.772 -17.524 30.0 6.1 2005/09/25 12:55:45
-76.476 -5.736 129.1 7.5 2005/09/26 01:55:38
151.833 -5.433 35.8 6.5 2005/09/29 15:50:24
151.839 -5.566 32.5 6.1 2005/09/29 18:23:25
73.640 34.524 7.9 7.3 2005/10/08 03:50:36
73.144 34.720 13.9 6.2 2005/10/08 10:46:28
154.179 46.838 42.7 6.0 2005/10/15 10:06:16
123.435 25.296 200.4 6.4 2005/10/15 15:51:08
140.945 36.374 43.0 6.3 2005/10/19 11:44:43

148.215 -3.203 32.3 6.3 2005/11/05 10:48:21
144.879 38.047 14.2 6.8 2005/11/14 21:38:51
130.122 30.983 145.8 6.1 2005/11/21 15:36:30
124.040 6.225 36.8 6.2 2005/11/30 16:53:44
142.180 38.059 38.4 6.4 2005/12/02 13:13:09
-177.618 -30.269 35.2 6.3 2005/12/07 23:32:52
146.988 -5.456 222.0 6.1 2005/12/08 09:01:27
152.197 -6.598 14.4 6.5 2005/12/11 14:20:43
71.104 36.406 223.9 6.5 2005/12/12 21:47:45
-178.588 -15.321 33.0 6.7 2005/12/13 03:16:08
141.069 12.211 23.0 6.1 2005/12/20 05:51:11
124.713 -0.156 86.3 6.2 2005/12/21 07:09:10
-77.590 -1.404 193.0 6.1 2005/12/23 21:47:27
-82.286 7.680 29.6 6.1 2005/12/30 18:26:46
-178.110 -19.974 584.1 7.1 2006/01/02 22:13:41
-112.126 28.230 14.1 6.5 2006/01/04 08:32:33
23.269 36.275 58.4 6.7 2006/01/08 11:34:55
-77.780 6.886 23.8 6.2 2006/01/23 20:50:47
128.194 -5.448 403.6 7.5 2006/01/27 16:58:54
-178.284 -17.831 599.6 6.7 2006/02/02 12:48:44
92.413 11.860 25.0 6.0 2006/02/03 20:34:12
146.211 20.932 48.9 6.2 2006/02/14 15:27:25
152.105 -5.236 56.4 6.2 2006/02/18 15:59:24
-179.527 -18.039 622.9 6.0 2006/02/24 14:15:46
-179.949 -23.668 534.3 6.4 2006/02/26 03:08:28
-176.265 -15.268 34.1 6.0 2006/02/26 04:18:43
56.830 28.105 31.1 6.0 2006/02/28 07:31:04
-175.595 -20.206 210.0 6.0 2006/03/05 08:07:57
167.361 -14.846 138.9 6.2 2006/03/07 06:28:56
127.309 -3.561 32.8 6.7 2006/03/14 06:57:34
143.214 -3.262 50.4 6.1 2006/03/24 12:27:11
174.497 -16.859 40.6 6.0 2006/03/24 17:46:55
-176.815 -29.684 24.8 6.5 2006/03/31 13:21:01
126.494 3.797 43.6 6.2 2006/03/31 21:14:46
121.279 22.925 10.3 6.1 2006/04/01 10:02:20
176.999 -16.564 13.5 6.4 2006/04/07 08:30:44
166.395 -12.544 30.8 6.0 2006/04/17 23:50:00
97.029 1.999 33.3 6.1 2006/04/25 18:26:19
167.397 -15.107 134.1 6.1 2006/04/30 08:17:36
-174.145 -20.163 53.5 7.9 2006/05/03 15:26:40
-173.949 -20.669 27.4 6.0 2006/05/04 11:25:29
-179.155 -31.844 156.0 7.4 2006/05/16 10:39:24
97.106 0.116 30.7 6.8 2006/05/16 15:28:29
-173.829 -20.723 11.1 6.0 2006/05/17 03:06:16

124.854 -0.304 58.5 6.1 2006/05/19 14:44:27
158.414 54.332 190.1 6.2 2006/05/22 13:08:02
126.980 -4.804 16.5 6.1 2006/05/22 20:53:60
110.274 -8.083 19.9 6.3 2006/05/26 22:54:01
151.201 -5.708 43.9 6.4 2006/05/28 03:12:11
-178.625 -20.945 592.0 6.0 2006/06/02 07:31:37
121.170 17.383 6.0 6.5 2006/06/11 09:25:04
131.252 33.195 143.2 6.3 2006/06/11 20:01:27
149.313 45.416 106.1 6.0 2006/06/22 10:53:13
123.343 -0.407 37.6 6.3 2006/06/24 21:15:03
-173.573 -15.286 37.5 6.0 2006/07/07 07:26:12
107.424 -9.318 20.0 7.2 2006/07/17 08:19:26
150.716 -5.514 28.3 6.3 2006/07/19 11:48:59
97.123 1.706 31.8 6.0 2006/07/27 11:16:42
167.817 -15.841 148.5 6.8 2006/08/07 22:18:56
-101.070 18.539 60.4 6.1 2006/08/11 14:30:41
96.366 2.382 30.2 6.1 2006/08/11 20:54:16
-176.205 -21.356 160.5 6.1 2006/08/15 23:53:47
157.398 51.175 54.2 6.5 2006/08/24 21:50:38
155.536 -6.775 48.7 6.8 2006/09/01 10:18:53
129.540 -3.058 25.3 6.3 2006/09/16 09:45:25
153.333 46.492 18.0 6.0 2006/09/28 01:36:49
-172.020 -16.616 40.0 6.9 2006/09/28 06:22:12
-61.745 10.866 55.4 6.1 2006/09/29 13:08:27
153.145 46.314 20.6 6.6 2006/09/30 17:50:24
153.207 46.467 20.7 6.5 2006/10/01 09:06:03
169.022 -18.930 169.2 6.3 2006/10/03 18:03:15
120.074 20.744 18.4 6.3 2006/10/09 10:01:49
-156.119 19.880 5.0 6.7 2006/10/15 17:07:46
151.024 -5.904 34.2 6.7 2006/10/17 01:25:13
140.344 29.470 31.1 6.4 2006/10/23 21:17:24
150.846 -6.450 18.4 6.6 2006/11/07 17:38:38
151.000 -6.263 38.0 6.2 2006/11/12 18:21:30
151.186 -6.418 25.7 6.2 2006/11/13 16:12:32
153.211 46.681 12.2 8.3 2006/11/15 11:14:15
154.922 47.005 14.7 6.0 2006/11/15 19:25:27
154.467 46.367 18.5 6.0 2006/11/16 06:20:22
129.897 28.616 25.2 6.2 2006/11/17 18:03:13
128.454 2.573 42.2 6.2 2006/11/29 01:32:19
-174.594 -21.492 13.8 6.0 2006/11/30 11:33:17
154.375 46.181 16.9 6.4 2006/12/07 19:10:22
124.890 3.697 215.0 6.3 2006/12/12 15:48:04
92.405 10.696 31.0 6.2 2006/12/22 19:50:46
120.545 21.864 6.6 7.0 2006/12/26 12:26:21

120.498 22.030 30.2 6.9 2006/12/26 12:34:17
154.773 48.400 23.1 6.0 2006/12/26 15:19:47
70.309 39.823 18.4 6.0 2007/01/08 17:21:50
127.345 -3.615 43.3 6.0 2007/01/11 14:31:25
154.503 46.231 22.5 8.1 2007/01/13 04:23:23
156.252 46.944 15.3 6.0 2007/01/13 17:37:08
139.884 -3.282 104.9 6.0 2007/01/17 04:28:27
126.362 1.082 23.5 7.5 2007/01/21 11:27:45
121.954 22.600 39.6 6.0 2007/01/25 10:59:18
144.766 21.170 51.7 6.6 2007/01/30 21:37:50
-10.244 35.918 30.4 6.0 2007/02/12 10:35:25
126.486 5.414 19.0 6.1 2007/02/12 12:45:29
143.514 41.801 33.0 6.0 2007/02/17 00:02:57
127.074 -1.029 27.7 6.7 2007/02/20 08:04:27
-80.446 -6.966 9.9 6.3 2007/02/24 02:36:22
133.510 43.227 441.4 6.0 2007/03/09 03:22:43
126.335 1.125 23.1 6.2 2007/03/17 17:42:25
-78.475 4.607 10.0 6.0 2007/03/17 22:43:10
-78.459 4.644 17.7 6.2 2007/03/18 02:11:08
169.346 -20.567 36.2 7.1 2007/03/25 00:40:03
136.569 37.333 2.5 6.7 2007/03/25 00:41:57
169.357 -20.748 34.6 6.9 2007/03/25 01:08:20
157.027 -8.447 9.5 8.1 2007/04/01 20:39:57
156.924 -9.493 35.0 6.1 2007/04/01 20:46:21
155.799 -7.173 17.4 6.6 2007/04/01 20:47:33
156.229 -7.310 49.1 6.0 2007/04/02 10:49:20
157.593 -8.693 11.5 6.2 2007/04/02 12:02:23
157.401 -8.618 13.3 6.2 2007/04/02 23:20:23
70.685 36.517 213.0 6.2 2007/04/03 03:35:07
155.826 -7.826 4.4 6.0 2007/04/03 12:04:27
168.987 -20.645 7.6 6.2 2007/04/03 20:26:10
156.081 -7.187 56.7 6.0 2007/04/04 00:39:51
156.516 -7.796 19.5 6.4 2007/04/04 06:34:37
168.970 -20.691 16.5 6.2 2007/04/04 11:00:28
169.039 -20.656 14.5 6.5 2007/04/04 11:02:30
-24.632 37.378 4.3 6.3 2007/04/05 03:56:49
-24.513 37.348 9.1 6.1 2007/04/07 07:09:26
-100.203 17.242 35.4 6.0 2007/04/13 05:42:23
125.115 25.663 30.4 6.1 2007/04/20 00:26:44
125.110 25.659 11.6 6.3 2007/04/20 01:45:57
151.351 -3.554 407.8 6.1 2007/04/21 07:12:48
166.740 -13.895 42.7 6.0 2007/04/21 17:20:33
166.853 -14.316 67.8 6.4 2007/04/25 13:34:16
82.034 34.269 14.2 6.1 2007/05/05 08:51:40

-179.329 -19.468 678.6 6.5 2007/05/06 21:11:53
100.758 20.575 1.3 6.3 2007/05/16 08:56:13
151.859 -4.598 134.3 6.1 2007/05/29 01:03:28
127.483 -1.024 24.1 6.0 2007/05/29 09:36:06
157.217 52.152 122.3 6.4 2007/05/30 20:22:14
101.024 23.065 11.6 6.1 2007/06/02 21:34:60
146.815 -3.343 22.2 6.2 2007/06/07 00:40:41
-90.570 13.716 66.0 6.7 2007/06/13 19:29:46
151.033 -3.576 23.4 6.3 2007/06/18 06:18:48
154.617 -7.965 17.9 6.7 2007/06/28 02:52:11
-93.541 16.617 121.9 6.1 2007/07/06 01:09:20
-74.325 -7.928 152.4 6.1 2007/07/12 05:23:50
168.616 -15.421 23.5 6.1 2007/07/15 09:27:37
138.482 37.557 7.4 6.6 2007/07/16 01:13:22
134.824 36.865 349.0 6.8 2007/07/16 14:17:38
-177.687 -26.246 28.9 6.1 2007/07/17 09:39:31
-177.696 -26.281 37.1 6.1 2007/07/18 00:07:40
-71.207 -8.086 633.7 6.0 2007/07/21 13:27:04
92.507 7.099 27.7 6.0 2007/07/25 23:37:33
127.568 2.886 39.8 6.9 2007/07/26 05:40:18
170.978 -21.497 22.2 6.1 2007/07/27 14:46:30
167.699 -15.675 149.5 7.2 2007/08/01 17:08:55
141.791 46.951 21.1 6.2 2007/08/02 02:37:45
-105.407 -4.750 10.0 6.1 2007/08/04 14:24:52
126.845 27.335 10.2 6.0 2007/08/07 00:02:23
107.584 -6.089 293.8 7.5 2007/08/08 17:04:58
107.451 -5.891 295.8 7.4 2007/08/08 17:05:07
166.238 -11.342 43.1 6.0 2007/08/12 12:05:20
-76.555 -13.384 41.2 8.0 2007/08/15 23:40:58
-76.092 -14.278 24.7 6.4 2007/08/16 05:16:57
159.462 -9.829 9.5 6.5 2007/08/16 08:39:28
-76.201 -14.254 31.8 6.0 2007/08/16 11:35:42
129.467 -5.283 42.4 6.4 2007/08/17 03:04:07
-76.297 -13.809 33.4 6.0 2007/08/18 02:52:36
127.446 6.110 23.8 6.4 2007/08/20 13:46:20
-39.249 8.125 0.7 6.5 2007/08/20 22:42:28
-174.326 -17.475 128.3 6.1 2007/08/26 12:37:31
-109.664 24.988 9.8 6.1 2007/09/01 19:14:24
165.820 -11.589 37.5 7.2 2007/09/02 01:05:19
165.731 -11.825 33.0 6.3 2007/09/02 02:35:23
150.097 45.802 100.6 6.2 2007/09/03 16:14:54
122.254 24.339 58.2 6.2 2007/09/06 17:51:27
-77.900 3.000 29.0 6.8 2007/09/10 01:49:14
101.396 -4.464 35.5 8.5 2007/09/12 11:10:27

100.726 -2.616 36.0 7.9 2007/09/12 23:49:04
126.458 3.794 24.4 6.3 2007/09/13 09:48:44
153.445 -5.038 31.8 6.8 2007/09/26 12:36:27
169.384 -21.142 19.9 6.1 2007/09/27 19:57:47
169.393 -21.242 14.4 6.3 2007/09/28 01:01:50
142.705 22.010 253.5 7.5 2007/09/28 13:38:58
145.799 10.535 18.5 7.0 2007/09/30 02:08:31
147.167 18.761 62.1 6.1 2007/10/06 12:38:55
154.182 46.063 14.2 6.1 2007/10/25 13:50:04
145.380 18.958 221.9 7.2 2007/10/31 03:30:18
-69.780 -22.321 33.6 7.7 2007/11/14 15:40:50
-77.794 -2.339 123.6 6.8 2007/11/16 03:13:00
-178.673 -21.212 558.9 6.3 2007/11/19 00:52:13
147.098 -5.811 77.1 6.8 2007/11/22 08:48:31
118.526 -8.226 31.6 6.5 2007/11/25 19:53:08
162.211 -10.983 37.1 6.6 2007/11/27 11:50:01
-61.224 14.995 147.3 7.4 2007/11/29 19:00:20
-177.364 -26.096 149.8 7.8 2007/12/09 07:28:21
-172.321 -15.275 33.3 6.2 2007/12/13 15:51:30
22.704 37.257 83.8 6.2 2008/01/06 05:14:21
85.255 32.404 27.7 6.4 2008/01/09 08:26:49
-126.909 43.835 10.0 6.3 2008/01/10 01:37:21
127.816 -7.263 38.3 6.1 2008/01/30 07:32:48
-41.902 10.725 4.1 6.9 2008/02/08 09:38:14
-94.243 16.431 85.7 6.5 2008/02/12 12:50:20
21.670 36.517 31.5 6.9 2008/02/14 10:09:23
95.964 2.763 31.4 7.3 2008/02/20 08:08:31
18.569 77.061 10.5 6.1 2008/02/21 02:46:18
-114.876 41.100 10.0 6.0 2008/02/21 14:16:04
99.920 -2.489 29.8 7.2 2008/02/25 08:36:34
99.806 -2.244 33.3 6.7 2008/02/25 21:02:20
142.445 26.879 35.3 6.2 2008/02/27 06:54:24
153.129 46.387 36.8 6.5 2008/03/03 09:31:07
121.340 20.012 34.6 6.0 2008/03/03 13:49:45
125.716 13.424 26.0 6.9 2008/03/03 14:11:15
167.402 -16.623 16.0 6.4 2008/03/12 11:23:34
142.547 27.047 38.8 6.0 2008/03/14 22:32:14
126.981 6.214 30.8 6.0 2008/03/20 14:10:39
81.506 35.549 10.0 7.1 2008/03/20 22:32:58
168.878 -20.177 9.6 6.3 2008/04/09 11:13:17
168.907 -20.038 31.4 7.3 2008/04/09 12:46:13
168.909 -20.350 24.0 6.0 2008/04/11 17:45:05
-179.009 -17.392 556.2 6.3 2008/04/18 20:39:08
168.812 -20.301 28.2 6.2 2008/04/19 05:58:44

121.745 22.939 1.9 6.0 2008/04/23 18:28:41
169.062 -19.808 34.3 6.4 2008/04/28 18:33:36
141.595 36.225 32.6 6.2 2008/05/07 16:02:05
141.738 36.205 29.7 6.1 2008/05/07 16:16:38
141.508 36.238 40.1 6.9 2008/05/07 16:45:21
143.265 12.531 89.2 6.8 2008/05/09 21:51:32
103.372 31.064 7.6 7.9 2008/05/12 06:27:60
105.377 32.603 14.0 6.1 2008/05/25 08:21:50
-20.987 63.956 10.0 6.3 2008/05/29 15:46:01
121.371 20.147 33.2 6.2 2008/06/01 01:57:24
161.305 -10.436 92.1 6.2 2008/06/03 16:20:52
21.449 37.961 15.8 6.2 2008/06/08 12:25:30
140.736 39.151 11.6 6.8 2008/06/13 23:43:47
-173.291 -20.786 37.7 6.1 2008/06/26 21:19:16
91.841 10.996 27.6 6.4 2008/06/27 11:40:16
91.727 10.867 27.9 6.1 2008/06/28 12:54:48
152.863 53.946 646.1 7.7 2008/07/05 02:12:06
128.374 27.560 49.9 6.0 2008/07/08 07:42:12
121.089 21.105 17.7 6.1 2008/07/13 14:58:34
27.804 35.923 64.9 6.3 2008/07/15 03:26:37
142.256 37.543 28.3 6.8 2008/07/19 02:39:30
164.527 -11.071 29.2 6.6 2008/07/19 09:27:05
164.628 -11.158 25.1 6.2 2008/07/19 11:01:20
-177.283 -17.399 389.2 6.3 2008/07/19 22:39:53
141.500 39.796 113.1 6.8 2008/07/23 15:26:21
157.512 50.928 45.3 6.1 2008/07/24 01:43:18
130.305 -5.926 188.5 6.3 2008/08/04 20:45:16
105.503 32.811 10.8 6.0 2008/08/05 09:49:18
91.825 11.024 29.1 6.1 2008/08/10 08:20:35
124.351 13.099 14.7 6.0 2008/08/15 10:25:18
83.652 31.061 25.5 6.7 2008/08/25 13:22:02
-74.369 -7.663 153.9 6.4 2008/08/26 21:00:37
104.144 51.657 10.0 6.3 2008/08/27 01:35:32
147.373 -6.139 67.6 6.4 2008/08/30 06:54:07
101.895 26.309 2.4 6.0 2008/08/30 08:30:52
166.985 -13.519 124.7 6.9 2008/09/08 18:52:09
-38.680 8.127 3.1 6.5 2008/09/10 13:08:14
127.447 1.887 97.3 6.5 2008/09/11 00:00:03
143.826 41.942 38.9 6.8 2008/09/11 00:20:53
-105.455 17.521 10.0 6.3 2008/09/24 02:33:05
-177.634 -30.097 35.0 6.9 2008/09/29 15:19:31
73.791 39.558 29.0 6.6 2008/10/05 15:52:50
90.379 29.844 6.4 6.1 2008/10/06 08:30:45
-92.335 14.541 83.5 6.4 2008/10/16 19:41:33

-173.799 -21.882 30.7 6.7 2008/10/19 05:10:34
145.602 -2.580 12.3 6.3 2008/10/23 10:04:37
67.375 30.593 18.8 6.3 2008/10/28 23:09:58
67.563 30.497 2.9 6.2 2008/10/29 11:32:42
-108.227 -9.193 10.0 6.0 2008/10/30 15:15:41
168.454 -17.127 211.3 6.2 2008/11/04 18:35:47
168.056 -14.882 10.0 6.2 2008/11/07 07:19:35
95.885 37.620 0.1 6.1 2008/11/10 01:21:60
122.163 1.352 28.1 7.3 2008/11/16 17:02:33
-82.902 8.326 44.6 6.1 2008/11/19 06:11:23
154.293 54.220 505.3 7.3 2008/11/24 09:03:00
-176.853 -31.266 26.1 6.6 2008/12/09 06:24:01
142.503 36.546 0.1 6.2 2008/12/20 10:29:20
-171.867 -17.267 6.9 6.0 2008/12/24 09:11:34
132.602 -0.527 31.1 7.4 2009/01/03 19:43:56
133.312 -0.709 34.4 7.2 2009/01/03 22:33:43
-84.216 10.215 10.7 6.1 2009/01/08 19:21:35
170.637 -22.260 22.2 6.4 2009/01/15 07:27:20
155.246 46.833 31.1 7.3 2009/01/15 17:49:38
-177.857 -30.227 31.5 6.3 2009/01/18 14:11:49
148.540 -6.054 48.0 6.0 2009/01/22 13:40:26
128.559 -7.319 149.5 6.1 2009/01/22 20:16:35
126.499 3.775 24.2 7.1 2009/02/11 17:34:51
126.479 3.976 35.5 6.0 2009/02/12 03:49:41
126.592 4.067 32.6 6.2 2009/02/12 13:15:07
-178.615 -30.750 30.9 6.0 2009/02/17 03:30:56
-176.236 -27.391 28.2 6.9 2009/02/18 21:53:46
-1.964 80.314 14.2 6.5 2009/03/06 10:50:30
-82.716 5.518 10.7 6.3 2009/03/12 23:23:34
126.622 3.725 34.0 6.3 2009/03/16 14:15:56
97.560 13.530 10.0 6.0 2009/03/18 12:21:03
-174.590 -23.156 30.9 7.6 2009/03/19 18:17:41
144.234 -3.530 16.8 6.4 2009/04/01 03:55:02
127.192 5.164 68.9 6.2 2009/04/04 05:31:58
13.319 42.370 14.1 6.3 2009/04/06 01:32:43
151.637 46.056 40.3 6.9 2009/04/07 04:23:34
100.456 -3.128 27.8 6.3 2009/04/15 20:01:35
151.397 46.053 50.8 6.6 2009/04/18 19:18:01
126.744 4.123 33.6 6.1 2009/04/19 05:23:27
155.188 50.727 157.2 6.2 2009/04/21 05:26:12
-178.506 -30.212 144.6 6.1 2009/04/26 00:06:55
-91.202 14.620 113.9 6.3 2009/05/03 16:21:46
-85.293 1.339 6.0 6.1 2009/05/10 01:16:06
149.574 -5.694 99.5 6.1 2009/05/12 01:26:28

-178.558 -31.449 32.5 6.5 2009/05/16 00:53:50
-86.243 16.808 29.0 7.3 2009/05/28 08:24:48
-86.600 20.280 10.0 6.7 2009/05/28 08:24:57
168.026 -17.781 34.6 6.3 2009/06/02 02:17:07
143.537 41.807 34.0 6.3 2009/06/05 03:30:34
-46.216 23.830 14.6 6.0 2009/06/06 20:33:29
167.845 -17.682 50.4 6.0 2009/06/12 09:44:20
126.707 4.675 33.0 6.5 2009/06/14 05:17:39
126.500 5.340 47.4 6.1 2009/06/14 05:58:45
153.708 -5.218 64.1 6.7 2009/06/23 14:19:18
153.819 -5.134 64.9 6.7 2009/06/23 14:19:23
25.540 34.147 13.7 6.4 2009/07/01 09:30:10
-79.022 9.752 48.6 6.1 2009/07/04 06:49:37
-72.691 75.343 15.2 6.0 2009/07/07 19:11:45
122.234 24.051 24.4 6.3 2009/07/13 18:05:03
150.616 -3.322 21.9 6.1 2009/07/15 20:10:44
132.954 -0.453 38.6 6.1 2009/08/02 08:54:36
-112.914 29.070 7.8 6.9 2009/08/03 17:59:56
-113.756 29.434 10.0 6.2 2009/08/03 18:40:50
125.165 24.303 31.1 6.1 2009/08/05 00:17:60
138.059 33.147 302.2 7.1 2009/08/09 10:55:56
166.229 -11.602 40.3 6.5 2009/08/10 04:06:31
92.868 14.052 30.7 7.5 2009/08/10 19:55:40
138.464 34.764 26.8 6.1 2009/08/10 20:07:07
140.428 32.813 61.8 6.6 2009/08/12 22:48:52
99.463 -1.467 40.1 6.7 2009/08/16 07:38:25
123.592 23.506 21.8 6.7 2009/08/17 00:05:49
123.615 23.445 17.8 6.1 2009/08/17 10:10:57
-178.263 -25.972 276.6 6.3 2009/08/18 21:20:49
0.951 72.209 9.5 6.0 2009/08/20 06:35:05
123.461 -7.202 640.1 6.9 2009/08/28 01:51:20
95.762 37.668 12.1 6.3 2009/08/28 01:52:06
-172.491 -15.222 14.3 6.6 2009/08/30 14:51:34
107.411 -7.735 57.8 7.0 2009/09/02 07:55:02
-178.810 -29.223 262.4 6.1 2009/09/02 18:00:10
130.183 31.180 167.2 6.2 2009/09/03 13:26:18
110.670 -10.115 32.1 6.2 2009/09/07 16:12:24
43.452 42.583 14.6 6.0 2009/09/07 22:41:37
154.352 48.265 58.7 6.0 2009/09/10 02:46:53
-67.913 10.716 19.6 6.4 2009/09/12 20:06:26
-112.314 -29.174 10.0 6.2 2009/09/17 23:21:39
91.460 27.369 16.1 6.1 2009/09/21 08:53:06
-107.209 18.811 30.2 6.4 2009/09/24 07:16:23
-171.937 -15.512 18.5 8.1 2009/09/29 17:48:12

-173.193 -15.368 29.0 6.0 2009/09/29 17:56:09
-172.538 -15.874 14.5 6.0 2009/09/29 23:45:04
99.968 -0.707 90.2 7.6 2009/09/30 10:16:11
101.565 -2.523 21.4 6.6 2009/10/01 01:52:30
-173.390 -16.371 14.1 6.1 2009/10/02 01:07:41
174.619 -17.095 32.2 6.0 2009/10/02 15:47:12
123.505 6.675 635.0 6.6 2009/10/04 10:58:01
122.538 4.087 586.8 6.8 2009/10/07 21:41:15
166.502 -13.036 33.7 7.6 2009/10/07 22:03:14
166.369 -12.474 59.0 7.8 2009/10/07 22:18:54
166.009 -12.576 40.0 6.8 2009/10/07 22:50:19
166.463 -13.084 32.9 7.4 2009/10/07 23:13:49
166.029 -13.324 40.1 6.7 2009/10/08 08:28:48
166.658 -12.325 39.9 6.0 2009/10/08 08:34:37
165.944 -11.349 37.0 6.1 2009/10/08 10:11:06
166.305 -12.921 17.7 6.0 2009/10/08 21:16:12
170.238 -22.076 34.5 6.0 2009/10/11 03:12:17
166.618 -12.475 56.9 6.2 2009/10/12 09:37:23
128.251 2.986 42.3 6.0 2009/10/13 11:38:07
-174.797 -14.940 12.3 6.2 2009/10/14 18:00:23
139.520 -3.109 110.0 6.0 2009/10/15 12:11:17
-103.878 3.288 10.0 6.0 2009/10/15 17:48:22
105.241 -6.515 54.6 6.1 2009/10/16 09:52:53
-172.086 -15.331 14.4 6.0 2009/10/19 22:49:38
-82.653 6.754 21.3 6.0 2009/10/22 00:51:40
71.012 36.519 188.6 6.1 2009/10/22 19:51:28
130.429 -6.116 140.3 6.9 2009/10/24 14:40:45
-179.101 -23.035 413.0 6.0 2009/10/25 07:53:52
70.768 36.382 213.9 6.2 2009/10/29 17:44:32
129.985 29.168 33.9 6.8 2009/10/30 07:03:39
-175.087 -24.147 13.9 6.1 2009/11/02 10:47:14
118.667 -8.284 32.1 6.6 2009/11/08 19:41:46
178.453 -17.267 591.3 7.3 2009/11/09 10:44:55
91.951 8.028 22.7 6.0 2009/11/10 02:48:46
-178.370 -17.823 526.8 6.3 2009/11/22 07:48:21
179.559 -31.550 434.9 6.2 2009/11/22 22:47:28
-174.040 -20.741 18.4 6.8 2009/11/24 12:47:16
118.843 -10.359 38.7 6.0 2009/11/28 06:04:25
126.397 5.414 66.8 6.1 2009/11/28 18:10:24
170.934 -22.220 86.6 6.4 2009/12/09 09:46:08
152.798 53.399 653.2 6.3 2009/12/10 02:30:52
121.703 23.793 50.1 6.4 2009/12/19 13:02:16
134.772 42.237 395.7 6.3 2009/12/24 00:23:34
131.324 -5.425 64.9 6.1 2009/12/26 08:57:25

142.053 12.421 24.0 6.0 2010/01/02 08:45:35
157.531 -8.817 17.8 6.6 2010/01/03 21:48:05
157.417 -8.879 29.8 7.1 2010/01/03 22:36:30
157.613 -8.993 24.7 6.8 2010/01/05 12:15:34
157.766 -9.099 31.7 6.2 2010/01/09 05:51:33
-124.467 40.665 20.6 6.5 2010/01/10 00:27:42
-72.588 18.382 15.0 7.0 2010/01/12 21:53:10
154.558 -6.087 42.6 6.2 2010/02/01 22:28:18
152.780 46.754 44.3 6.0 2010/02/06 04:45:00
123.691 23.436 23.0 6.3 2010/02/07 06:10:00
-174.753 -21.955 16.4 6.0 2010/02/13 02:34:29
128.767 -7.268 134.7 6.2 2010/02/15 21:51:48
130.699 42.603 573.7 6.9 2010/02/18 01:13:18
128.508 25.984 24.2 7.0 2010/02/26 20:31:27
120.800 22.930 27.0 6.3 2010/03/04 00:18:52
167.233 -13.625 189.6 6.5 2010/03/04 14:02:29
144.760 19.351 446.9 6.1 2010/03/08 09:47:11
128.082 -1.648 63.6 6.5 2010/03/14 00:57:46
141.655 37.784 40.1 6.5 2010/03/14 08:08:05
152.279 -3.375 418.9 6.6 2010/03/20 14:00:50
92.875 13.613 38.5 6.6 2010/03/30 16:54:47
-115.263 32.276 5.2 7.2 2010/04/04 22:40:44
125.105 -0.089 28.1 6.1 2010/04/05 10:05:45
97.111 2.360 33.4 7.8 2010/04/06 22:15:02
141.975 -3.824 33.6 6.0 2010/04/07 14:33:04
161.166 -10.927 54.3 6.9 2010/04/11 09:40:30
96.747 33.193 13.8 6.9 2010/04/13 23:49:37
-173.230 -15.315 36.2 6.1 2010/04/21 17:20:30
123.816 22.241 23.2 6.5 2010/04/26 02:59:52
141.013 29.666 89.6 6.1 2010/05/03 10:27:46
96.028 3.733 42.3 7.3 2010/05/09 05:59:42
-77.497 -5.126 129.0 6.0 2010/05/19 04:15:43
-74.432 -14.000 102.6 6.1 2010/05/23 22:46:52
-71.641 -8.115 582.1 6.5 2010/05/24 16:18:29
129.955 25.739 12.0 6.4 2010/05/26 08:53:08
166.672 -13.673 34.7 7.2 2010/05/27 17:14:47
123.962 6.937 34.3 6.0 2010/05/31 10:16:03
93.652 11.211 131.6 6.5 2010/05/31 19:51:48
-84.190 9.321 28.4 6.0 2010/06/01 03:26:17
169.546 -18.638 15.6 6.0 2010/06/09 23:23:18
91.955 7.851 31.4 7.5 2010/06/12 19:26:50
136.650 -2.405 24.3 6.2 2010/06/16 03:06:05
136.587 -2.203 22.1 7.0 2010/06/16 03:16:29
148.742 44.492 43.7 6.2 2010/06/18 02:23:08

151.194 -5.553 50.8 6.2 2010/06/24 05:32:28
161.487 -10.572 40.3 6.7 2010/06/26 05:30:20
179.180 -23.285 572.8 6.4 2010/06/30 04:31:02
-97.959 16.290 27.8 6.3 2010/06/30 07:22:28
166.654 -13.610 34.4 6.3 2010/07/02 06:04:04
142.579 39.661 30.1 6.3 2010/07/04 21:55:52
146.082 11.166 16.9 6.3 2010/07/10 11:43:33
150.516 -5.981 45.8 6.9 2010/07/18 13:04:12
150.660 -6.044 43.1 7.3 2010/07/18 13:35:01
150.750 -5.981 41.1 6.3 2010/07/20 19:18:23
128.179 3.003 111.9 6.1 2010/07/21 09:16:05
123.488 6.711 610.2 7.3 2010/07/23 22:08:11
123.580 6.423 584.7 7.7 2010/07/23 22:51:13
123.563 6.171 564.7 6.6 2010/07/24 05:35:02
123.360 6.558 615.8 6.6 2010/07/29 07:31:57
159.922 52.422 30.3 6.3 2010/07/30 03:56:15
126.279 1.298 50.6 6.3 2010/08/03 12:08:28
146.859 -5.518 219.7 6.5 2010/08/04 07:15:33
150.775 -5.825 46.0 6.9 2010/08/04 22:01:44
168.038 -17.535 33.5 7.3 2010/08/10 05:23:46
-77.369 -1.278 206.5 7.1 2010/08/12 11:54:15
141.562 12.475 16.4 6.9 2010/08/13 21:19:34
141.520 12.345 21.6 6.1 2010/08/14 07:30:18
141.483 12.201 28.4 6.3 2010/08/14 23:01:06
148.375 -5.782 180.8 6.3 2010/08/15 15:09:30
141.516 12.247 18.3 6.2 2010/08/18 16:28:17
154.237 -6.534 23.5 6.1 2010/08/20 17:56:15
-173.941 -17.453 64.9 6.0 2010/09/04 08:52:04
169.986 -20.754 50.0 6.3 2010/09/08 11:37:38
70.969 36.535 215.4 6.2 2010/09/17 19:21:15
133.807 -4.919 18.3 6.2 2010/09/29 17:10:52
133.775 -4.986 20.5 7.0 2010/09/29 17:11:25
125.249 24.218 32.8 6.3 2010/10/04 13:28:39
-109.174 24.788 13.9 6.7 2010/10/21 17:53:14
100.104 -3.525 20.0 7.8 2010/10/25 14:42:22
-174.216 -20.519 33.1 6.1 2010/11/03 23:34:45
139.239 28.394 485.0 6.8 2010/11/30 03:24:41
149.925 -6.100 30.7 6.6 2010/12/02 03:12:09
155.696 -6.527 144.8 6.2 2010/12/13 01:14:43
143.705 26.899 13.8 7.4 2010/12/21 17:19:41
143.608 26.774 31.9 6.4 2010/12/22 21:49:42
167.938 -19.837 15.7 7.3 2010/12/25 13:16:38
168.148 -19.778 34.9 6.3 2010/12/29 06:54:22
168.379 -19.274 20.7 6.5 2011/01/09 10:03:44

168.220 -19.364 30.0 6.2 2011/01/09 17:21:54
140.016 26.967 524.5 6.5 2011/01/12 21:32:55
168.585 -20.604 14.8 6.9 2011/01/13 16:16:43
63.995 28.683 79.9 7.2 2011/01/18 20:23:26
-6.909 70.868 6.4 6.2 2011/01/29 06:55:26
94.735 24.609 86.5 6.3 2011/02/04 13:53:46
155.318 -7.093 414.8 6.5 2011/02/07 19:53:43
160.746 -10.330 44.1 6.4 2011/03/07 00:09:38
142.980 38.441 26.2 7.3 2011/03/09 02:45:20
142.700 38.280 25.0 6.1 2011/03/09 18:16:16
142.818 38.299 29.4 6.0 2011/03/09 21:22:18
142.872 38.242 14.7 6.5 2011/03/09 21:24:02
116.730 -6.857 518.6 6.6 2011/03/10 17:08:37
142.498 38.296 19.7 9.1 2011/03/11 05:46:23
141.664 36.186 26.0 6.5 2011/03/11 08:19:27
143.024 39.138 4.2 6.0 2011/03/11 08:32:57
142.588 39.216 28.1 6.0 2011/03/11 10:10:35
142.532 39.222 18.9 6.5 2011/03/11 11:36:40
141.880 35.997 19.2 6.3 2011/03/11 15:13:15
138.542 36.999 14.6 6.3 2011/03/11 18:59:18
142.999 39.326 24.2 6.2 2011/03/11 19:02:59
139.154 40.404 11.2 6.2 2011/03/11 19:46:50
142.751 37.590 24.8 6.5 2011/03/12 01:47:16
141.740 35.726 24.0 6.2 2011/03/13 01:26:07
142.500 37.780 18.8 6.0 2011/03/14 06:12:37
142.338 37.587 30.9 6.1 2011/03/15 13:27:57
138.721 35.309 14.9 6.0 2011/03/15 13:31:47
143.383 40.350 22.9 6.0 2011/03/15 15:23:55
142.375 40.168 37.7 6.1 2011/03/17 04:13:58
144.053 37.216 16.4 6.4 2011/03/22 07:18:46
141.793 37.372 28.4 6.2 2011/03/22 09:19:05
99.918 20.630 12.8 6.8 2011/03/24 13:55:13
141.993 38.749 39.0 6.2 2011/03/25 11:36:24
-179.225 -15.923 22.0 6.0 2011/03/26 22:49:43
142.216 38.380 19.8 6.2 2011/03/27 22:23:59
142.347 37.440 19.8 6.2 2011/03/29 10:54:34
-177.391 -16.548 19.4 6.4 2011/03/31 00:11:59
107.769 -9.734 31.9 6.7 2011/04/03 20:06:43
-94.144 17.265 165.1 6.7 2011/04/07 13:11:23
141.730 38.251 53.2 7.1 2011/04/07 14:32:44
131.847 30.016 26.2 6.0 2011/04/09 12:57:50
140.584 36.953 13.3 6.7 2011/04/11 08:16:13
140.703 35.439 16.7 6.2 2011/04/11 23:08:17
143.561 39.585 16.2 6.0 2011/04/13 19:57:24

179.943 -34.286 98.1 6.5 2011/04/18 13:03:04
140.552 35.642 43.4 6.2 2011/04/21 13:37:03
161.247 -10.358 85.6 6.8 2011/04/23 04:16:55
142.939 39.170 31.7 6.0 2011/04/23 10:12:47
-82.359 6.851 10.0 6.2 2011/04/30 08:19:17
144.154 38.201 19.7 6.1 2011/05/05 14:58:20
168.275 -20.335 33.4 6.8 2011/05/10 08:55:13
-84.189 10.111 76.8 6.0 2011/05/13 22:47:55
141.457 37.401 38.6 6.1 2011/05/13 23:35:53
70.723 36.426 207.6 6.0 2011/05/14 21:07:22
154.432 -6.066 46.9 6.5 2011/05/15 18:37:11
143.966 37.305 19.6 6.1 2011/06/03 00:05:02
126.455 2.545 66.0 6.4 2011/06/13 14:31:23
151.201 -5.885 26.9 6.3 2011/06/16 00:03:38
165.496 -11.483 18.7 6.0 2011/06/21 02:04:17
142.462 39.976 32.1 6.7 2011/06/22 21:50:52
165.975 -10.926 49.8 6.1 2011/06/24 06:33:05
136.661 -2.389 25.3 6.4 2011/06/26 12:16:40
-176.257 -29.307 25.4 7.6 2011/07/06 19:03:20
-176.959 -29.280 23.8 6.0 2011/07/09 15:02:29
143.302 38.055 24.7 7.0 2011/07/10 00:57:11
122.246 9.528 21.6 6.5 2011/07/11 20:47:05
71.501 40.156 19.5 6.2 2011/07/19 19:35:43
162.139 -10.307 30.8 6.0 2011/07/20 22:05:01
141.922 38.914 45.9 6.3 2011/07/23 04:34:25
141.559 37.740 41.1 6.3 2011/07/24 18:51:25
150.754 -3.191 29.7 6.3 2011/07/25 00:50:51
-109.537 25.090 17.0 6.0 2011/07/26 17:44:22
179.825 -23.728 522.8 6.7 2011/07/29 07:42:23
141.077 36.965 48.1 6.4 2011/07/30 18:53:52
171.679 -17.086 22.8 6.1 2011/07/31 14:34:49
144.965 -3.515 19.6 6.6 2011/07/31 23:38:58
138.522 34.671 23.1 6.0 2011/08/01 14:58:11
154.839 48.767 49.8 6.1 2011/08/04 13:51:36
128.036 -2.303 38.7 6.0 2011/08/16 11:03:58
143.777 36.788 23.1 6.2 2011/08/17 11:44:11
-176.852 -16.546 405.9 6.2 2011/08/19 03:54:27
141.693 37.670 48.6 6.3 2011/08/19 05:36:33
168.067 -18.277 34.6 7.1 2011/08/20 16:55:04
168.091 -18.318 31.5 6.5 2011/08/20 17:13:06
168.226 -18.331 31.5 7.0 2011/08/20 18:19:25
-74.538 -7.620 149.3 7.0 2011/08/24 17:46:12
167.606 -18.216 18.9 6.1 2011/08/24 23:06:19
126.750 -6.359 467.2 6.9 2011/08/30 06:57:42

166.682 -12.455 52.0 6.0 2011/09/01 06:14:40
169.778 -20.628 136.6 7.0 2011/09/03 22:55:36
-173.551 -15.246 34.6 6.2 2011/09/05 09:52:01
97.999 3.025 106.6 6.7 2011/09/05 17:55:13
141.434 36.264 24.3 6.2 2011/09/15 08:00:09
-179.324 -21.593 629.0 7.3 2011/09/15 19:31:03
142.924 40.296 29.7 6.7 2011/09/16 19:26:41
143.118 40.231 25.4 6.0 2011/09/16 21:08:06
88.154 27.804 29.6 6.9 2011/09/18 12:40:50
-175.080 -15.448 12.7 6.4 2011/09/22 23:07:04
147.931 -6.626 43.2 6.5 2011/10/14 03:35:15
123.814 54.074 13.9 6.0 2011/10/14 06:10:15
151.105 -5.768 29.8 6.0 2011/10/18 05:05:07
142.531 43.873 189.0 6.2 2011/10/21 08:02:38
-176.033 -28.881 34.8 7.4 2011/10/21 17:57:17
43.446 38.729 7.6 7.1 2011/10/23 10:41:22
43.117 38.589 10.1 6.0 2011/10/23 20:45:37
-179.430 -17.942 606.0 6.0 2011/10/27 00:15:24
-76.121 -14.557 29.0 7.0 2011/10/28 18:54:35
-109.173 19.838 30.0 6.2 2011/11/01 12:32:04
-85.784 11.692 177.2 6.0 2011/11/07 22:35:25
125.723 27.250 228.2 6.9 2011/11/08 02:59:09
126.880 -0.953 24.4 6.4 2011/11/14 04:05:13
-81.706 -1.748 19.6 6.0 2011/11/17 01:57:05
141.463 37.377 42.7 6.1 2011/11/23 19:24:32
142.797 41.892 48.2 6.2 2011/11/24 10:25:35
153.801 -5.510 43.2 6.1 2011/11/28 12:26:48
119.098 15.429 21.1 6.0 2011/11/30 00:27:09
-99.930 17.902 65.4 6.5 2011/12/11 01:47:25
123.063 0.047 167.4 6.1 2011/12/13 07:52:12
146.814 -7.528 128.5 7.1 2011/12/14 05:04:58
-173.723 -16.112 66.9 6.0 2011/12/26 04:48:06
95.964 51.835 12.8 6.7 2011/12/27 15:21:58
138.183 31.468 359.7 6.8 2012/01/01 05:27:56
165.308 -10.589 33.3 6.4 2012/01/09 04:07:15
93.208 2.431 20.9 7.2 2012/01/10 18:37:00
167.181 -17.753 27.3 7.0 2012/02/02 13:34:41
167.321 -17.421 24.7 6.1 2012/02/03 03:46:24
123.217 9.919 17.5 6.7 2012/02/06 03:49:14
161.190 -10.371 69.3 6.4 2012/02/14 08:19:57
95.980 51.801 13.0 6.7 2012/02/26 06:17:20
170.388 -22.122 17.4 6.6 2012/03/03 12:19:56
169.749 -19.224 33.7 6.6 2012/03/09 07:09:53
145.015 40.842 19.2 7.0 2012/03/14 09:08:36

144.856 40.802 14.4 6.1 2012/03/14 10:49:25
151.092 -5.583 46.6 6.2 2012/03/14 21:13:10
140.263 -3.833 69.2 6.3 2012/03/20 17:56:19
-98.369 16.473 19.4 7.5 2012/03/20 18:02:48
146.008 -6.223 117.7 6.6 2012/03/21 22:15:06
142.204 39.857 14.4 6.0 2012/03/27 11:00:44
-98.462 16.373 16.3 6.1 2012/04/02 17:36:43
93.014 2.238 26.3 8.6 2012/04/11 08:38:38
-102.876 18.204 27.6 6.7 2012/04/11 22:55:11
-113.060 28.858 17.0 6.1 2012/04/12 07:06:01
-113.127 28.839 10.0 7.0 2012/04/12 07:15:49
168.765 -18.988 11.4 6.3 2012/04/14 22:05:27
147.125 -5.534 208.2 6.9 2012/04/17 07:13:50
134.322 -1.695 24.4 6.7 2012/04/21 01:16:54
-174.686 -18.729 132.5 6.7 2012/04/28 10:08:07
-92.897 14.376 14.0 6.0 2012/05/01 22:43:33
11.230 44.890 6.3 6.0 2012/05/20 02:03:52
143.164 39.646 11.0 6.3 2012/05/20 07:20:37
142.082 41.335 46.0 6.0 2012/05/23 15:02:25
5.683 72.960 10.0 6.2 2012/05/24 22:47:47
-82.629 5.305 7.0 6.3 2012/06/04 00:45:15
-82.563 5.508 7.0 6.3 2012/06/04 03:15:25
141.132 34.943 15.0 6.1 2012/06/05 19:31:34
28.880 36.420 35.0 6.0 2012/06/10 12:44:17
141.831 38.919 36.0 6.3 2012/06/17 20:32:21
97.896 3.009 95.0 6.1 2012/06/23 04:34:53
163.195 57.601 10.0 6.1 2012/06/24 03:15:01
84.700 43.433 18.0 6.3 2012/06/29 21:07:34
167.340 -14.657 160.1 6.3 2012/07/06 02:28:22
151.288 45.497 20.0 6.0 2012/07/08 11:33:03
155.907 49.407 19.0 6.1 2012/07/20 06:10:25
96.045 2.707 22.0 6.4 2012/07/25 00:27:45
159.727 -9.694 20.0 6.4 2012/07/25 11:20:27
153.173 -4.651 41.0 6.5 2012/07/28 20:03:57
-74.259 -8.414 144.6 6.1 2012/08/02 09:38:31
46.826 38.329 11.0 6.4 2012/08/11 12:23:18
82.518 35.661 13.0 6.3 2012/08/12 10:47:06
145.064 49.800 583.2 7.7 2012/08/14 02:59:38
120.096 -1.315 10.0 6.3 2012/08/18 09:41:52
144.570 -4.766 73.0 6.3 2012/08/19 22:41:50
126.837 2.190 91.1 6.6 2012/08/26 15:05:37
-88.590 12.139 28.0 7.4 2012/08/27 04:37:19
-10.605 71.441 14.0 6.7 2012/08/30 13:43:25
126.638 10.811 28.0 7.6 2012/08/31 12:47:33

-85.315 10.085 35.0 7.6 2012/09/05 14:42:08
135.109 -3.177 21.0 6.1 2012/09/08 10:51:44
155.750 49.247 31.0 6.0 2012/09/09 05:39:37
-110.173 24.666 10.0 6.3 2012/09/25 23:45:25
-76.362 1.929 170.0 7.2 2012/09/30 16:31:36
143.099 39.808 15.0 6.1 2012/10/01 22:21:46
-109.574 25.127 14.0 6.0 2012/10/08 06:26:23
129.129 -4.472 10.0 6.3 2012/10/08 11:43:31
134.030 -4.892 13.0 6.5 2012/10/12 00:31:28
124.520 4.232 326.0 6.0 2012/10/17 04:42:30
166.564 -13.552 36.0 6.2 2012/10/20 23:00:32
-85.298 10.086 17.0 6.4 2012/10/24 00:45:33
126.161 9.219 37.0 6.1 2012/11/02 18:17:33
-91.895 13.988 24.0 7.3 2012/11/07 16:35:47
95.885 23.005 13.7 6.8 2012/11/11 01:12:39
-92.164 14.129 20.0 6.4 2012/11/11 22:14:59
-100.382 18.346 53.0 6.1 2012/11/15 09:20:22
155.425 49.280 29.0 6.5 2012/11/16 18:12:40
151.602 -5.705 13.0 6.0 2012/11/19 09:44:34
143.949 37.890 31.0 7.3 2012/12/07 08:18:23
129.825 -6.533 155.0 7.1 2012/12/10 16:53:09
-119.660 31.095 13.0 6.4 2012/12/14 10:36:02
-119.372 32.414 11.1 6.1 2012/12/14 10:36:18
123.807 -0.649 44.2 6.1 2012/12/17 09:16:31
167.286 -14.344 200.7 6.7 2012/12/21 22:28:09
79.708 42.605 15.0 6.1 2013/01/28 16:38:54
166.371 -10.635 11.0 6.1 2013/01/30 23:03:44
166.382 -10.628 9.2 6.1 2013/01/31 03:33:44
165.532 -11.104 15.0 6.0 2013/02/01 05:36:42
165.379 -10.896 10.0 6.3 2013/02/01 22:16:34
165.378 -11.120 10.0 6.4 2013/02/01 22:18:33
143.106 42.758 107.0 6.9 2013/02/02 14:17:35
165.248 -10.865 12.6 6.0 2013/02/06 00:07:22
165.138 -10.738 28.7 8.0 2013/02/06 01:12:27
164.932 -11.254 10.1 7.1 2013/02/06 01:23:20
164.512 -10.784 10.1 6.1 2013/02/06 06:35:20
165.727 -11.245 14.0 6.0 2013/02/06 11:53:55
164.940 -11.658 8.0 6.0 2013/02/07 00:30:11
165.658 -11.001 10.0 6.7 2013/02/07 18:59:16
165.886 -10.905 15.9 6.8 2013/02/08 11:12:13
166.021 -10.932 21.0 7.1 2013/02/08 15:26:39
-77.400 1.142 145.0 6.9 2013/02/09 14:16:08
165.838 -10.952 15.6 6.6 2013/02/09 21:02:23
165.459 -10.959 11.0 6.0 2013/02/10 18:39:32

142.564 67.582 9.9 6.6 2013/02/14 13:13:53
125.748 5.812 105.0 6.1 2013/02/16 04:37:36
157.339 50.942 41.0 6.9 2013/02/28 14:05:50
157.448 50.949 29.0 6.5 2013/03/01 13:20:50
148.155 -6.653 28.9 6.5 2013/03/10 22:51:52
143.208 39.516 20.9 6.0 2013/04/01 18:53:19
131.105 42.713 561.9 6.3 2013/04/05 13:00:02
138.477 -3.513 66.0 7.0 2013/04/06 04:42:36
169.535 -19.141 280.2 6.0 2013/04/13 22:49:51
154.607 -6.475 31.0 6.6 2013/04/14 01:32:23
62.053 28.107 82.0 7.7 2013/04/16 10:44:21
142.543 -3.218 13.0 6.6 2013/04/16 22:55:27
150.783 46.224 112.2 7.2 2013/04/19 03:05:53
157.663 49.958 20.0 6.1 2013/04/19 19:58:41
102.888 30.308 14.0 6.6 2013/04/20 00:02:48
157.165 50.105 18.0 6.1 2013/04/20 13:12:51
138.887 29.933 421.9 6.1 2013/04/21 03:22:16
-101.908 18.127 30.0 6.0 2013/04/22 01:16:33
152.120 -3.913 23.3 6.5 2013/04/23 23:14:43
175.064 -19.638 70.1 6.0 2013/05/07 10:10:56
57.770 26.560 15.0 6.1 2013/05/11 02:08:09
-175.099 -17.954 212.2 6.4 2013/05/11 20:46:58
145.287 18.728 602.3 6.8 2013/05/14 00:32:26
141.471 37.739 39.0 6.0 2013/05/18 05:47:60
160.486 52.469 15.1 6.0 2013/05/21 01:55:06
159.986 52.307 36.7 6.1 2013/05/21 05:43:22
-177.109 -23.025 171.4 7.4 2013/05/23 17:19:04
-175.765 -20.561 149.1 6.3 2013/05/23 21:07:46
153.281 54.874 608.9 8.3 2013/05/24 05:44:50
151.515 52.222 623.0 6.7 2013/05/24 14:56:32
121.133 23.794 17.0 6.2 2013/06/02 05:43:03
166.299 -11.401 39.0 6.1 2013/06/05 04:47:26
107.243 -9.998 8.6 6.7 2013/06/13 16:47:23
25.044 34.449 10.0 6.2 2013/06/15 16:11:00
-86.975 11.725 35.8 6.5 2013/06/15 17:34:29
25.114 34.270 26.0 6.0 2013/06/16 21:39:05
-42.594 10.701 10.0 6.6 2013/06/24 22:04:13
155.644 -7.039 72.0 6.1 2013/07/04 17:16:00
153.920 -3.923 386.3 7.3 2013/07/07 18:35:31
149.721 -6.016 62.0 6.6 2013/07/07 20:30:07
154.782 -6.308 44.3 6.0 2013/07/16 09:35:55
167.689 -15.379 124.0 6.1 2013/07/26 07:07:16
-173.501 -15.244 31.7 6.0 2013/08/01 20:01:43
129.809 -7.135 95.0 6.0 2013/08/12 00:53:44

-81.927 -5.396 10.0 6.2 2013/08/12 09:49:32
-78.200 5.773 12.0 6.7 2013/08/13 15:43:15
-99.498 16.878 21.0 6.2 2013/08/21 12:38:30
179.633 -27.783 478.0 6.2 2013/08/28 02:54:41
128.221 -7.440 112.0 6.5 2013/09/01 11:52:30
138.833 29.938 402.0 6.5 2013/09/04 00:18:23
-45.232 15.184 10.0 6.0 2013/09/05 04:01:36
-92.121 14.606 66.0 6.4 2013/09/07 00:13:30
-104.578 -4.547 10.5 6.1 2013/09/11 12:44:13
65.501 26.951 15.0 7.7 2013/09/24 11:29:48
-74.511 -15.839 40.0 7.1 2013/09/25 16:42:43
65.505 27.183 12.0 6.8 2013/09/28 07:34:06
152.786 53.200 573.0 6.7 2013/10/01 03:38:22
141.691 12.311 104.0 6.0 2013/10/06 16:38:09
-62.315 10.905 63.0 6.0 2013/10/12 02:10:27
23.252 35.514 40.0 6.6 2013/10/12 13:11:53
124.117 9.880 19.0 7.1 2013/10/15 00:12:32
154.931 -6.446 35.0 6.8 2013/10/16 10:30:59
-110.321 26.091 9.5 6.6 2013/10/19 17:54:55
-177.143 -23.007 160.0 6.0 2013/10/23 08:23:30
144.661 37.156 35.0 7.1 2013/10/25 17:10:20
121.437 23.590 10.0 6.3 2013/10/31 12:02:09
-112.596 -23.636 10.0 6.0 2013/11/02 15:52:46
-172.641 -19.171 10.1 6.2 2013/11/02 18:53:47
128.434 2.640 38.0 6.0 2013/11/19 13:32:51
145.204 18.475 511.0 6.0 2013/11/19 17:00:44
151.005 45.561 34.0 6.0 2013/11/25 05:56:50
128.379 -7.027 9.9 6.4 2013/12/01 01:24:14
149.167 44.444 28.0 6.0 2013/12/08 17:24:54
146.790 20.773 9.0 6.2 2013/12/17 23:38:07
167.249 -13.863 187.0 6.5 2014/01/01 16:03:29
-66.810 19.043 20.0 6.4 2014/01/13 04:01:03
-177.881 -32.908 44.3 6.5 2014/02/02 09:26:38
167.372 -15.069 122.0 6.5 2014/02/07 08:40:14
82.586 35.905 10.0 6.9 2014/02/12 09:19:49
-58.927 14.668 14.8 6.5 2014/02/18 09:27:13
-87.688 12.556 60.0 6.2 2014/03/02 09:37:55
127.367 27.431 119.0 6.5 2014/03/02 20:11:23
-93.154 14.183 18.5 6.0 2014/03/02 22:17:14
169.823 -14.738 638.0 6.3 2014/03/05 09:56:58
-125.134 40.829 16.6 6.8 2014/03/10 05:18:13
148.553 -3.086 7.0 6.1 2014/03/11 22:03:10
131.825 33.684 79.0 6.3 2014/03/13 17:06:51
94.334 7.745 21.5 6.4 2014/03/21 13:41:09

-70.769 -19.610 25.0 8.2 2014/04/01 23:46:47
161.703 -10.536 57.0 6.0 2014/04/04 11:40:32
155.048 -6.586 60.5 7.1 2014/04/11 07:07:23
154.950 -6.788 20.0 6.5 2014/04/11 08:16:46
-85.878 11.642 135.0 6.6 2014/04/11 20:29:13
155.238 -7.103 20.0 6.1 2014/04/12 05:24:23
162.148 -11.270 22.6 7.6 2014/04/12 20:14:39
162.051 -11.463 39.0 7.4 2014/04/13 12:36:19
164.814 -11.139 10.0 6.1 2014/04/18 04:13:12
-100.972 17.397 24.0 7.2 2014/04/18 14:27:25
155.087 -6.656 29.0 6.6 2014/04/19 01:04:04
155.024 -6.755 43.4 7.5 2014/04/19 13:28:01
155.335 -7.165 20.0 6.2 2014/04/20 00:15:58
-174.707 -20.752 45.0 6.1 2014/04/26 06:02:21
170.355 -21.454 106.0 6.6 2014/05/01 06:36:36
179.086 -24.611 527.0 6.6 2014/05/04 09:15:53
139.419 34.912 153.0 6.0 2014/05/04 20:18:25
99.670 19.656 6.0 6.1 2014/05/05 11:08:43
154.901 -6.960 10.0 6.0 2014/05/07 04:20:34
-100.746 17.235 17.1 6.4 2014/05/08 17:00:15
-100.812 17.219 23.0 6.0 2014/05/10 07:36:01
-82.304 7.210 10.0 6.5 2014/05/13 06:35:24
144.924 6.451 10.0 6.1 2014/05/14 20:56:13
144.936 6.426 11.0 6.3 2014/05/15 08:16:34
122.060 9.383 15.5 6.3 2014/05/15 10:16:42
92.757 4.248 35.0 6.0 2014/05/18 01:02:33
25.389 40.289 6.4 6.9 2014/05/24 09:25:02
-107.469 18.788 5.0 6.2 2014/05/31 11:53:46
166.828 -13.559 36.0 6.2 2014/06/19 10:17:56
-177.725 -29.977 20.0 6.9 2014/06/23 19:19:16
-177.516 -29.938 10.0 6.5 2014/06/23 19:21:46
-177.607 -29.941 26.6 6.7 2014/06/23 20:06:21
142.628 24.388 48.0 6.2 2014/06/29 05:56:32
-175.259 -14.780 9.0 6.4 2014/06/29 15:52:23
-175.510 -14.983 18.0 6.7 2014/06/29 17:15:09
138.844 28.340 511.0 6.2 2014/06/30 19:55:32
-176.445 -30.460 35.0 6.3 2014/07/03 19:50:07
152.807 -6.230 20.0 6.5 2014/07/04 15:00:28
-92.461 14.724 53.0 6.9 2014/07/07 11:23:55
168.398 -17.686 110.2 6.2 2014/07/08 12:56:26
142.452 37.005 20.0 6.5 2014/07/11 19:22:01
126.478 5.714 20.0 6.3 2014/07/14 07:59:57
-174.452 -15.824 227.3 6.2 2014/07/19 12:27:10
148.784 44.642 61.0 6.2 2014/07/20 18:32:48

-178.400 -19.802 615.4 6.9 2014/07/21 14:54:41
-45.581 23.724 10.0 6.0 2014/07/27 01:28:37
-95.653 17.682 107.0 6.3 2014/07/29 10:46:15
146.769 -3.422 9.8 6.0 2014/07/29 13:27:40
146.169 0.830 13.0 6.9 2014/08/03 00:22:04
103.409 27.189 12.0 6.2 2014/08/03 08:30:14
128.036 -7.274 10.0 6.2 2014/08/06 11:45:23
142.131 41.159 41.0 6.1 2014/08/10 03:43:17
47.695 32.703 10.2 6.2 2014/08/18 02:32:05
47.704 32.583 5.0 6.0 2014/08/18 18:08:23
-122.312 38.215 11.3 6.0 2014/08/24 10:20:44
-73.571 -14.598 101.0 6.8 2014/08/24 23:21:46
-173.323 -21.387 35.0 6.0 2014/09/04 05:33:50
-114.500 -26.648 7.0 6.1 2014/09/06 06:53:12
-107.049 18.753 17.0 6.2 2014/09/06 19:22:59
125.104 -0.242 35.0 6.2 2014/09/10 02:46:06
144.429 13.764 130.0 6.7 2014/09/17 06:14:45
156.412 -9.462 4.0 6.1 2014/09/25 09:13:50
149.533 -6.071 42.0 6.0 2014/10/01 03:38:52
-108.331 23.844 10.0 6.1 2014/10/08 02:40:53
-110.811 -32.108 16.5 7.0 2014/10/09 02:14:31
143.165 41.027 22.0 6.1 2014/10/11 02:35:47
-88.122 12.526 40.0 7.3 2014/10/14 03:51:34
-174.675 -15.295 8.0 6.0 2014/10/28 03:15:38
-177.759 -19.690 434.0 7.1 2014/11/01 18:57:22
148.232 -5.987 53.2 6.6 2014/11/07 03:33:55
173.085 -15.215 10.0 6.0 2014/11/13 10:24:18
126.522 1.893 45.0 7.1 2014/11/15 02:31:42
127.056 2.300 35.0 6.5 2014/11/21 10:10:20
137.887 36.641 9.0 6.2 2014/11/22 13:08:18
126.575 1.960 39.0 6.8 2014/11/26 14:33:44
-82.734 7.982 15.0 6.0 2014/12/06 17:21:49
154.460 -6.511 23.0 6.6 2014/12/07 01:22:02
-82.687 7.940 20.0 6.6 2014/12/08 08:54:53
122.450 25.540 256.0 6.1 2014/12/10 21:03:39
126.648 2.089 41.0 6.3 2014/12/21 11:34:14
-178.564 -20.326 599.3 6.0 2014/12/30 21:17:24
-82.658 5.905 8.0 6.5 2015/01/07 05:07:08
168.520 -17.031 220.0 6.8 2015/01/23 03:47:27
-178.303 -20.966 484.1 6.2 2015/01/28 02:43:19
-31.902 52.649 16.7 7.1 2015/02/13 18:59:12
142.881 39.856 23.0 6.7 2015/02/16 23:06:28
164.122 -10.760 10.0 6.1 2015/02/18 09:32:27
168.148 -16.431 10.0 6.4 2015/02/19 13:18:33

143.587 39.824 10.0 6.2 2015/02/20 04:25:23
143.486 39.819 7.0 6.0 2015/02/21 10:13:53
-106.848 18.677 5.0 6.2 2015/02/22 14:23:13
122.535 -7.297 552.1 7.0 2015/02/27 13:45:05
-72.988 6.776 155.0 6.2 2015/03/10 20:55:44
126.522 1.669 44.0 6.2 2015/03/17 22:12:29
-69.166 -18.353 130.0 6.4 2015/03/23 04:51:38
152.562 -4.729 41.0 7.5 2015/03/29 23:48:31
-172.958 -15.384 11.5 6.4 2015/03/30 08:18:01
152.490 -4.895 39.0 6.0 2015/03/31 12:18:24
-173.225 -15.168 30.0 6.3 2015/04/07 00:46:22
-178.618 -15.883 10.0 6.5 2015/04/17 15:52:52
122.316 24.203 29.0 6.4 2015/04/20 01:42:58
166.432 -12.039 72.0 6.2 2015/04/22 22:57:16
84.708 28.147 15.0 7.8 2015/04/25 06:11:26
85.540 27.628 10.0 6.1 2015/04/25 06:15:23
86.035 27.788 24.8 6.7 2015/04/26 07:09:11
-178.638 -20.866 579.4 6.1 2015/04/28 16:39:39
151.818 -5.392 48.9 6.7 2015/04/30 10:45:05
151.777 -5.201 44.0 6.8 2015/05/01 08:06:03
151.676 -5.631 24.0 6.0 2015/05/03 22:32:39
151.874 -5.489 41.5 7.5 2015/05/05 01:44:04
154.534 -7.277 22.1 7.2 2015/05/07 07:10:22
86.080 27.819 15.0 7.3 2015/05/12 07:05:19
142.032 38.902 38.9 6.8 2015/05/12 21:12:59
-175.478 -19.339 201.0 6.0 2015/05/20 00:30:53
164.158 -10.889 12.0 6.8 2015/05/20 22:48:53
163.691 -11.054 11.2 6.9 2015/05/22 21:45:19
163.215 -11.109 10.0 6.8 2015/05/22 23:59:34
-175.992 -19.380 13.0 6.2 2015/05/24 14:38:59
140.493 27.831 677.6 7.8 2015/05/30 11:23:03
142.974 30.744 8.7 6.2 2015/05/30 18:49:07
142.031 41.562 42.0 6.1 2015/06/08 06:01:08
-173.010 -15.676 48.0 6.0 2015/06/12 11:07:08
-178.328 -20.431 562.6 6.0 2015/06/21 21:28:16
139.725 27.737 460.0 6.5 2015/06/23 12:18:30
151.546 -5.451 43.0 6.0 2015/06/30 03:39:29
147.975 43.910 49.0 6.3 2015/07/07 05:10:28
138.528 -2.629 48.0 7.0 2015/07/27 21:41:22
-178.251 -26.458 269.0 6.0 2015/08/06 23:59:46
-178.730 -30.650 228.0 6.0 2015/08/24 09:41:27
179.128 -24.243 535.0 6.0 2015/09/07 08:46:09
126.429 1.884 41.6 6.3 2015/09/16 07:40:59
167.303 -14.859 135.0 7.1 2015/10/20 21:52:03

70.368 36.524 231.0 7.5 2015/10/26 09:09:43
129.938 -7.148 82.0 6.0 2015/11/21 09:06:13
145.266 18.779 586.9 6.0 2015/11/24 13:21:36
-70.944 -10.537 606.2 7.5 2015/11/24 22:45:39
-71.018 -10.060 620.6 7.6 2015/11/24 22:50:54
-71.257 -9.182 602.8 6.7 2015/11/26 05:45:18
-93.633 15.802 85.0 6.6 2015/12/17 19:49:53
71.126 36.493 206.0 6.3 2015/12/25 19:14:47
93.650 24.804 55.0 6.7 2016/01/03 23:05:22
141.087 44.476 238.8 6.2 2016/01/11 17:08:04
142.781 41.972 46.0 6.7 2016/01/14 03:25:34
158.546 53.978 177.0 7.2 2016/01/30 03:25:12
-179.950 -30.754 391.0 6.2 2016/02/01 19:00:46
-173.395 -15.222 51.0 6.0 2016/02/07 02:03:40
166.639 -14.203 35.0 6.0 2016/04/06 07:57:38
71.131 36.472 212.0 6.6 2016/04/10 10:28:59
94.865 23.094 136.0 6.9 2016/04/13 13:55:18
-178.648 -20.810 567.5 6.4 2016/05/27 04:08:44
-178.204 -21.972 405.7 6.9 2016/05/28 05:38:51
122.546 25.562 246.4 6.4 2016/05/31 05:23:47
100.665 -2.097 50.0 6.7 2016/06/01 22:56:01
125.626 -4.587 429.6 6.3 2016/06/05 16:25:34
-177.836 -30.024 43.8 6.1 2016/06/06 02:35:32
168.828 -18.761 111.0 6.2 2016/06/14 13:49:23
169.042 -18.945 174.0 6.1 2016/07/20 15:13:17
145.541 18.544 207.6 7.7 2016/07/29 21:18:27
142.007 24.948 510.0 6.3 2016/08/04 16:24:34
-177.339 -25.139 121.0 6.2 2016/08/12 03:29:33
143.680 40.356 10.0 6.0 2016/08/20 09:01:26
143.741 40.316 10.0 5.8 2016/08/20 15:58:04
122.425 -7.280 532.4 6.0 2016/08/23 19:39:45
122.541 -7.208 514.3 5.8 2016/08/23 19:40:46
94.579 20.919 84.1 6.8 2016/08/24 10:34:55
137.846 30.615 456.0 5.9 2016/08/25 17:04:43
152.788 -3.691 499.1 6.7 2016/08/31 03:11:36
179.055 -37.401 19.0 7.1 2016/09/01 16:37:58
98.534 0.580 24.3 5.8 2016/09/01 20:04:16
125.914 8.382 12.4 5.9 2016/09/04 02:38:12
178.659 -37.137 27.6 5.8 2016/09/05 15:19:04
165.989 -10.959 73.3 5.8 2016/09/06 04:13:35
-76.965 -5.583 114.4 6.0 2016/09/10 10:08:20
-76.156 7.378 17.0 6.0 2016/09/14 01:58:31
159.146 -9.368 10.0 6.0 2016/09/14 07:24:60
128.997 -3.858 113.0 5.5 2016/09/15 19:45:55

140.572 -2.116 10.0 5.9 2016/09/17 01:20:18
167.431 -16.013 36.8 6.0 2016/09/17 02:31:60
140.471 -2.018 10.0 5.5 2016/09/18 07:17:37
142.079 30.537 10.0 6.1 2016/09/20 16:21:17
141.659 34.488 10.0 6.2 2016/09/23 00:14:35
126.485 6.570 62.5 6.3 2016/09/23 22:53:10
26.627 45.723 88.2 5.6 2016/09/23 23:11:20
140.617 -1.945 10.0 5.6 2016/09/24 11:04:30
140.583 -1.852 14.2 5.6 2016/09/24 11:09:44
-175.004 -18.094 179.0 6.3 2016/09/24 21:07:13
-178.270 -19.838 594.5 6.8 2016/09/24 21:28:42
-177.492 -32.546 10.0 5.9 2016/09/25 04:28:37
128.560 27.471 40.2 6.0 2016/09/26 05:19:58
141.935 27.854 35.0 5.7 2016/10/04 14:00:47
121.435 22.627 14.0 5.8 2016/10/06 15:51:59
127.471 1.757 128.0 5.7 2016/10/09 14:46:27
153.472 -5.371 21.9 5.7 2016/10/12 03:21:26
150.406 -4.262 446.6 6.0 2016/10/15 08:03:38
20.657 39.811 21.5 5.5 2016/10/15 20:14:50
148.862 -6.053 35.0 6.9 2016/10/17 06:14:58
94.880 32.906 23.3 5.9 2016/10/17 07:14:49
-179.917 -23.319 540.0 5.9 2016/10/18 16:36:42
-61.517 15.226 143.0 5.6 2016/10/18 22:08:14
-44.855 13.300 10.0 5.7 2016/10/20 00:09:27
143.757 22.274 107.9 5.7 2016/10/20 06:25:57
141.566 38.497 42.4 6.1 2016/11/11 21:42:60
123.380 -7.316 526.0 6.3 2016/12/05 01:13:05
161.330 -10.676 41.0 7.8 2016/12/08 17:38:46
161.123 -10.748 21.1 6.9 2016/12/09 19:10:07
154.488 -5.660 157.1 6.1 2016/12/10 16:24:37
144.404 21.290 22.4 6.0 2016/12/14 02:01:23
153.522 -4.505 94.5 7.9 2016/12/17 10:51:11
161.195 -10.227 39.1 6.0 2016/12/18 05:46:25
-70.970 -9.966 622.5 6.4 2016/12/18 13:30:11
127.921 -7.508 152.0 6.7 2016/12/21 00:17:15
153.575 -5.245 35.0 6.0 2016/12/24 01:32:16
118.664 -9.028 79.0 6.3 2016/12/29 22:30:19
122.575 4.463 612.7 7.3 2017/01/10 06:13:47
161.030 -10.125 28.6 6.3 2017/01/10 15:27:15
161.318 -10.343 36.0 6.5 2017/01/19 23:04:21
155.144 -6.214 135.0 7.9 2017/01/22 04:30:23
63.258 25.201 24.0 6.3 2017/02/07 22:03:56
-178.803 -23.260 414.9 6.9 2017/02/24 17:28:45
149.362 -5.995 37.0 6.3 2017/03/05 22:47:54

162.734 56.921 22.8 6.6 2017/03/29 04:09:25
-178.374 -18.080 628.0 6.0 2017/04/18 17:11:47
-177.523 -28.733 36.6 6.1 1999/07/28 00:16:58
100.214 1.246 214.6 6.1 1999/11/11 18:05:44
144.641 12.807 68.8 6.0 1999/12/19 00:48:39
-82.672 5.657 10.0 6.1 1999/12/28 12:46:59
131.680 42.863 501.5 6.0 2000/02/13 02:57:08
144.820 13.757 133.4 6.2 2000/02/26 08:11:48
128.620 -7.340 161.7 6.4 2000/03/03 22:09:16
-178.491 -17.847 480.3 6.4 2000/05/04 20:36:30
123.134 -4.297 40.1 6.2 2000/05/14 20:08:35
65.311 28.662 8.1 6.0 2000/06/04 17:52:12
-176.259 -29.564 57.4 6.2 2000/07/31 23:01:55
126.787 6.824 86.7 6.0 2000/10/05 20:06:14
-175.234 -18.086 33.3 6.1 2000/10/31 18:43:20
153.159 -5.202 54.3 6.0 2000/11/16 05:21:24
151.680 -5.159 80.9 6.0 2000/11/19 02:45:30
154.488 -9.285 36.6 6.5 2000/12/20 16:49:43
135.758 -7.914 46.4 6.0 2000/12/23 07:13:22
117.487 -7.138 526.6 6.1 2001/02/16 05:59:10
121.923 0.394 135.4 6.0 2001/03/14 18:56:22
93.955 8.689 33.0 6.0 2001/03/15 01:22:44
-176.345 -27.763 38.5 6.0 2001/04/07 23:17:38
-179.723 -36.801 33.5 7.1 2001/08/21 06:52:07
127.710 -7.513 145.0 6.0 2001/09/18 02:19:32
168.118 -18.466 33.8 6.2 2001/09/30 19:01:19
125.936 0.840 44.1 6.0 2001/10/13 16:27:01
-64.981 19.336 41.2 6.0 2001/10/17 11:29:11
178.978 -37.096 79.1 6.6 2001/10/21 00:29:29
168.147 -18.514 26.0 6.0 2001/10/26 23:05:50
-179.156 -17.339 551.6 6.3 2001/11/05 23:07:11
-82.209 9.812 18.1 6.1 2001/11/09 00:47:57
-106.954 22.383 17.7 6.1 2001/11/13 09:47:35
128.921 -6.932 5.9 6.2 2001/11/20 21:08:14
-178.617 -33.220 5.6 6.0 2001/11/27 00:53:46
166.661 -12.786 112.2 6.0 2001/12/02 02:47:58
-177.386 -16.448 33.0 6.3 2001/12/03 11:32:34
122.875 -0.037 0.0 6.1 2001/12/09 18:15:03
167.653 -17.206 50.3 6.1 2001/12/12 12:53:20
165.856 -10.914 73.3 6.0 2001/12/22 00:40:04
167.239 -14.734 172.6 6.1 2001/12/27 10:54:54
72.336 36.991 256.1 6.3 2002/01/01 07:28:57
68.173 36.199 15.0 6.2 2002/01/03 07:06:37
151.065 -5.674 40.6 6.3 2002/01/13 14:10:56

151.154 -5.583 49.6 6.2 2002/01/15 09:01:17
169.400 20.200 10.0 6.9 2002/01/21 15:47:24
-95.600 24.400 120.0 6.0 2002/01/30 08:42:31
30.876 38.628 24.9 6.0 2002/02/03 09:26:46
151.319 -5.389 44.3 6.6 2002/02/05 13:27:26
150.980 -3.781 10.0 6.1 2002/02/19 00:35:46
124.208 5.791 33.0 6.0 2002/03/08 18:27:55
144.100 34.800 10.0 6.0 2002/03/11 01:46:31
-176.450 34.276 15.0 7.0 2002/03/20 03:59:53
-174.563 -17.988 0.0 6.2 2002/05/08 05:26:00
122.300 24.058 0.0 6.0 2002/05/28 16:45:18
179.239 -22.237 626.5 6.5 2002/06/30 21:29:37
168.999 -19.423 112.0 6.0 2002/08/12 02:59:24
178.333 -23.923 665.4 6.1 2002/08/19 11:23:05
114.250 -7.946 2.0 6.1 2002/08/24 13:44:45
-176.048 -20.175 179.4 6.0 2002/09/07 08:14:17
178.960 -22.866 623.2 6.0 2002/09/08 13:15:56
134.211 -1.744 5.0 6.0 2002/09/20 13:33:41
115.677 -7.513 325.8 6.0 2002/10/03 19:05:12
118.339 -8.223 19.1 6.2 2002/10/06 15:46:35
134.043 -1.533 5.3 6.2 2002/10/10 12:28:25
134.024 -1.457 8.8 6.0 2002/10/10 12:29:35
-175.385 -14.629 8.8 6.1 2002/10/13 20:55:07
-178.386 -19.813 610.9 6.2 2002/10/17 04:23:55
140.179 -3.625 28.2 6.2 2002/10/17 17:52:43
96.437 3.006 25.7 6.1 2002/11/02 09:46:47
-85.648 16.930 33.0 6.0 2002/12/23 13:46:11
-176.239 -19.802 20.3 6.0 2003/01/09 02:50:47
39.848 39.479 10.0 6.0 2003/01/27 05:26:23
-110.577 26.649 10.3 6.4 2003/03/12 23:41:34
132.912 -0.436 31.6 6.3 2003/03/14 07:06:13
-175.128 -17.457 271.6 6.4 2003/03/14 12:54:12
160.347 52.229 40.6 6.1 2003/03/15 19:41:30
156.626 -9.418 34.0 6.2 2003/03/19 00:03:43
120.672 -8.329 46.3 6.3 2003/03/25 02:53:27
-178.287 -30.699 34.5 6.4 2003/05/04 20:08:45
-72.791 -17.374 33.0 6.0 2003/06/03 23:58:03
159.941 55.479 182.1 6.9 2003/06/16 22:08:03
143.598 41.683 31.8 6.4 2003/09/25 21:07:60
-177.367 -30.660 32.7 6.4 2003/09/30 14:08:40
-178.916 -30.597 14.4 6.1 2003/11/11 13:44:50
-179.136 -30.614 30.4 6.0 2003/11/11 15:39:33
172.308 -16.637 2.6 6.0 2003/11/14 04:28:33
-178.236 -34.919 22.6 6.0 2003/12/25 14:21:13

169.574 -22.368 25.3 6.0 2004/01/03 08:21:49
169.861 -22.488 33.5 6.1 2004/01/03 16:34:30
149.370 -5.969 21.4 6.2 2004/01/09 22:35:25
-37.659 7.665 10.0 6.2 2004/01/16 18:07:54
-82.953 8.318 29.4 6.1 2004/02/04 11:59:46
100.413 -1.580 51.3 6.0 2004/02/22 06:46:27
-43.932 10.917 10.0 6.0 2004/03/08 23:39:12
-175.073 -15.578 244.1 6.0 2004/03/12 22:13:10
162.648 55.285 57.3 6.2 2004/04/14 01:54:09
102.688 -5.218 34.1 6.0 2004/04/16 21:57:03
-179.408 -32.818 42.7 6.2 2004/06/02 08:50:37
-115.945 -24.977 10.0 6.0 2004/07/08 19:54:32
-126.908 -20.174 12.9 6.1 2004/07/11 23:46:11
114.997 -8.093 30.0 6.1 2004/09/15 20:18:30
138.889 37.355 14.3 6.1 2004/10/23 09:03:12
138.959 37.308 19.9 6.0 2004/10/27 01:40:50
124.702 -8.286 41.8 6.1 2004/11/11 22:49:52
-84.149 9.590 24.5 6.4 2004/11/20 08:07:22
-90.282 13.349 39.6 6.2 2004/11/20 22:01:44
-174.900 -15.399 238.3 6.0 2004/11/21 11:07:11
93.394 6.326 30.0 6.1 2004/12/26 01:21:19
93.998 7.372 30.0 6.0 2004/12/26 01:22:24
94.282 5.463 30.0 6.1 2004/12/26 01:25:47
94.575 6.926 28.6 6.0 2004/12/26 02:00:39
92.932 6.846 31.7 6.1 2004/12/26 04:21:27
92.744 13.435 26.9 6.1 2004/12/26 10:19:30
92.850 13.524 13.6 6.3 2004/12/26 11:04:59
94.443 5.483 31.9 6.0 2004/12/27 00:32:15
92.384 12.972 27.4 6.0 2004/12/27 00:49:27
93.756 9.041 23.8 6.1 2004/12/29 01:50:53
93.173 8.755 30.0 6.2 2004/12/29 05:56:48
92.552 7.057 14.1 6.0 2004/12/31 02:23:59
92.929 6.184 23.2 6.0 2004/12/31 12:04:58
92.383 10.669 23.4 6.1 2005/01/04 09:13:11
94.814 5.269 53.3 6.1 2005/01/06 00:56:29
152.684 -4.212 21.9 6.1 2005/01/14 08:33:15
-80.938 -1.372 10.0 6.1 2005/01/24 23:23:24
94.684 2.656 23.7 6.2 2005/01/26 22:00:41
-81.359 -1.171 10.0 6.1 2005/01/28 09:26:17
-81.195 -1.008 19.2 6.2 2005/01/28 15:46:46
162.958 -11.086 47.3 6.1 2005/03/06 04:40:03
-179.544 -21.928 596.1 6.2 2005/03/19 17:34:45
97.871 0.927 33.0 6.1 2005/03/28 18:30:43
97.778 -0.205 22.5 6.1 2005/04/08 05:48:36

169.192 -23.209 15.4 6.1 2005/04/08 11:38:17
99.722 -1.687 32.8 6.2 2005/04/10 11:14:19
99.713 -1.599 30.6 6.4 2005/04/10 17:24:38
93.448 5.499 33.0 6.1 2005/05/18 11:37:45
178.808 -24.465 559.7 6.0 2005/05/20 12:40:41
52.351 14.431 19.9 6.2 2005/08/26 18:16:34
-67.942 -22.368 161.7 6.8 2005/11/17 19:26:55
96.805 2.177 28.5 6.5 2005/11/19 14:10:13
145.236 -5.155 87.8 6.1 2005/11/22 15:11:32
-82.716 6.824 7.8 6.0 2005/12/21 14:32:39
-82.325 6.692 5.5 6.1 2006/01/06 03:39:59
122.579 -7.882 261.7 6.1 2006/01/15 11:58:29
167.792 -17.382 33.4 6.3 2006/01/23 06:02:59
122.727 11.571 96.0 7.4 2006/02/15 10:10:00
121.950 9.624 2.0 7.9 2006/02/15 18:29:15
123.086 8.472 31.0 7.8 2006/02/26 22:31:33
120.148 13.640 36.0 7.0 2006/03/03 14:41:57
93.226 2.639 23.9 6.2 2006/04/19 20:36:48
120.884 19.054 13.0 8.4 2006/06/01 18:57:03
119.075 17.992 124.0 8.0 2006/06/05 00:50:32
-178.726 -17.594 565.7 6.1 2006/06/09 05:58:28
120.647 13.580 89.0 6.7 2006/06/17 16:19:48
127.248 7.350 24.0 6.8 2006/06/18 17:20:44
120.315 18.933 4.0 6.2 2006/06/19 01:26:05
-178.230 -19.958 574.9 6.0 2006/06/27 02:59:16
107.857 -9.093 48.7 6.1 2006/07/17 09:13:10
108.327 -9.434 19.1 6.1 2006/07/17 15:45:60
105.386 -6.578 49.3 6.1 2006/07/19 10:57:38
120.128 -7.251 579.1 6.3 2006/09/09 04:13:13
121.677 13.537 1.0 6.5 2006/09/09 19:46:22
110.350 -9.132 19.4 6.0 2006/09/21 18:54:49
-73.168 -15.607 108.3 6.0 2006/09/30 16:26:56
153.115 46.281 14.5 6.0 2006/09/30 17:56:17
-156.161 20.116 19.9 6.0 2006/10/15 17:14:13
167.254 -15.095 138.2 6.4 2006/10/18 10:45:35
-76.668 -13.497 34.3 6.7 2006/10/20 10:48:58
-76.592 -13.346 29.7 6.0 2006/10/26 22:54:33
146.580 -5.459 115.0 6.0 2006/11/06 20:56:50
148.570 -6.039 53.5 6.0 2006/11/11 15:10:32
119.643 16.853 1.0 6.4 2006/11/12 12:11:20
128.031 -6.419 336.2 6.1 2006/11/14 14:21:01
152.661 47.625 16.7 6.0 2006/11/15 11:25:10
154.048 46.159 10.9 6.0 2006/11/15 11:28:39
154.373 46.396 16.6 6.2 2006/11/15 11:29:24

155.222 46.708 12.4 6.4 2006/11/15 11:34:59
154.629 46.523 7.9 6.7 2006/11/15 11:40:55
-104.685 -4.612 10.0 6.1 2006/11/19 18:57:34
99.113 3.429 206.1 6.3 2006/12/01 03:58:22
118.738 -8.347 46.8 6.3 2006/12/01 14:01:49
-91.162 14.044 62.8 6.0 2006/12/03 20:52:17
154.458 -5.781 373.5 6.0 2006/12/27 20:15:41
51.360 13.272 8.3 6.6 2006/12/30 08:30:49
92.453 8.049 17.4 6.1 2007/01/08 12:48:42
-177.774 -18.657 410.5 6.3 2007/01/08 20:52:21
58.723 10.095 10.0 6.2 2007/01/17 23:18:50
126.388 1.062 59.7 6.2 2007/01/21 17:33:00
-177.918 -29.902 60.5 6.5 2007/01/31 03:15:56
-78.405 19.401 10.0 6.2 2007/02/04 20:56:59
127.014 -1.050 30.4 6.0 2007/02/20 14:25:29
-44.622 26.590 10.0 6.0 2007/03/01 23:11:52
100.465 -0.527 22.5 6.4 2007/03/06 03:49:40
100.474 -0.501 30.1 6.3 2007/03/06 05:49:29
140.218 29.956 140.1 6.1 2007/03/08 05:03:33
155.783 -7.322 14.5 6.9 2007/04/01 21:11:35
155.623 -7.349 41.6 6.0 2007/04/01 21:15:27
95.691 2.921 31.2 6.1 2007/04/07 09:51:52
-178.084 -20.202 607.7 6.0 2007/04/09 02:24:30
-108.818 -35.016 10.0 6.1 2007/04/13 18:24:20
125.065 25.619 4.9 6.0 2007/04/20 02:23:33
100.340 -0.480 10.0 6.9 2007/05/04 13:46:09
100.390 -0.460 10.0 6.9 2007/05/04 16:52:41
100.390 -0.460 10.0 6.9 2007/05/06 04:44:22
100.380 -0.470 3.0 6.5 2007/05/06 05:36:47
-179.301 -19.479 692.1 6.0 2007/05/06 22:01:10
-178.170 -30.754 32.6 6.0 2007/05/17 19:29:10
122.440 13.660 0.0 7.5 2007/05/21 16:55:20
118.240 -2.340 468.0 6.4 2007/05/27 16:44:49
108.214 -10.498 18.2 6.0 2007/06/26 22:23:04
-30.261 0.720 10.0 6.3 2007/07/03 08:26:01
99.588 -1.671 24.8 6.5 2007/09/13 02:30:03
99.573 -2.157 20.0 7.1 2007/09/13 03:35:29
101.365 -3.210 50.9 6.0 2007/09/13 16:09:17
101.100 -4.155 32.9 6.4 2007/09/14 06:01:34
100.830 -2.775 38.4 6.0 2007/09/19 07:27:51
100.059 -2.021 30.9 6.7 2007/09/20 08:31:15
-179.974 -31.010 417.5 6.2 2007/09/25 05:16:01
99.403 -1.816 31.3 6.1 2007/09/26 15:43:03
169.475 -21.177 17.0 6.3 2007/09/28 01:35:53

95.518 2.897 32.6 6.0 2007/09/29 05:37:07
92.889 2.545 36.7 6.2 2007/10/04 12:40:31
179.446 -25.199 521.3 6.5 2007/10/05 07:17:54
152.874 -4.815 46.8 6.0 2007/10/09 15:03:42
169.292 -21.205 22.2 6.0 2007/10/13 17:45:52
179.502 -25.745 501.2 6.6 2007/10/16 21:05:43
100.987 -3.951 29.9 6.8 2007/10/24 21:02:52
-70.415 -22.898 31.4 6.3 2007/11/15 15:03:10
-70.077 -22.739 35.0 6.8 2007/11/15 15:06:01
173.568 -22.023 1.1 6.0 2007/11/19 15:20:02
155.753 -6.902 53.2 6.0 2007/11/20 12:52:60
-70.514 -22.881 13.7 6.1 2007/11/20 17:55:52
118.337 -8.352 35.5 6.5 2007/11/25 16:02:18
-70.418 -23.188 41.7 6.0 2007/12/13 05:20:26
-70.528 -23.233 30.6 6.2 2007/12/13 07:23:42
127.515 -7.619 181.0 6.0 2007/12/15 08:03:16
131.128 -6.656 65.1 6.4 2007/12/15 09:39:54
-70.129 -22.888 57.0 6.7 2007/12/16 08:09:20
178.012 -38.948 42.2 6.6 2007/12/20 07:55:20
139.112 -2.371 36.1 6.2 2007/12/22 07:11:11
96.785 2.125 32.8 6.1 2007/12/22 12:26:19
142.012 38.533 50.1 6.1 2007/12/25 14:04:35
146.912 -5.953 47.7 6.3 2008/01/01 18:55:01
100.916 -2.793 40.6 6.0 2008/01/04 07:29:20
-179.580 -21.987 597.0 6.5 2008/01/15 17:52:16
126.901 2.431 50.6 6.1 2008/01/20 20:26:07
-175.324 -15.260 6.7 6.0 2008/01/22 07:55:49
-175.540 -15.396 35.0 6.1 2008/01/22 10:49:26
97.450 1.033 40.6 6.2 2008/01/22 17:14:58
-179.378 -21.589 626.1 6.0 2008/02/01 12:10:09
-69.948 -20.185 42.8 6.3 2008/02/04 17:01:31
125.110 -0.237 27.7 6.0 2008/02/09 18:34:00
128.666 -8.248 17.1 6.2 2008/02/13 19:58:45
21.832 36.384 35.3 6.5 2008/02/14 12:08:57
-68.363 -21.319 131.8 6.1 2008/02/16 14:45:12
21.780 36.299 17.4 6.2 2008/02/20 18:27:07
99.923 -2.424 35.0 6.5 2008/02/24 14:46:24
99.864 -2.380 33.1 6.6 2008/02/25 18:06:05
99.765 -2.177 32.4 6.2 2008/03/03 02:37:28
167.189 -16.572 35.0 6.3 2008/03/12 11:36:59
94.574 2.713 23.5 6.0 2008/03/15 14:43:27
-177.329 -29.296 35.0 6.2 2008/03/18 08:22:49
-68.973 -20.078 120.8 6.2 2008/03/24 20:39:08
95.277 2.928 24.3 6.3 2008/03/29 17:30:52

168.965 -20.184 51.2 6.3 2008/04/09 11:23:42
168.874 -20.010 25.2 6.3 2008/04/09 14:47:50
-90.730 13.640 35.0 6.2 2008/04/15 03:03:06
-175.734 -18.640 6.8 6.3 2008/04/16 00:35:48
125.712 -7.838 39.6 6.1 2008/04/19 03:12:30
168.928 -20.172 24.4 6.0 2008/04/28 20:26:52
103.627 31.238 11.5 6.1 2008/05/12 11:11:03
99.053 1.675 14.8 6.0 2008/05/19 14:26:46
-34.891 7.359 10.0 6.5 2008/05/23 19:35:36
-107.512 -36.505 10.0 6.0 2008/06/15 08:37:18
-179.743 -23.514 562.3 6.2 2008/07/03 03:02:36
-71.748 -15.986 122.6 6.2 2008/07/08 09:13:08
-173.482 -15.144 35.0 6.0 2008/08/19 16:30:17
97.724 25.208 10.0 6.0 2008/08/21 12:24:32
-177.675 -25.463 170.3 6.0 2008/09/01 04:00:39
169.087 -19.894 43.1 6.1 2008/09/08 03:03:18
-177.263 -30.311 10.0 6.1 2008/10/05 09:12:36
-64.826 19.194 25.7 6.0 2008/10/11 10:40:15
-64.982 -20.181 357.8 6.1 2008/10/12 20:55:42
-175.401 -18.466 234.8 6.3 2008/10/22 12:55:58
129.294 -6.712 30.7 6.2 2008/11/07 16:04:27
117.470 -6.680 10.0 6.5 2008/11/20 23:29:07
101.227 -4.376 26.1 6.3 2008/11/22 16:01:03
171.220 -22.509 46.1 6.4 2008/11/22 16:01:39
124.699 -7.474 406.3 6.4 2008/12/06 10:55:27
125.523 5.776 209.3 6.3 2008/12/25 03:20:30
170.964 -22.560 16.3 6.4 2009/01/19 03:35:20
-70.502 -19.581 28.7 6.1 2009/04/17 02:08:09
-102.687 -35.927 16.0 6.0 2009/07/08 19:23:39
-70.535 -15.041 198.7 6.1 2009/07/12 06:12:47
-70.418 -19.469 36.0 6.5 2009/11/13 03:05:58
157.962 -8.986 33.2 6.0 2010/01/05 13:11:43
-72.794 18.337 6.0 6.0 2010/01/12 22:00:41
-173.298 -15.052 15.0 6.1 2010/02/09 01:03:45
-68.458 -22.265 108.4 6.3 2010/03/04 22:39:26
100.916 -3.839 24.2 6.7 2010/03/05 16:07:00
-115.291 -16.292 17.9 6.2 2010/03/07 07:05:25
40.044 38.788 12.2 6.1 2010/03/08 02:32:35
120.014 13.829 24.6 6.0 2010/03/25 05:29:26
-3.476 37.007 619.6 6.3 2010/04/11 22:08:11
96.490 33.149 12.2 6.1 2010/04/14 01:25:16
147.304 -6.700 65.9 6.2 2010/04/17 23:15:23
128.112 -1.899 38.7 6.0 2010/04/24 07:41:02
101.105 -4.140 26.3 6.5 2010/05/05 16:29:03

-70.587 -18.096 46.8 6.2 2010/05/06 02:42:48
-35.937 35.284 15.4 6.3 2010/05/25 10:09:06
166.793 -13.677 33.2 6.1 2010/05/27 20:47:60
136.602 -2.352 20.6 6.6 2010/06/16 03:58:10
179.782 -33.190 211.2 6.0 2010/06/17 13:06:51
-68.316 -22.279 109.4 6.2 2010/07/12 00:11:20
123.327 6.740 633.7 7.5 2010/07/23 23:15:10
153.301 46.003 32.0 6.0 2010/08/04 23:48:03
-178.756 -20.842 600.8 6.2 2010/08/16 19:35:48
96.723 2.198 33.2 6.0 2010/08/21 05:42:54
-107.159 18.569 30.0 6.2 2010/08/24 02:11:60
-179.193 -15.887 14.7 6.3 2010/09/07 16:13:34
133.898 -5.299 20.4 6.0 2010/09/26 12:12:40
128.221 2.764 140.8 6.2 2010/10/08 05:43:10
100.370 -3.007 22.6 6.3 2010/10/25 19:37:30
134.106 -4.649 24.6 6.0 2010/11/03 11:18:17
148.978 -6.016 73.0 6.1 2010/11/23 09:01:07
-178.769 -15.827 15.0 6.0 2010/12/01 16:01:27
128.794 -7.266 140.4 6.0 2010/12/15 11:29:31
59.150 28.368 14.5 6.5 2010/12/20 18:41:60
-179.715 -23.413 550.9 6.3 2010/12/28 08:34:17
171.684 -22.295 123.2 6.1 2011/01/05 06:46:15
168.472 -20.670 29.7 6.0 2011/01/13 16:43:11
102.602 -5.104 39.1 6.0 2011/01/17 19:20:57
96.382 2.575 23.7 6.0 2011/01/18 11:33:45
72.847 38.402 101.9 6.1 2011/01/24 02:45:31
96.813 2.165 23.8 6.0 2011/01/26 15:42:30
59.052 28.151 18.5 6.2 2011/01/27 08:38:30
-175.537 -21.999 69.3 6.0 2011/01/31 06:03:26
123.062 4.130 532.8 6.5 2011/02/10 14:39:28
123.034 4.046 531.2 6.5 2011/02/10 14:41:60
-175.585 -20.851 85.9 6.1 2011/02/12 17:57:56
121.469 -2.490 26.8 6.1 2011/02/15 13:33:54
162.235 55.837 39.1 6.2 2011/02/20 21:43:25
178.477 -26.044 551.8 6.5 2011/02/21 10:57:52
-95.171 17.821 130.6 6.0 2011/02/25 13:07:27
-112.125 -29.643 3.8 6.1 2011/03/01 00:53:45
-69.501 -18.206 114.5 6.3 2011/03/06 12:31:59
149.794 -6.116 51.0 6.3 2011/03/09 21:24:52
142.240 37.310 33.0 6.8 2011/03/11 05:51:21
141.359 37.508 35.0 6.3 2011/03/11 05:54:31
143.410 37.298 35.0 6.4 2011/03/11 05:55:45
142.045 37.670 9.5 6.3 2011/03/11 05:58:02
142.499 38.130 14.0 6.2 2011/03/11 06:00:36

142.431 39.012 19.5 6.3 2011/03/11 06:06:10
141.969 36.389 29.2 6.4 2011/03/11 06:07:20
143.463 38.985 20.0 6.7 2011/03/11 06:08:33
141.830 36.080 26.0 6.2 2011/03/11 06:08:54
144.365 37.884 35.0 6.2 2011/03/11 06:12:38
141.679 37.215 28.2 6.2 2011/03/11 06:12:59
143.920 37.900 35.0 6.3 2011/03/11 06:15:23
141.088 36.227 25.4 7.9 2011/03/11 06:15:38
142.139 36.069 23.0 6.6 2011/03/11 06:18:51
141.729 36.068 23.0 6.5 2011/03/11 06:20:02
142.882 38.356 23.0 6.2 2011/03/11 06:21:29
142.458 39.018 23.1 6.2 2011/03/11 06:23:05
144.630 38.051 19.8 7.6 2011/03/11 06:25:51
144.209 37.863 35.0 6.1 2011/03/11 06:29:15
142.600 37.420 9.0 6.2 2011/03/11 06:42:18
142.741 37.980 14.0 6.2 2011/03/11 06:48:46
144.226 37.294 35.0 6.1 2011/03/11 06:49:15
140.968 35.797 33.4 6.0 2011/03/11 06:57:15
144.760 37.374 30.0 6.3 2011/03/11 06:58:59
141.881 36.575 25.0 6.3 2011/03/11 07:14:59
144.608 38.005 28.5 6.1 2011/03/11 07:25:35
141.886 36.861 25.3 6.1 2011/03/11 07:28:12
142.453 39.000 33.8 6.3 2011/03/11 07:29:00
141.281 37.358 27.1 6.0 2011/03/11 07:30:15
141.602 36.604 34.2 6.2 2011/03/11 08:12:07
144.602 37.054 25.3 6.1 2011/03/11 08:15:40
143.010 37.384 24.0 6.1 2011/03/11 08:26:38
142.736 38.015 23.0 6.0 2011/03/11 08:27:49
141.305 37.454 29.0 6.0 2011/03/11 08:31:08
141.963 36.368 19.0 6.0 2011/03/11 15:20:04
142.777 39.011 14.7 6.1 2011/03/11 20:11:24
141.297 37.237 33.8 6.2 2011/03/12 13:15:41
167.757 -17.243 27.5 6.2 2011/03/17 02:48:02
121.307 19.075 39.9 6.0 2011/03/20 08:26:11
143.539 39.864 19.2 6.3 2011/03/22 09:44:30
142.024 38.918 41.7 6.0 2011/03/31 07:15:30
26.547 35.732 75.5 6.1 2011/04/01 13:29:12
-178.534 -17.607 547.2 6.4 2011/04/03 14:07:09
122.864 -4.481 28.3 6.1 2011/04/24 23:07:55
104.005 -6.356 33.4 6.1 2011/08/22 20:12:21
-178.895 -35.139 42.0 6.0 2011/09/15 07:53:23
-178.801 -32.422 41.7 6.1 2011/10/07 08:58:29
114.555 -9.363 63.2 6.2 2011/10/13 03:16:32
-65.163 -15.308 560.3 6.6 2011/11/22 18:48:16

-93.142 14.933 63.5 6.2 2012/01/21 18:47:13
178.600 -24.899 579.0 6.3 2012/01/24 00:52:05
-75.658 -14.214 34.2 6.4 2012/01/30 05:10:59
168.973 -18.986 158.8 6.1 2012/02/05 00:15:40
167.227 -17.996 19.5 6.0 2012/02/05 16:40:41
123.175 9.900 12.6 6.0 2012/02/06 10:10:20
-178.436 -18.012 577.4 6.0 2012/02/10 01:47:33
-177.224 -24.623 17.2 6.0 2012/02/26 05:21:25
140.825 35.748 19.7 6.0 2012/03/14 12:05:06
-104.194 10.065 10.0 6.0 2012/03/26 18:12:53
153.575 -4.479 93.4 6.1 2012/04/06 16:15:56
91.715 1.218 10.0 6.0 2012/04/11 09:27:57
92.428 0.767 21.6 8.2 2012/04/11 10:43:11
-127.629 43.551 16.4 6.0 2012/04/11 22:41:47
90.336 2.581 25.0 6.3 2012/04/15 05:57:40
134.239 -1.700 24.0 6.0 2012/04/21 01:25:14
-177.341 -28.601 113.8 6.0 2012/04/23 17:36:21
-69.591 -17.678 105.9 6.2 2012/05/14 10:00:40
140.055 26.910 487.4 6.0 2012/05/26 21:48:10
-72.413 -15.877 110.0 6.1 2012/06/07 16:03:19
173.756 -40.023 229.8 6.3 2012/07/03 10:36:16
153.275 -4.654 46.0 6.1 2012/08/02 09:56:42
46.745 38.389 12.0 6.3 2012/08/11 12:34:36
113.931 -10.708 14.0 6.1 2012/09/03 18:23:05
166.513 -12.476 27.0 6.0 2012/09/05 13:09:10
100.594 -3.319 19.0 6.2 2012/09/14 04:51:47
-75.071 -8.866 129.0 6.0 2012/11/10 14:57:51
167.645 -16.975 32.0 6.2 2012/12/02 00:54:23
143.764 37.914 32.0 6.2 2012/12/07 08:31:15
176.067 -38.428 163.0 6.3 2012/12/07 18:19:06
126.231 0.533 30.0 6.0 2012/12/11 06:18:27
153.016 -4.632 52.0 6.1 2012/12/15 19:30:02
148.899 -3.563 4.0 6.0 2012/12/29 07:59:41
95.856 4.966 11.6 6.1 2013/01/21 22:22:53
165.772 -10.479 9.8 7.0 2013/02/06 01:54:15
157.511 50.938 40.9 6.4 2013/03/01 12:53:52
173.370 -20.757 10.0 6.1 2013/03/24 08:13:45
-90.439 14.596 189.0 6.2 2013/03/25 23:02:13
51.591 28.500 10.0 6.4 2013/04/09 11:52:50
130.218 -6.292 108.1 6.0 2013/04/20 04:51:12
-178.915 -28.736 349.0 6.2 2013/04/26 06:53:29
179.402 -33.853 195.0 6.0 2013/06/15 11:20:36
96.687 4.698 10.0 6.1 2013/07/02 07:37:03
100.567 -3.249 19.7 6.0 2013/07/06 05:05:07

-71.773 -15.635 6.6 6.0 2013/07/17 02:37:43
174.443 -41.713 14.0 6.5 2013/07/21 05:09:31
-179.678 -30.628 340.6 6.1 2013/08/12 04:16:48
174.152 -41.734 8.2 6.5 2013/08/16 02:31:06
120.011 -7.331 549.9 6.1 2013/09/21 01:39:16
-178.323 -30.926 41.5 6.5 2013/09/30 05:55:55
-178.484 -30.662 151.0 6.2 2013/10/11 21:25:00
162.302 54.686 43.0 6.4 2013/11/12 07:03:51
-176.545 -17.117 371.0 6.5 2013/11/23 07:48:32
96.826 2.044 20.0 6.0 2013/12/01 06:29:58
175.814 -40.660 28.0 6.1 2014/01/20 02:52:44
-174.681 -15.144 6.1 6.1 2014/01/21 01:29:07
109.265 -7.985 66.0 6.1 2014/01/25 05:14:19
20.453 38.208 8.0 6.1 2014/01/26 13:55:42
20.390 38.264 5.0 6.0 2014/02/03 03:08:46
154.435 -5.965 41.8 6.0 2014/02/09 14:56:39
-76.311 -14.085 20.0 6.1 2014/03/15 08:59:22
-80.971 -5.575 29.0 6.3 2014/03/15 23:51:33
-70.702 -19.981 20.0 6.7 2014/03/16 21:16:30
-70.884 -20.017 21.0 6.4 2014/03/17 05:11:35
-175.046 -24.204 21.6 6.7 2014/03/20 02:26:38
-70.874 -19.763 20.0 6.2 2014/03/22 12:59:59
-70.854 -19.690 21.0 6.3 2014/03/23 18:20:02
179.288 -26.169 495.0 6.3 2014/03/26 03:29:36
179.320 -26.125 510.0 6.1 2014/03/26 03:36:26
-170.598 -27.642 15.3 6.0 2014/03/26 03:49:34
166.589 -12.099 98.0 6.0 2014/03/27 03:49:43
-70.946 -19.893 28.4 6.9 2014/04/01 23:57:59
-70.264 -19.426 18.0 6.2 2014/04/01 23:58:01
-82.340 7.940 25.0 6.0 2014/04/02 16:13:27
-70.576 -20.311 24.1 6.5 2014/04/03 01:58:31
-70.493 -20.571 22.4 7.7 2014/04/03 02:43:13
-70.587 -20.797 25.0 6.4 2014/04/03 05:26:16
-70.654 -20.643 13.7 6.3 2014/04/04 01:37:51
-86.378 12.403 13.0 6.1 2014/04/10 23:27:46
-70.647 -20.659 13.8 6.2 2014/04/11 00:01:45
162.052 -11.128 10.0 6.6 2014/04/13 13:24:60
178.240 -25.807 634.2 6.3 2014/05/04 09:25:16
-97.054 -36.170 16.8 6.3 2014/05/06 20:52:28
88.038 18.201 47.2 6.0 2014/05/21 16:21:54
96.939 1.934 20.0 6.0 2014/07/05 09:39:28
57.638 11.745 10.0 6.0 2014/07/19 14:14:02
100.470 23.383 8.5 6.1 2014/10/07 13:49:40
-110.865 -32.095 10.0 6.6 2014/10/09 02:32:05

-77.890 0.662 10.0 6.0 2014/10/20 19:33:22
-111.244 -31.852 10.0 6.0 2014/11/01 10:59:55
179.662 -37.648 22.0 6.7 2014/11/16 22:33:20
123.126 6.157 614.0 6.6 2014/12/02 05:11:31
130.483 -6.110 116.0 6.0 2014/12/06 22:05:11
-91.473 13.672 32.0 6.1 2014/12/07 21:16:36
121.521 8.634 8.0 6.1 2014/12/29 09:29:37
170.158 -21.245 7.1 6.0 2015/01/30 17:57:56
121.427 22.637 30.0 6.2 2015/02/13 20:06:32
98.716 -0.779 28.0 6.1 2015/03/03 10:37:30
122.307 -0.541 31.0 6.1 2015/03/15 23:17:17
-173.049 -15.430 10.0 6.0 2015/03/30 07:56:53
-172.983 -15.543 15.5 6.5 2015/03/30 08:48:26
26.831 35.155 20.0 6.0 2015/04/16 18:07:43
122.451 24.081 29.0 6.0 2015/04/20 11:45:13
122.457 24.037 29.0 6.1 2015/04/20 12:00:00
173.070 -42.090 52.0 6.1 2015/04/24 03:36:42
84.802 28.185 10.0 6.6 2015/04/25 06:45:21
86.172 27.610 15.0 6.3 2015/05/12 07:36:54
102.158 -2.629 151.0 6.0 2015/05/15 20:26:55
151.880 -3.420 354.0 6.3 2016/06/21 17:12:07
100.055 -2.957 17.2 5.8 2016/08/24 13:48:44
179.125 -37.208 22.4 5.8 2016/08/31 22:04:35
102.841 -4.436 60.3 5.5 2016/09/17 02:30:57
-177.559 -32.550 10.0 5.8 2016/09/24 04:02:13
178.795 -37.082 10.0 5.5 2016/10/08 19:41:17
-178.569 -20.912 574.6 5.5 2016/10/12 04:16:24
108.160 -4.917 614.0 6.2 2016/10/19 00:26:01
141.566 38.497 42.4 6.1 2016/11/11 21:42:60
123.380 -7.316 526.0 6.3 2016/12/05 01:13:05
161.330 -10.676 41.0 7.8 2016/12/08 17:38:46
161.123 -10.748 21.1 6.9 2016/12/09 19:10:07
154.488 -5.660 157.1 6.1 2016/12/10 16:24:37
144.404 21.290 22.4 6.0 2016/12/14 02:01:23
153.522 -4.505 94.5 7.9 2016/12/17 10:51:11
153.997 -5.650 26.5 6.3 2016/12/17 11:27:39
161.195 -10.227 39.1 6.0 2016/12/18 05:46:25
-70.970 -9.966 622.5 6.4 2016/12/18 13:30:11
127.921 -7.508 152.0 6.7 2016/12/21 00:17:15
153.575 -5.245 35.0 6.0 2016/12/24 01:32:16
118.664 -9.028 79.0 6.3 2016/12/29 22:30:19
179.238 -23.251 551.6 6.3 2017/01/02 13:14:03
-92.404 74.392 31.0 6.0 2017/01/08 23:47:14
122.575 4.463 612.7 7.3 2017/01/10 06:13:47

161.030 -10.125 28.6 6.3 2017/01/10 15:27:15
161.318 -10.343 36.0 6.5 2017/01/19 23:04:21
155.144 -6.214 135.0 7.9 2017/01/22 04:30:23
63.258 25.201 24.0 6.3 2017/02/07 22:03:56
-178.803 -23.260 414.9 6.9 2017/02/24 17:28:45
149.362 -5.995 37.0 6.3 2017/03/05 22:47:54
162.734 56.921 22.8 6.6 2017/03/29 04:09:25
-178.374 -18.080 628.0 6.0 2017/04/18 17:11:47
125.072 5.505 26.0 6.9 2017/04/28 20:23:17
167.377 -14.588 169.0 6.8 2017/05/09 13:52:11
123.958 9.385 533.0 6.0 2017/05/20 01:06:14
-91.988 14.982 94.0 6.9 2017/06/14 07:29:06
-178.054 -30.514 34.0 6.0 2017/06/15 00:26:18
179.606 -24.093 511.0 6.1 2017/06/17 22:26:02
-90.949 13.753 46.8 6.8 2017/06/22 12:31:04
-176.463 -19.666 38.3 6.2 2017/06/25 17:42:30
-177.662 -30.310 19.0 6.0 2017/06/28 18:20:55
-80.493 -0.288 13.0 6.0 2017/06/30 22:29:45
124.619 11.111 7.0 6.5 2017/07/06 08:03:57
153.196 -4.772 34.8 6.4 2017/07/13 03:36:09
-73.630 -16.421 44.9 6.4 2017/07/18 02:05:20
27.413 36.925 7.0 6.6 2017/07/20 22:31:11
130.184 26.897 12.0 6.0 2017/07/26 10:32:57
-49.326 13.396 10.0 6.0 2017/07/27 17:53:25
103.855 33.193 9.0 6.5 2017/08/08 13:19:50
82.827 44.301 20.0 6.3 2017/08/08 23:27:53
120.678 13.999 172.0 6.2 2017/08/11 05:28:26
101.623 -3.768 31.0 6.4 2017/08/13 03:08:11
-178.841 -17.961 544.0 6.4 2017/08/19 02:00:53
148.056 -1.454 8.1 6.4 2017/08/27 04:17:51
99.685 -1.152 45.1 6.3 2017/08/31 17:06:56
129.036 41.343 0.0 6.3 2017/09/03 03:30:02
139.811 27.764 448.2 6.1 2017/09/07 17:26:49
-93.715 15.068 69.7 8.1 2017/09/08 04:49:21
-98.481 18.568 51.0 7.1 2017/09/19 18:14:38
144.660 37.981 11.0 6.1 2017/09/20 16:37:16
169.095 -18.785 197.0 6.4 2017/09/20 20:09:50
-94.951 16.773 9.6 6.1 2017/09/23 12:53:02
-176.937 -23.713 98.1 6.4 2017/09/26 04:20:01
144.020 37.503 9.0 6.2 2017/10/06 07:59:33
-173.802 -20.591 10.0 6.1 2017/10/18 12:00:59
123.040 -7.236 549.2 6.7 2017/10/24 10:47:48
169.209 -21.664 9.1 6.8 2017/10/31 00:42:07
127.766 -3.740 18.5 6.1 2017/10/31 11:50:50

168.936 -21.730 10.0 6.1 2017/11/01 00:09:30
168.888 -21.669 9.9 6.6 2017/11/01 02:23:56
168.919 -21.793 10.0 6.0 2017/11/01 05:09:01
-173.168 -15.320 10.0 6.8 2017/11/04 09:00:19
143.485 -4.243 110.6 6.5 2017/11/07 21:26:38
141.438 32.521 12.0 6.0 2017/11/09 07:42:11
45.956 34.905 19.0 7.3 2017/11/12 18:18:17
-84.487 9.515 19.4 6.5 2017/11/13 02:28:24
94.978 29.833 8.0 6.4 2017/11/17 22:34:20
168.699 -21.654 4.0 6.3 2017/11/19 09:25:47
168.574 -21.511 16.5 6.6 2017/11/19 15:09:03
168.683 -21.334 10.0 7.0 2017/11/19 22:43:29
57.314 30.743 9.0 6.1 2017/12/01 02:32:46
147.629 -6.113 39.5 6.0 2017/12/01 02:49:59
-80.311 -0.489 16.0 6.2 2017/12/03 11:19:05
140.220 10.116 12.8 6.4 2017/12/08 00:22:54
140.132 10.009 20.3 6.4 2017/12/08 09:51:10
140.202 10.093 10.0 6.1 2017/12/09 15:14:25
57.271 30.720 10.0 6.0 2017/12/12 08:43:18
57.286 30.823 8.0 6.0 2017/12/12 21:41:31
-83.519 17.474 10.0 7.5 2018/01/10 02:51:32
96.078 18.363 9.0 6.0 2018/01/11 18:26:24
-111.107 26.680 10.0 6.3 2018/01/19 16:17:43
142.432 41.103 31.0 6.3 2018/01/24 10:51:19
145.848 -3.514 10.0 6.3 2018/01/26 22:47:58
70.815 36.543 191.2 6.1 2018/01/31 07:07:00
-177.395 -16.645 10.0 6.0 2018/02/01 11:05:51
121.708 24.157 12.0 6.1 2018/02/04 13:56:42
121.658 24.136 17.0 6.4 2018/02/06 15:50:43
146.438 13.821 10.0 6.0 2018/02/11 23:14:15
-97.979 16.389 26.0 7.2 2018/02/16 23:39:40
142.770 -6.053 24.4 7.5 2018/02/25 17:44:44
143.271 -6.427 23.6 6.0 2018/02/26 08:26:59
143.255 -6.505 19.0 6.3 2018/02/26 15:18:00
142.480 -6.167 16.0 6.1 2018/02/28 02:45:45
142.613 -6.293 10.0 6.7 2018/03/06 14:13:06
153.187 -4.385 22.5 6.8 2018/03/08 17:39:51
151.497 -5.496 33.0 6.3 2018/03/24 11:23:32
151.396 -5.462 40.0 6.6 2018/03/26 09:51:01
151.507 -5.495 35.0 6.9 2018/03/29 21:25:37
-176.605 -24.896 83.5 6.1 2018/04/02 05:57:32
179.927 -31.106 414.6 6.0 2017/06/29 07:03:12
-175.566 -18.990 10.0 6.1 2017/10/08 14:04:39
168.823 -21.511 10.0 6.0 2017/11/20 00:09:24

-175.074 -14.726 6.0 6.0 2017/11/20 18:51:07
153.234 -4.578 52.0 6.0 2017/11/27 07:11:11
126.727 -2.763 9.9 6.1 2018/02/26 13:34:54
142.594 -6.333 10.0 6.0 2018/03/04 19:56:18
129.866 -6.655 171.5 6.4 2018/03/25 20:14:47

TABLE S3. MOHO DEPTH ESTIMATES

Location		Moho		
long (°W)	lat (°N)	depth (km)	# of RF	station ID
-138.828903	59.492401	23	5C-HRLQ-	
-165.373199	64.564598	33	089953	139 AK-ANM-
-174.197495	52.201599	42	435748	134 AK-ATKA-
-142.091507	60.489601	28	767523	30 AK-BAGL-
-142.346207	61.035999	46	875000	197 AK-BAL-
-142.493103	60.403000	29	818925	10 AK-BARK-
-141.662201	61.059502	45	589953	70 AK-BARN-
-139.636902	59.953400	29	001168	33 AK-BCP-
-143.703796	60.392300	25	613318	24 AK-BERG-
-143.284103	60.120499	24	094626	18 AK-BGLC-
-144.605103	60.967701	34	725467	421 AK-BMR-
-150.987305	64.099701	30	052570	421 AK-BPAW-
-150.906296	59.751099	53	300234	176 AK-BRLK-
-150.741394	59.741699	34	375000	30 AK-BRSE-
-149.299103	64.173203	30	286215	29 AK-BWN-
-152.084396	63.418800	34	141355	151 AK-CAST-
-147.805298	64.645302	27	365654	207 AK-CCB-
-155.622498	55.821800	33	674065	11 AK-CHI-
-159.589493	54.831001	20	940421	18 AK-CHN-
-152.317200	63.882198	29	702103	147 AK-CHUM-
-150.203796	67.226898	36	594626	461 AK-COLD-
-143.092606	60.752300	27	132009	75 AK-CRQ-
-141.340103	60.964901	45	706776	162 AK-CTG-
-150.262497	62.405800	35	192757	28 AK-CUT-
-142.487198	60.082298	-9	199766	35 AK-CYK-
-138.215393	59.090599	36	127336	95 AK-DCPH-
-147.375900	63.075298	30	636682	137 AK-DHY-
-145.774902	61.129200	49	795561	410 AK-DIV-
-144.069702	63.648201	32	155374	264 AK-DOT-
-145.750000	60.548698	24	678738	440 AK-EYAK-
-163.417496	54.856400	23	977804	102 AK-FALS-
-171.703506	63.775799	33	323598	388 AK-GAMB-
-156.879196	64.746101	39	281542	28 AK-GCSA-
-148.925995	61.771000	51	080607	105 AK-GHO-
-143.812302	61.441700	28	884346	120 AK-GLB-
-147.095901	60.879200	46	407710	94 AK-GLI-
-147.399902	64.987801	32	622664	34 AK-GLM-
-144.729202	60.580502	29	935748	25 AK-GOAT-
-143.320999	60.280499	20	940421	46 AK-GRIN-
-141.755798	60.731499	34	725467	40 AK-GRNC-
-146.947693	64.409500	29	585280	20 AK-HDA-
-146.503494	60.396000	27	832944	45 AK-HIN-
-144.262299	60.335098	39	632009	29 AK-HMT-
-151.651505	59.657200	23	744159	76 AK-HOM-

-142.340607 60.602402 30.052570 28 AK-ISLE-
-143.251007 60.442699 22.809579 68 AK-KHIT-
-142.360504 60.923100 58.089953 75 AK-KIAG-
-145.922699 61.492401 57.856308 136 AK-KLU-
-148.458496 61.413101 59.375000 137 AK-KNK-
-150.923294 63.552700 31.571262 333 AK-KTH-
-142.723404 60.247398 44.188084 34 AK-KULT-
-143.024002 61.383598 54.001168 40 AK-MCAR-
-148.937302 63.731800 41.267523 230 AK-MCK-
-148.231903 64.960197 29.468458 239 AK-MDM-
-141.950500 60.178501 38.697430 40 AK-MESA-
-150.744202 65.030403 33.323598 192 AK-MLY-
-149.070602 64.592201 26.547897 38 AK-NEA-
-143.969193 60.236099 43.720794 9 AK-NICH-
-168.854996 52.972099 19.655374 110 AK-NIKH-
-145.469894 62.969898 44.421729 300 AK-PAX-
-140.252502 60.095901 44.538551 51 AK-PIN-
-139.403595 59.665901 34.842290 140 AK-PNL-
-145.524597 65.517403 35.893692 105 AK-PPD-
-152.189407 62.896198 45.005841 250 AK-PPLA-
-142.467194 61.187099 56.220794 90 AK-PTPK-
-148.333405 60.858398 29.935748 118 AK-PWL-
-149.738998 61.088902 27.716121 396 AK-RC01-
-162.908005 68.054100 42.085280 145 AK-RDOG-
-144.843994 63.740299 34.725467 81 AK-RIDG-
-141.347794 60.299400 46.875000 41 AK-RKAV-
-148.860199 63.405602 41.968458 221 AK-RND-
-148.331604 61.806999 30.987150 196 AK-SAW-
-147.329605 61.832901 59.959112 96 AK-SCM-
-143.990494 63.976101 34.491822 194 AK-SCRK-
-145.208206 60.534100 41.150701 42 AK-SGA-
-154.184204 56.559299 33.907710 38 AK-SII-
-151.531693 61.980000 32.155374 75 AK-SKN-
-150.223099 60.511700 52.015187 106 AK-SLK-
-170.247696 57.176601 29.234813 105 AK-SPIA-
-150.746704 61.463600 30.403037 143 AK-SSN-
-142.839096 60.179001 23.160047 39 AK-SSP-
-143.779007 60.071999 24.795561 37 AK-SUCK-
-149.452606 60.104301 51.898364 77 AK-SWD-
-141.144302 60.439899 54.234813 51 AK-TABL-
-142.829193 60.754101 51.898364 69 AK-TGL-
-145.758408 63.415901 23.160047 76 AK-THY-
-167.926407 65.560097 32.856308 387 AK-TNA-
-150.289307 63.450199 40.332944 268 AK-TRF-
-166.503998 53.845600 34.608645 133 AK-UNV-
-143.454498 61.227501 57.739486 70 AK-VRDI-
-148.550903 62.829498 37.061916 86 AK-WAT1-
-148.585495 62.962799 37.762850 77 AK-WAT2-
-148.537704 62.681198 35.660047 42 AK-WAT3-
-147.942093 62.834900 37.762850 82 AK-WAT4-
-148.228607 63.062401 39.515187 56 AK-WAT5-

-147.740005 62.580799 29.001168 143 AK-WAT6-
-148.847595 62.833099 37.762850 88 AK-WAT7-
-142.852905 60.448002 40.566589 64 AK-WAX-
-148.091599 64.471497 30.753505 215 AK-WRH-
-141.751007 60.358299 41.267523 54 AK-YAH-
-165.771851 54.135170 40.099299 33 AT-AKUT-
-158.414154 56.301399 40.449766 66 AT-CHGN-
-143.719421 62.938049 39.515187 87 AT-MENT-
-153.287506 57.222500 35.426402 204 AT-OHAK-
-149.130798 61.592201 43.136682 441 AT-PMR-
-135.324402 57.056900 22.575935 153 AT-SIT-
-135.328964 59.460098 40.800234 281 AT-SKAG-
-155.621704 61.108200 36.828271 202 AT-SVW2-
-156.011597 62.930099 36.945093 92 AT-TTA-
-165.933807 54.097500 31.921729 11 AV-AKBB-
-165.993607 54.197899 34.4262 25 AV-AKGG-
-165.957596 54.161800 30.987150 37 AV-AKLV-
-166.070801 54.129200 36.711449 69 AV-AKRB-
-153.357300 59.337021 23.160047 13 AV-AU22-
-153.444702 59.362598 29.935748 9 AV-AUCH-
-153.422699 59.339500 20.706776 24 AV-AUJA-
-155.284302 58.270199 37.178738 79 AV-KABU-
-155.063202 58.296299 26.664720 49 AV-KAKN-
-166.940704 53.808201 37.295561 13 AV-MAPS-
-166.878006 53.793800 40.449766 13 AV-MGOD-00
-152.929306 60.562099 41.968458 10 AV-NCT-00
-168.161896 53.356499 25.963785 27 AV-OKSO-
-152.688293 60.591202 35.075935 21 AV-RDDF-
-152.805801 60.590500 41.150701 68 AV-RDJH-
-152.742996 60.453602 40.099299 10 AV-RDSO-
-152.842499 60.487499 41.851636 10 AV-RDWB-
-152.774200 60.419601 38.931075 23 AV-RED-00
-152.372192 61.259102 24.445093 78 AV-SPBG-
-152.022797 61.291302 35.075935 36 AV-SPCG-
-152.209106 61.200298 39.748832 48 AV-SPCR-
-139.390900 64.065498 36.010514 20 CN-DAWY-
-140.459503 61.775501 43.370327 14 CN-YUK3-
-138.139893 60.530701 34.608645 10 CN-YUK7-
-139.764603 61.284401 38.814252 8 CN-YUK8-
-152.583496 57.782799 40.099299 418 II-KDAK-10
-147.861603 64.873596 29.702103 641 IU-COLA-10
-156.617493 71.322098 33.206776 52 TA-A21K-
-143.711395 69.625999 45.122664 30 TA-C27K-
-146.375107 69.321999 38.931075 29 TA-D25K-
-148.486801 68.074799 40.917056 30 TA-E24K-
-136.719101 66.370102 41.501168 94 TA-EPYK-
-145.643005 67.593300 36.828271 42 TA-F25K-
-144.145493 67.694603 34.024533 35 TA-F26K-
-133.742004 67.441002 25.262850 9 TA-F31M-
-143.784805 66.949799 31.688084 30 TA-G26K-
-141.654907 66.808800 36.010514 34 TA-G27K-

-152.804993 65.657097 34.024533 53 TA-H21K-
-151.377304 65.893700 34.694656 50 TA-H22K-
-149.543198 65.825104 31.997195 70 TA-H23K-
-147.878098 65.837097 29.702103 43 TA-H24K-
-151.982193 65.180000 30.757272 78 TA-I21K-
-149.360306 65.147903 32.155374 62 TA-I23K-
-145.369705 64.612999 34.725467 42 TA-J25K-
-138.215805 64.453003 29.935748 19 TA-J29M-
-154.070007 63.356899 34.481050 87 TA-K20K-
-142.075806 64.029198 40.332944 77 TA-K27K-
-137.520096 63.843300 32.272196 24 TA-K29M-
-141.827499 63.061798 30.753505 71 TA-L27K-
-147.726196 61.792900 45.239486 22 TA-M23K-
-144.598206 61.606098 23.276869 59 TA-N25K-
-137.088501 61.459301 37.879673 22 TA-N30M-
-135.779602 61.486198 36.360981 13 TA-N31M-
-152.623993 60.081501 36.360981 20 TA-O20K-
-136.090607 60.770401 41.384346 18 TA-O30N-
-157.990601 59.031399 25.963785 12 TA-P16K-
-137.738098 59.630402 37.879673 9 TA-P29M-
-136.959793 60.121799 36.594626 24 TA-P30M-
-133.714706 59.589802 32.038551 6 TA-P32M-
-147.433502 65.117104 32.856308 176 TA-POKR-
-153.644608 58.928699 27.482477 11 TA-Q19K-
-147.861801 64.873497 29.585280 143 TA-TCOL-
-149.572403 68.640800 47.692757 205 TA-TOLK-
-141.158096 64.777397 39.047897 213 US-EGAK-00
-150.231812 62.689251 41.968458 129 XE-BYR-01
-146.643616 63.103287 36.477804 27 XE-CZN-01
-148.382935 63.373405 44.538551 78 XE-DH1-01
-147.855225 63.265217 46.758178 13 XE-DH2-01
-147.143753 63.034489 35.893692 57 XE-DH3-01
-149.781433 63.558075 42.786215 34 XE-EFS-01
-148.977997 63.834457 32.739486 41 XE-GNR-01
-149.270538 63.228626 40.683411 57 XE-GOO-01
-149.606369 62.999084 37.061916 126 XE-HURN-01
-149.864838 62.860256 39.047897 52 XE-MHR-01
-150.803925 62.527706 32.038551 49 XE-PVW-01
-149.711731 62.909351 42.202103 11 XE-PYY-01
-148.855057 63.401527 41.033879 18 XE-RND5-01
-148.815002 63.400314 45.356308 25 XE-RNDE-01
-148.877777 63.415718 42.669393 9 XE-RNDN-01
-148.867355 63.401440 41.734813 18 XE-RNDR-01
-148.867569 63.389576 44.304907 14 XE-RNDS-01
-150.199921 63.468590 34.842290 24 XE-SBL-01
-148.804886 63.506710 36.945093 19 XE-SLM-01
-149.121170 63.939140 34.959112 6 XE-SLT-01
-149.299316 64.170219 28.650701 7 XE-SOB-01
-150.060883 62.149956 31.454439 121 XE-TKY-01
-150.203857 62.560440 35.309579 21 XE-WOLF-01
-150.854263 63.462105 34.959112 60 XE-WON-01

-148.774933 63.655891 38.113318 61 XE-YAN-01
-141.405899 60.155602 44.188084 36 XF-BOOM-
-141.385803 60.172001 49.678738 41 XF-DOST-
-141.549805 60.223499 36.477804 32 XF-KAVU-
-141.347900 60.159199 36.244159 43 XF-LUPN-
-141.454300 60.217602 33.089953 12 XF-STEW-
-141.372696 60.129799 40.683411 15 XF-TRIP-
-147.048096 61.121601 29.351636 31 XL-BBB-
-149.823593 67.851601 42.202103 66 XR-BMQ-01
-150.263504 66.206596 34.725467 72 XR-CBM-01
-149.581696 68.078903 51.314252 90 XR-CHS-01
-148.698502 69.716202 35.075935 80 XR-FRB-01
-150.671005 66.719200 34.842290 109 XR-GBN-01
-161.277802 65.401497 34.491822 105 XR-GTM-01
-148.835999 69.022301 31.337617 85 XR-ICT-01
-148.511307 65.511398 32.973131 84 XR-LMW-01
-148.551407 65.522003 34.725467 36 XR-LVG-01
-165.338303 64.569504 32.856308 75 XR-NOM-01
-155.466003 64.739998 34.258178 67 XR-RBY-01
-148.694000 69.424004 34.959112 109 XR-SAG-01
-149.589996 68.627403 47.926402 99 XR-TFS-01
-150.110001 67.381203 39.982477 102 XR-WSM-01
-149.542892 65.824997 31.804907 70 XR-YRT-01
-149.825607 64.853699 32.272196 18 XV-F7TV-
-149.930695 64.765297 28.650701 30 XV-F8KN-
-149.083099 64.549797 29.468458 9 XV-FAPT-
-149.099197 64.612999 30.636682 38 XV-FPAP-
-148.827896 64.691704 26.781542 29 XV-FTGH-
-147.433197 65.117302 32.739486 90 YE-PIC1-01
-147.433197 65.117302 32.973131 90 YE-PIC2-
-147.430405 65.117599 32.973131 22 YE-PIC4-
-139.545807 59.972198 42.669393 9 YO-TIDE-
-149.539703 61.244801 53.767523 82 YV-ALPI-
-149.346802 60.375500 34.959112 61 YV-AVAL-
-149.817398 61.591900 55.753505 17 YV-BIGB-
-148.417099 60.774601 41.851636 78 YV-BLAK-
-149.594101 60.550800 51.080607 88 YV-DEVL-
-149.355896 60.256401 41.033879 25 YV-DIVI-
-149.409500 60.008400 42.786215 59 YV-HEAD-
-149.769699 59.835098 37.879673 22 YV-HOLG-
-149.597702 60.873798 58.206776 68 YV-HOPE-
-149.425507 60.776001 41.968458 64 YV-HOPJ-
-149.497894 61.000999 60.309579 45 YV-INDI-
-150.461700 60.483200 56.337617 31 YV-LSKI-
-149.481003 60.671700 47.225467 55 YV-LSUM-
-148.091400 60.518299 39.865654 24 YV-MAIN-
-149.545395 61.342701 47.692757 54 YV-MCDC-
-149.373901 60.475399 40.332944 31 YV-MOOP-
-150.029404 61.695400 27.248832 79 YV-NANC-
-147.953400 60.709801 48.510514 54 YV-PERI-
-150.031601 60.488098 47.459112 79 YV-RUSS-

-149.187195 60.804501 50.613318 60 YV-TUPA-
-150.190002 60.460098 48.627336 43 YV-USKI-
-148.623795 60.786598 30.753505 29 YV-WHIT-
-140.860596 62.414101 34.141355 9 CN-BVCY-
-137.503799 60.825001 39.164719 29 CN-HYT-
-140.842606 61.766800 44.421729 16 CN-YUK2-
-138.546295 61.434799 36.828271 4 CN-YUK4-
-137.859299 61.131500 34.491822 9 CN-YUK5-
-138.362595 60.943199 47.575935 8 CN-YUK6-
-161.071304 70.204300 36.068702 1 TA-A19K-
-154.974197 71.003304 48.435115 3 TA-A22K-
-161.801605 69.364098 24.618321 10 TA-B18K-
-157.159897 70.007896 32.557252 2 TA-B20K-
-154.612793 69.621101 38.053435 1 TA-B21K-
-153.419601 70.339996 27.671756 1 TA-B22K-
-165.343597 68.274597 53.778626 25 TA-C16K-
-163.177597 68.475304 52.709924 13 TA-C17K-
-161.194305 68.648300 48.893130 24 TA-C18K-
-159.587402 69.104897 45.839695 17 TA-C19K-
-154.783295 69.156502 49.656489 14 TA-C21K-
-148.700897 69.720001 34.847328 15 TA-C24K-
-144.912201 69.917503 42.175573 6 TA-C26K-
-143.711395 69.625999 45.229008 19 TA-C27K-
-163.083099 67.698799 35.000000 18 TA-D17K-
-158.115097 68.494598 45.229008 24 TA-D19K-
-156.613205 68.713203 52.557252 26 TA-D20K-
-152.682098 68.879898 51.183206 28 TA-D22K-
-150.680695 68.965599 49.351145 32 TA-D23K-
-148.823303 69.153198 37.748092 16 TA-D24K-
-146.375107 69.321999 40.343511 45 TA-D25K-
-140.964798 69.242996 48.740458 27 TA-D27M-
-138.736694 69.328598 37.290076 4 TA-D28M-
-161.826202 67.082001 24.618321 38 TA-E17K-
-160.602707 67.421303 31.793893 40 TA-E18K-
-157.231598 67.457199 36.526718 44 TA-E19K-
-156.188507 68.257500 49.656489 34 TA-E20K-
-153.972107 68.441399 50.877863 21 TA-E21K-
-151.813202 68.134300 45.992366 45 TA-E22K-
-149.616302 68.058403 41.564885 46 TA-E23K-
-148.486801 68.074799 42.480916 35 TA-E24K-
-145.567993 68.120697 39.580153 51 TA-E25K-
-141.595093 68.186096 31.793893 41 TA-E27K-
-139.534897 68.604301 37.442748 27 TA-E28M-
-137.896896 68.388901 47.061069 24 TA-E29M-
-166.328796 65.474197 31.793893 45 TA-F14K-
-164.648300 65.707703 31.183206 48 TA-F15K-
-161.250198 66.442001 35.000000 31 TA-F17K-
-159.651398 66.600098 39.732824 8 TA-F18K-
-157.772797 66.833199 35.458015 42 TA-F19K-
-155.725098 67.048599 26.755725 41 TA-F20K-
-153.483002 67.222099 43.091603 45 TA-F21K-

-152.179001 67.507599 49.961832 35 TA-F22K-
-147.887100 67.518700 37.748092 45 TA-F24K-
-145.643005 67.593300 36.068702 49 TA-F25K-
-144.145493 67.694603 34.389313 48 TA-F26K-
-139.871704 67.613602 24.618321 30 TA-F28M-
-164.038605 64.994102 34.541985 37 TA-G15K-
-162.354706 65.393600 33.167939 47 TA-G16K-
-160.651398 65.501099 34.694656 45 TA-G17K-
-158.654007 65.894997 35.152672 41 TA-G18K-
-157.087006 66.143402 37.748092 50 TA-G19K-
-153.505798 66.515602 40.038168 38 TA-G21K-
-151.507294 66.921402 38.664122 36 TA-G22K-
-150.023895 66.710800 35.152672 49 TA-G23K-
-147.475403 66.700401 35.763359 42 TA-G24K-
-143.784805 66.949799 31.030534 40 TA-G26K-
-138.022293 66.911598 41.259542 19 TA-G29M-
-162.238998 64.637901 35.458015 41 TA-H16K-
-159.912598 64.936996 42.328244 49 TA-H17K-
-158.363297 65.152702 43.396947 43 TA-H18K-
-156.449402 65.527603 36.068702 52 TA-H19K-
-154.880798 65.492401 34.541985 53 TA-H20K-
-141.526505 66.230499 38.932342 70 TA-H27K-
-138.368896 66.219101 21.564885 3 TA-H29M-
-160.695007 63.886398 33.473282 48 TA-I17K-
-154.478302 64.796204 34.083969 4 TA-I20K-
-143.154099 65.306396 31.641221 45 TA-I26K-
-141.615295 65.603500 36.374046 43 TA-I27K-
-139.935501 65.448303 40.648855 31 TA-I28M-
-138.306305 65.360901 38.664122 30 TA-I29M-
-163.554001 62.749199 35.763359 57 TA-J14K-
-160.602097 63.284199 41.717557 48 TA-J16K-
-159.077698 63.396500 31.488550 22 TA-J17K-
-156.715393 63.465000 35.152672 52 TA-J18K-
-155.621399 63.993999 35.763359 57 TA-J19K-
-154.146698 64.176697 37.137405 53 TA-J20K-
-145.369705 64.612999 35.152672 50 TA-J25K-
-143.563599 64.501198 38.358779 50 TA-J26L-
-138.216400 64.452499 45.839695 15 TA-J29N-
-164.655502 61.933102 28.282443 33 TA-K13K-
-161.530807 62.293800 38.358779 45 TA-K15K-
-158.301407 62.716099 35.458015 45 TA-K17K-
-145.778397 63.803600 37.290076 1 TA-K24K-
-162.682907 61.341599 37.290076 46 TA-L14K-
-161.486893 61.678001 29.045802 50 TA-L15K-
-159.474701 61.710499 36.526718 53 TA-L16K-
-158.297195 62.134399 35.763359 48 TA-L17K-
-156.688599 62.219501 32.251908 40 TA-L18K-
-154.854294 62.181599 35.711449 80 TA-L19K-
-153.879807 62.478699 34.458015 82 TA-L20K-
-143.347794 63.025398 29.961832 86 TA-L26K-
-138.128998 63.109001 34.083969 41 TA-L29M-

-166.201096 60.384899 34.083969 17 TA-M11K-
-161.960007 60.751499 22.786260 26 TA-M14K-
-160.688400 60.694698 34.541985 47 TA-M15K-
-158.959305 61.022400 40.038168 43 TA-M16K-
-157.437500 61.400902 31.335878 48 TA-M17K-
-155.824203 61.490700 28.435115 37 TA-M18K-
-154.391495 61.903702 42.480916 45 TA-M19K-
-153.131805 61.882301 38.969466 47 TA-M20K-
-147.726196 61.792900 43.549618 25 TA-M23K-
-142.996307 62.401299 34.694656 41 TA-M26K-
-141.878006 62.357899 35.152672 29 TA-M27K-
-138.462402 62.443501 36.374046 41 TA-M29M-
-161.685196 59.923698 42.022901 25 TA-N14K-
-160.092102 60.168598 40.496183 46 TA-N15K-
-158.768997 60.474201 38.053435 47 TA-N16K-
-157.186707 60.526901 33.320611 51 TA-N17K-
-155.889694 60.680099 33.015267 49 TA-N18K-
-154.483795 60.813202 35.152672 45 TA-N19K-
-152.208893 61.200100 43.396947 39 TA-N20K-
-144.598206 61.606098 23.854962 42 TA-N25K-
-161.263794 59.253300 40.038168 38 TA-O14K-
-159.824600 59.176701 39.732824 33 TA-O15K-
-158.093201 59.593800 36.984733 48 TA-O16K-
-157.094604 59.773300 37.290076 51 TA-O17K-
-155.207993 59.854198 40.038168 44 TA-O18K-
-154.320099 60.195202 38.053435 45 TA-O19K-
-149.724106 60.481400 45.687023 12 TA-O22K-
-140.190598 60.771801 57.137405 20 TA-O28M-
-138.575500 60.302399 48.587786 27 TA-O29M-
-156.439407 59.195301 43.396947 23 TA-P17K-
-155.229202 59.392200 38.053435 43 TA-P18K-
-153.231903 59.652401 28.129771 12 TA-P19K-
-147.403107 59.997898 37.442748 14 TA-P23K-
-147.433502 65.117104 32.862595 83 TA-POKR-
-156.655594 58.677399 42.328244 20 TA-Q16K-
-155.886505 58.263699 21.870229 32 TA-Q17K-
-155.008606 58.648399 33.778626 32 TA-Q18K-
-152.394196 58.609699 55.458015 26 TA-Q20K-
-156.387207 57.639702 27.977099 16 TA-R17K-
-154.452393 57.566502 42.480916 12 TA-R18K-