11-2011

Stress Modulation on the San Andreas Fault by Interseismic Fault System Interactions

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ABSTRACT

During the interseismic phase of the earthquake cycle, between large earthquakes, stress on faults evolves in response to elastic strain accumulation driven by tectonic plate motions. Because earthquake cycle processes induce non-local stress changes, the interseismic stress accumulation rate on one fault is influenced by the behavior of all nearby faults. Using a geodetically constrained block model, we show that the total interseismic elastic strain field generated by fault interactions within the southern California may increase stressing rates on the Mojave and San Bernardino sections of the San Andreas fault within the Big Bend region by up to 38% relative to estimates from isolated San Andreas models. Assuming steady fault system behavior since the 1857 Fort Tejon earthquake, stress accumulated on these sections due only to interaction with faults other than the San Andreas reaches 1 MPa, ~3 times larger than the coseismic and postseismic stress changes induced by recent southern California earthquakes. Stress increases along Big Bend sections coincide with the greatest earthquake frequency inferred from a 1,500 year long paleoseismic record and may affect earthquake recurrence intervals within geometrically complex fault systems including the sections of the San Andreas fault closest to metropolitan Los Angeles.

INTRODUCTION

The San Andreas fault (SAF) in central-southern California accommodates as much as 35 mm/yr (Sieh and Jahns, 1984) of the 53 mm/yr of local relative motion between the Pacific and North American plates (DeMets and Dixon, 1999). Historically, this motion has been expressed seismically by the large 1812 M_W = 7.5 Wrightwood and 1857 M_W = 7.9 Fort Tejon earthquakes (Sieh et al., 1989). Further evidence for large magnitude earthquakes has been documented through paleoseismic studies revealing up to 14 earthquakes averaging of 3.2 m of slip per event along the central-southern SAF since 550 CE (Weldon et al., 2004). The spatial distribution of earthquake occurrence is not homogeneous over this time interval: seismic events have more frequently ruptured the Big Bend of the SAF comprising the Mojave (MJ) and San Bernardino sections (SB) within 50 km of metropolitan Los Angeles (Weldon et al., 2004; Biasi and Weldon, 2009). During the past ~150 years of relative seismic quiescence, interseismic earthquake cycle processes have continually modulated shear and Coulomb stresses on the SAF while the seismically exposed population of greater Los Angeles has grown from less than 10,000 to more than 10,000,000 (Stein and Hanks, 1998).

The total stress on a seismogenic fault surface results from the cumulative effects of coseismic, postseismic, and interseismic earthquake cycle processes. Elastic models of a two-hundred-year long historical earthquake catalog suggest abrupt coseismic Coulomb failure stress perturbations up to 700 kPa along the SAF (King et al., 1994; Freed et al., 2007). In the decade following the 1992 M_W = 7.3 Landers and 1999 M_W = 7.1 Hector Mine earthquakes in the eastern California shear zone (ECSZ), postseismic deformation, controlled by viscoelastic relaxation processes in the lower crust and upper mantle (Smith and Sandwell, 2006), resulted in a net 230–350 kPa increase in CFS on SB and northern Indio section (IN) of the SAF and a decrease on MJ of 100 kPa, reducing the likelihood of failure (Freed and Lin, 2002). Except

following the largest earthquakes, such as the Fort Tejon event, the contribution of postseismic deformation to the state of stress decays to apparently negligible levels within about a decade (Freed et al., 2007).

In contrast to the short time scales associated with co- and postseismic stress changes, interseismic stress accumulation is gradual yet characterizes the majority of each seismic cycle, building cumulatively through the 10–100s of years between earthquakes and serving as the primary mechanism driving future seismicity. On-fault stress accumulates through the interseismic phase of the earthquake cycle when temporary frictional stability inhibits slip on the seismogenic fault interface, above a locking depth defined by the brittle-ductile transition zone at 15–25 km depth, causing a build-up of elastic strain within the upper crust (Fig. 1a; Savage and Burford, 1973). In the seismogenic layer this effect is modeled using the slip deficit ("backslip") method (Savage, 1983), where the slip deficit rate ranges from zero for a creeping fault to the long-term fault slip rate for a locked fault. The interseismic stress accumulation rate on an isolated fault is linearly proportional to its slip deficit rate (Fig. 1b; Okada, 1992). However, stresses generated by slip deficit on one fault extend throughout the upper crust (e.g., Hetland and Hager, 2006), decaying with distance as $\sim 1/r$ for the near-field two-dimensional case. Because of this non-local effect, the total stress accumulation on any fault segment is the sum of the contributions from all active structures within the interacting fault network (Fig. 1b).

SAN ANDREAS FAULT STRESSING RATES

To calculate current stressing rates on the southern-central SAF, we use GPS measurements of interseismic deformation (Fig. 2a) (McClusky et al., 2001; Shen et al., 2003; Hammond and Thatcher, 2005; Williams et al., 2006; McCaffrey et al., 2007; Plate Boundary Observatory network velocity field) and a three-dimensional spherical block model[1] (Meade and

69 Loveless, 2009) to constrain kinematically consistent slip rates (Weldon and Humphreys, 1986;
70 Minster and Jordan, 1987) on ~60,000 km^2 of fault area throughout the southern California fault
71 system (SCFS). Block models describe the interseismic GPS velocity field as the combined
72 effects of two processes, long-term microplate rotations and local elastic strain accumulation
73 effects (Savage and Burford, 1973; Savage, 1983; Matsu'ura et al., 1986). Using a fault system
74 geometry derived from the Southern California Earthquake Center Community Fault Model
75 (Plesch et al., 2007) (Table DR1) and 1822 GPS velocities (Table DR2), we simultaneously
76 estimate micro-plate rotations (yielding strike-slip rates and dip-slip (on dipping segments) or
77 opening/closing-slip (on vertical segments) rates on block-bounding faults), elastic strain
78 accumulation due to interseismic locking of faults, and homogeneous strain rates within crustal
79 micro-plates (McCaffrey, 2005). The block model fits the data with a mean residual velocity
80 magnitude of 1.67 mm/yr and simultaneously satisfies far-field Pacific-North America plate
81 motion constraints (DeMets and Dixon, 1999).
82 Model results show that slip on the Carrizo section (CZ) of the SAF currently accounts
83 for up to 60% of the 53 mm/yr of relative plate motion (DeMets and Dixon, 1999). However, the
84 anastomosing geometry of the SCFS partitions slip across multiple faults through the Big Bend
85 region (Fig. 2b) and, as a consequence, SAF strike-slip rates vary significantly along strike: 31.2
86 ± 0.2 mm/yr on CZ, 16.3 ± 0.8 mm/yr on MJ, 10.2 ± 0.3 mm/yr on SB, 25.4 ± 0.2 mm/yr on IN,
87 and 39.2 ± 0.4 mm/yr on the Imperial section (IM) (Fig. 2b, Table DR1). The remaining 16%–
88 74% (~10–40 mm/yr) of relative plate motion is distributed among other active faults, most
89 significantly the San Jacinto, Elsinore, and Hosgri faults and the ECSZ (McClusky et al., 2001)
90 (Fig. 2b). The along-strike variation in SAF strike-slip rate, reaching a minimum along SB, is
91 consistent with late Pleistocene estimates (McGill et al., 2010).

These fault slip rates inferred from the geodetically constrained block model, interpreted as slip deficit rates, provide the basis for determining present-day interseismic stress accumulation rates on the SAF (Fig. 1, 3, DR1–DR3). We analytically (Okada, 1992) calculate shear stress rates every ~10 km along strike at the centroid of each SAF segment, with the centroid depth defined as half the depth to which the segment is inferred to be interseismically locked. The self-stress rate, τ_{SAF}, results from slip deficit only on SAF segments and total stress rate on the fault, τ_{TOT}, is due to slip deficit on all fault segments of the SCFS. Differential stress rates, $\Delta\tau = \tau_{TOT} - \tau_{SAF}$, and the normalized percent difference, $\Delta\tau' = \Delta\tau/\tau_{SAF} \times 100$, represent the modulation of SAF stress rate due to all faults other than the SAF.

Self shear stress rates are greatest (60–80 kPa/yr) along the southern IN and northern IM and least (11–14 kPa/yr) along MJ and SB (Fig. 3a) where fault slip deficit rates are lowest. Slip deficit rates are highest along CZ and IM (31.5 and 38 mm/yr, respectively) (Fig. 2b), but τ_{SAF} are moderate (~18–32 kPa/yr) due to greater locking depths along CZ (20–25 km) and IM (15 km) than along IN (5.0–7.5 km) (Table DR1). Total stress rates, τ_{TOT}, show a similar spatial distribution to τ_{SAF}, but are significantly higher (~14–17 kPa/yr) along MJ and SB (Fig. 2b).

Stress rate modulation, $\Delta\tau'$, shows peaks at fault junctions, which result from singularities at fault triple junctions that are incompletely cancelled by adjacent segments in the fault geometry subset considered in calculating τ_{SAF}. These artifacts persist for only ~10 km, and we focus on values away from junctions, which reach +38% along MJ and SB (Fig. 3b). Stress increases (positive $\Delta\tau'$) results from the cumulative effect of the interseismic stress fields generated by the nearby White Wolf, Garlock, San Gabriel, North Frontal, Eureka Peak, and San Jacinto faults, as well as the ECSZ. Assuming a 45º north-dipping San Gorgonio Pass fault segment, $\Delta\tau'$ along SB is decreased by an average of 8.7% relative to the vertically dipping

reference model, primarily due to three negative $\Delta\tau'$ dipping segments; the overall SB stress increases are similar. Except at fault junctions, $\Delta\tau'$ is negligible along CZ, IN, and IM where the SAF is relatively isolated from neighboring faults.

DISCUSSION

A consequence of the increased shear stress rates is that interseismic fault system interactions may reduce the time required to accumulate the stresses necessary for seismic failure on MJ and SB relative to the time predicted by τ_{SAF} alone. Annual $\Delta\tau$ along SB (mean 2.8 kPa/yr, maximum 6.8 kPa/yr) is ~2 orders of magnitude smaller than the co- and post-seismic stress changes induced by the recent Landers and Hector Mine ECSZ earthquakes (Freed and Lin, 2002). However, the cumulative effect of interseismic shear stress modulation reaches a maximum of 1 MPa when integrated over the ~150 years since the 1857 Fort Tejon earthquake. This value is ~3 times the maximum (~300 kPa) shear stress induced by the Landers earthquake on SB (King et al., 1994). Thus, in terms of stress perturbations that may trigger earthquakes and control long-term seismicity patterns, interseismic stress modulation is of similar magnitude to co- and post-seismic sources along SB and, more importantly, continues to influence this section long after the earthquake-related stress changes have decayed to negligible levels, though ongoing postseismic deformation occurring at a rate below the current detection limits of GPS (Freed et al., 2007) may be considered a part of the nominally interseismic period. Coulomb failure stress (CFS = $\tau - \mu\sigma_n$, where μ is the effective coefficient of friction and σ_n is normal stress) on MJ was reduced up to 50 kPa coseismically due to the Landers earthquake (King et al., 1994; Freed and Lin, 2002) and up to 100 kPa by postseismic deformation following the Landers and Hector Mine events (Freed and Lin, 2002). In contrast, interseismic fault system interactions have induced a positive CFS change of up to 540 kPa during the post-Fort Tejon epoch

138 (CFS_{TOT}–CFS_{SAF} ≈3.6 kPa/yr maximum; 1.8 kPa/yr mean). This outweighs the negative changes
139 caused by recent ECSZ earthquakes by 440–490 kPa and suggests that interseismic fault system
140 interactions over the past 150 years have been the largest magnitude off-SAF source of stress
141 with the potential to reduce earthquake recurrence intervals.

142 Assuming uniform fault strength along strike and homogeneous coseismic stress drops,
143 estimated recurrence intervals of large earthquakes on the entire SAF based on τ_{SAF} or τ_{TOT}
144 would suggest that earthquakes occur more frequently on the high stress rate CZ, IN, and IM
145 than along MJ and SB. However, this simple idealization is inconsistent with paleoseismic data,
146 which suggest that Big Bend sections have ruptured in at least as many earthquakes as CZ (Grant
147 Ludwig et al., 2010) and more than IN and IM (Weldon et al., 2004; Biasi and Weldon, 2009).
148 Based on data compiled at paleoseismic sites along the SAF between CZ and IN, admissible
149 rupture models (Weldon et al., 2004; Biasi and Weldon, 2009) support the occurrence of 12–26
150 earthquakes in the past 1500 yr. For these models, we count the number of inferred events that
151 involved each ~10 km-long segment of the SAF used in our stress rate calculations (Fig. 3b).
152 Though the models vary in number of events and rupture extents due to uncertainties in
153 stratigraphic offset and age measurements and correlation of data from site to site (Biasi and
154 Weldon, 2009), those that have been published (Weldon et al., 2004; Biasi and Weldon, 2009)
155 show a greater number of inferred events rupturing MJ and SB than elsewhere along strike,
156 where $\Delta\tau'$ is generally positive (Fig. 3b). Interseismic stress modulation may, however, be
157 modified by subsequent co- and postseismic effects, such as the decrease in failure stress induced
158 on MJ by ECSZ earthquakes (King et al., 1994). Therefore, any relationship between $\Delta\tau'$ and
159 earthquake recurrence interval may only be relevant during a single interseismic phase.

Regardless, SAF earthquake recurrence intervals estimated from τ_{SAF}, assuming uniform fault strength and coseismic stress drop, may be overestimated.

ACKNOWLEDGMENTS

Figures 2 & 3 created with the Generic Mapping Tools (Wessel and Smith, 1998). We thank James Dolan and an anonymous referee for helpful reviews and Michele Cooke for reviewing a previous version. Figures 2 and 3 were prepared using the Generic Mapping Tools (Wessel and Smith, 1998). This work is supported by funding from Harvard University and the Southern California Earthquake Center.

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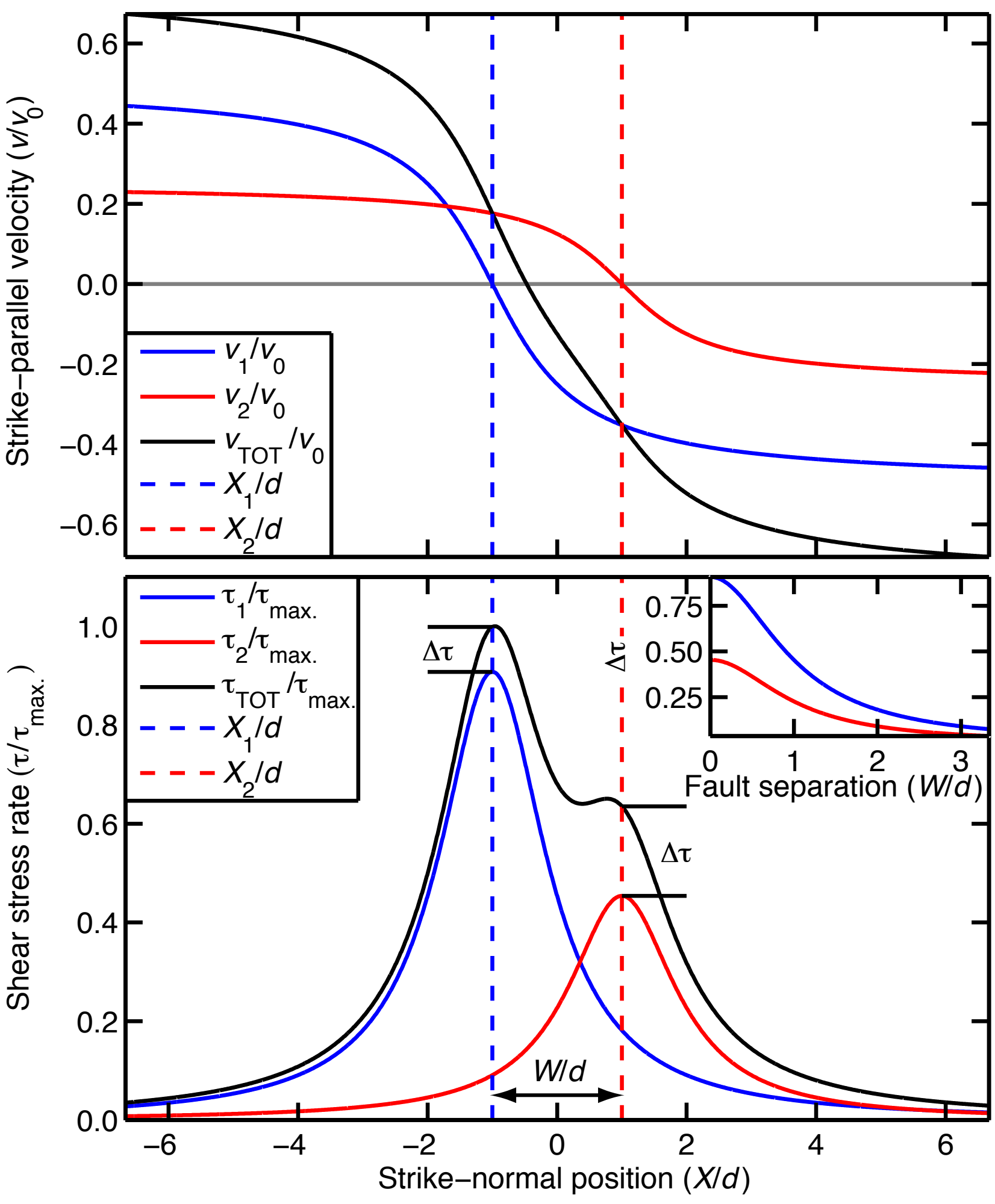
FIGURE CAPTIONS

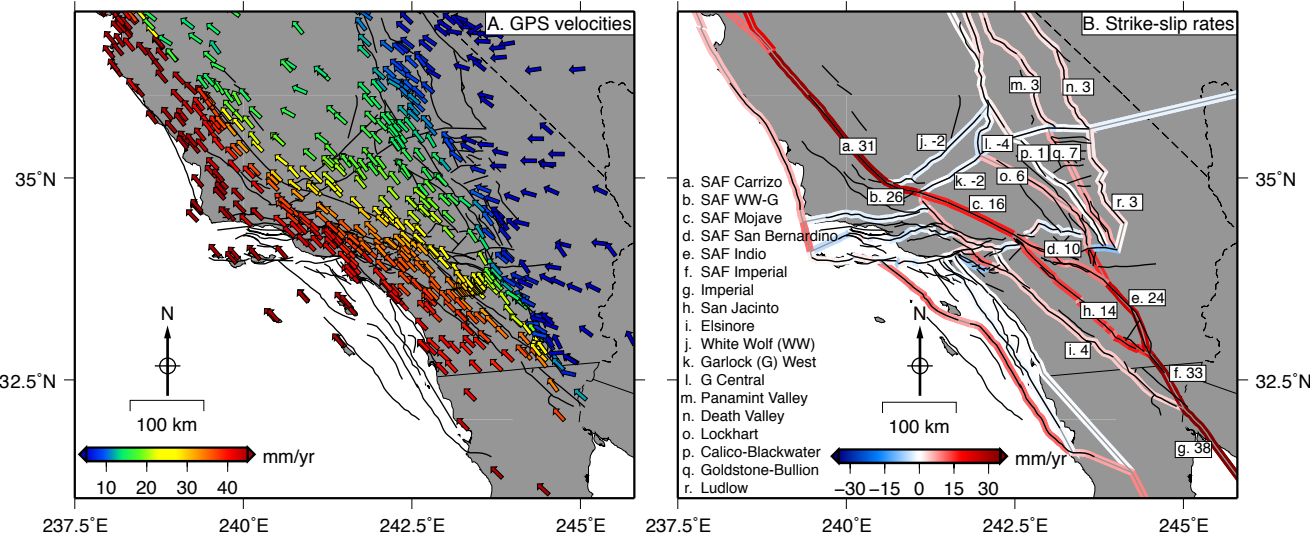
Figure 1. A) Interseismic fault-parallel surface velocities, v, due to slip deficit on two faults locked to depth d and spaced $W = 2d$. The slip deficit rate is v_0 on fault 1 (blue) and $v_0/2$ on fault 2 (red). Total velocity due to slip deficit on both faults is shown in black. B) Interseismic surface shear stress accumulation rates, τ. The difference between total stress accumulation rate (black line) and the self-stressing rate on fault 2 (red line), $\Delta\tau$, represents modulation of stress on one fault due to slip deficit on the other. Inset shows decay of $\Delta\tau$ with fault separation, W/d.

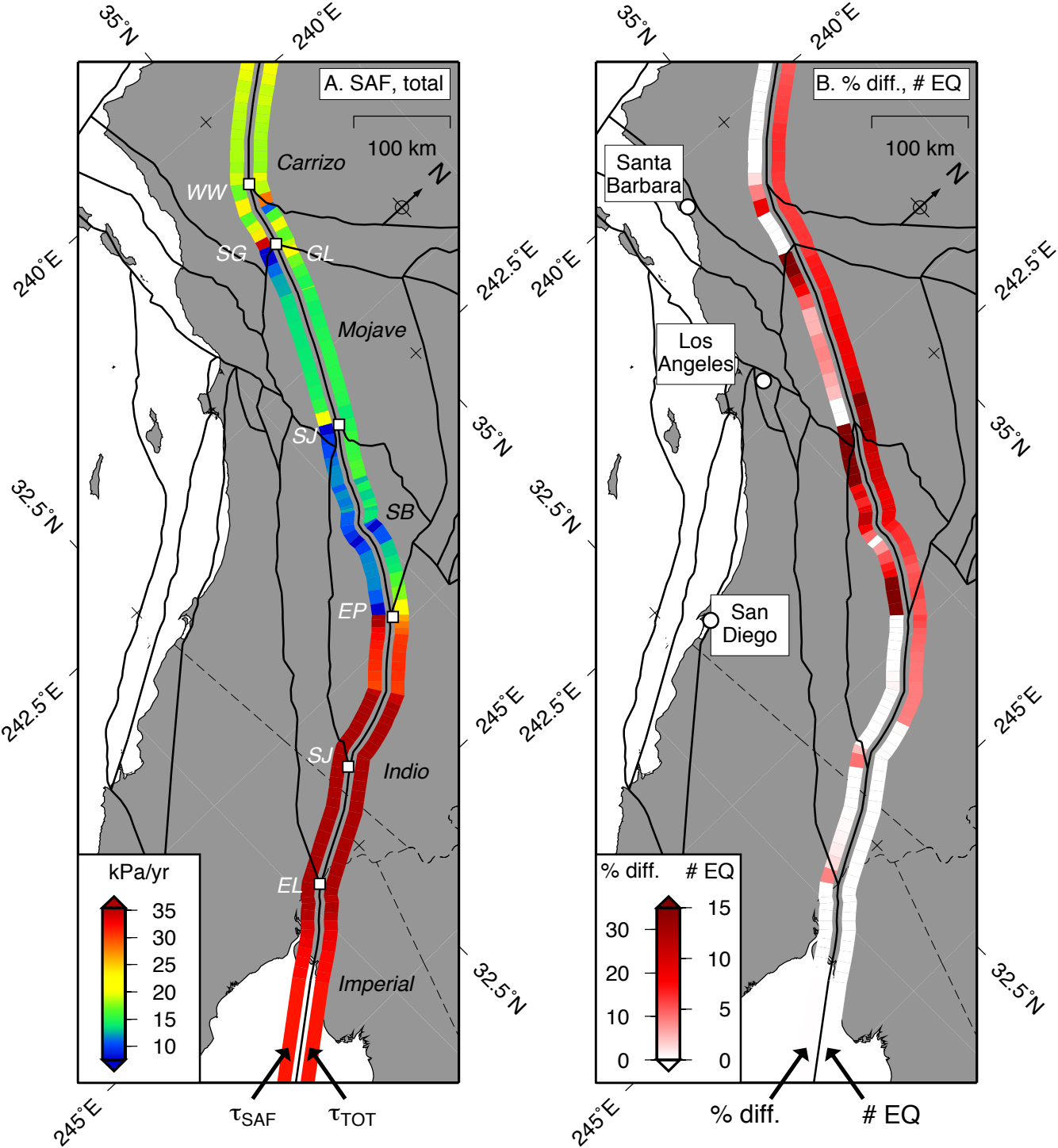
Figure 2. Block model constraints and results. A) Interseismic velocity field (McClusky et al., 2001; Shen et al., 2003; Hammond and Thatcher, 2005; Williams et al., 2006; McCaffrey et al., 2007; Plate Boundary Observatory network velocity field) relative to stable North America. Arrow length is uniform; speed is denoted by color. B) Estimated strike-slip rates on block bounding faults from our reference block model given by colored lines (right-lateral is positive). Gray lines show block geometry, which is constructed by connecting faults with parameters specified by the SCEC CFM-R (Plesch et al., 2007) (black lines). Selected faults are labeled with average slip rate, rounded to nearest mm/yr; G: Garlock, WW: White Wolf. See Table DR1 for full listing of slip rates.

Figure 3. Interseismic shear stressing rates calculated analytically (Okada, 1992) using the slip deficit rates from our kinematically consistent block model. Two quantities are plotted in each panel, one to the left (southwest) and one to the right (northeast) of the SAF trace, as labeled at the bottom of the panel. A) Self-shear stress rate due to slip deficit on San Andreas fault (SAF) segments alone, τ_{SAF}, and total shear stress rate due to slip deficit on all faults, τ_{TOT}. Fault junctions are labeled in white; WW: White Wolf, GL: Garlock, SG: San Gabriel, SJ: San Jacinto, NF: North Frontal, EP: Eureka Peak, EL: Elsinore. Junctions bound labeled sections of the SAF (black italics); SB: San Bernardino. B) Percent difference between total and self-stress, normalized by self-stress, $\Delta\tau'$ ("% diff."), and mean number of paleoseismic earthquakes on each model segment ("# EQ"), from the rupture models of Biasi and Weldon (2009).

[1]GSA Data Repository item 2011xxx, text, Tables DR1–DR2, and Figures DR1–DR3, is available online at www.geosociety.org/pubs/ft2011.htm, or on request from editing@geosociety.org or Documents Secretary, GSA, P.O. Box 9140, Boulder, CO 80301, USA.


Strike–parallel velocity (v/v_0)
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
v_1/v_0
v_2/v_0
v_{TOT}/v_0
X_1/d
X_2/d
Shear stress rate ($\tau/\tau_{max.}$)
1.0
0.8
0.6
0.4
0.2
0.0
$\tau_1/\tau_{max.}$
$\tau_2/\tau_{max.}$
$\tau_{TOT}/\tau_{max.}$
X_1/d
X_2/d
$\Delta\tau$
$\Delta\tau$
W/d
$\Delta\tau$
0.75
0.50
0.25
0
1
2
3
Fault separation (W/d)
−6
−4
−2
0
2
4
6
Strike–normal position (X/d)


A. GPS velocities
B. Strike-slip rates
35˚N
32.5˚N
237.5˚E
240˚E
242.5˚E
245˚E
N
100 km
10 20 30 40
mm/yr
−30 −15 0 15 30
a. SAF Carrizo
b. SAF WW-G
c. SAF Mojave
d. SAF San Bernardino
e. SAF Indio
f. SAF Imperial
g. Imperial
h. San Jacinto
i. Elsinore
j. White Wolf (WW)
k. Garlock (G) West
l. G Central
m. Panamint Valley
n. Death Valley
o. Lockhart
p. Calico-Blackwater
q. Goldstone-Bullion
r. Ludlow
a. 31
j. -2
l. -4
m. 3
n. 3
p. 1
q. 7
k. -2
o. 6
b. 26
c. 16
r. 3
d. 10
e. 24
h. 14
i. 4
f. 33
g. 38


A. SAF, total
100 km
N
Carrizo
WW
SG
GL
Mojave
SJ
SB
EP
SJ
Indio
EL
Imperial
kPa/yr
35
30
25
20
15
10
τSAF
τTOT
35°N
240°E
240°E
242.5°E
35°N
32.5°N
32.5°N
242.5°E
245°E
245°E
B. % diff., # EQ
100 km
N
Santa Barbara
Los Angeles
San Diego
% diff.
# EQ
30
20
10
0
15
10
5
0
% diff.
# EQ

Stress amplification on the San Andreas fault due to interseismic fault system interactions: Supplementary Information

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WESTERN UNITED STATES BLOCK MODEL AND FAULT SLIP RATES

We construct a three-dimensional, spherical block model geometry of interconnected faults throughout the entire western United States, integrating the southern California fault system (SCFS) with San Francisco Bay Area faults, Basin and Range structures, and the Cascadia subduction zone in the Pacific Northwest. In southern California, we use the Southern California Earthquake Center's Community Fault Model (CFM) (*Plesch et al.*, 2007) and United States Geological Survey Quaternary fault map as the bases for the block geometry, using the CFM-specified dips for most fault segments. The model is constrained by a nominally interseismic velocity field from 6 published networks (*McClusky et al.*, 2001; *Shen et al.*, 2003; *Hammond and Thatcher*, 2005; *McCaffrey*, 2005; *Williams et al.*, 2006; *Plate Boundary Observatory network velocity field*, 2008), combined into a common reference frame by minimizing velocity misfit between collocated stations in the fields, using a 6-parameter (rotation plus translation) transformation.

We use these data and the theory presented by *Meade and Loveless* (2009) to estimate a suite of kinematically consistent slip rates on fault segments bounding crustal blocks. The basis for block theory is the earthquake cycle, in which net "long-term" displacement between adjacent blocks at the end of one complete cycle is given as the sum of interseismic and coseismic deformation. The GPS data used to constrain the model measures the nominally interseismic velocity field, $\mathbf{v}_\mathrm{I}$, which is given as the difference between the step-like, long-term block deformation, $\mathbf{v}_\mathrm{B}$, and the velocities related to coseismic elastic deformation, $\mathbf{v}_\mathrm{E}$: $\mathbf{v}_\mathrm{I} = \mathbf{v}_\mathrm{B} - \mathbf{v}_\mathrm{E}$. We estimate an Euler pole of rotation for each crustal block in the model and project the relative rotational motion of two adjacent blocks onto the fault segments that bound them to give a set of block-motion slip rates that inherently satisfy path integral constraints. Assuming that the fault segments are fully locked from the surface to an assumed locking depth, the elastic strain contribution to the velocity field is proportional to the kinematically consistent fault slip rate. We can therefore interpret the block-motion slip rates as slip deficit rates, giving the annual accrual of slip that will be released in the next earthquake.

The constraining GPS data, $\mathbf{v}_\mathrm{I}$, is related to the block rotation vectors, Ω, slip rates on partially coupled dislocation sources, $\mathbf{p}$, and internal strain rate tensors, $\dot{\epsilon}$, through the equation $\mathbf{v}_\mathrm{I} = \mathbf{G}\left[\Omega\ \mathbf{p}\ \dot{\epsilon}\right]^\mathsf{T}$, where $\mathbf{G}$ is a combined Jacobian, and we estimate the model parameters using a linear weighted least-squares inversion. The estimated relative block rotations are projected onto the three dimensional fault system geometry, providing a kinematically consistent set of fault-parallel and fault-normal slip rates that inherently satisfy path integral constraints. We estimate two components of fault slip rates on each segment: strike-slip rates are estimated for all faults, and the

fault-normal slip rate is given as dip-slip on dipping faults and tensile (opening or closing sense) slip on vertical faults. The contribution to the velocity field from elastic strain accumulation about locked faults scales linearly with these slip rates and is incorporated into $\mathbf{G}$ using elastic dislocation Green's functions (*Okada*, 1992). Partially coupled fault surfaces — in this case, the Cascadia subduction zone and Parkfield segment of the San Andreas fault (SAF) — are parametrized by triangular dislocation elements (*Meade*, 2007). The total contribution to the interseismic velocity field from elastic strain accumulation is subtracted from the velocity field due to block rotation alone, reflecting the We present geometric parameters and estimated fault slip rates for southern California faults in Table DR1 and the combined interseismic GPS velocity field in Table DR2.

STRESS ACCUMULATION RATES

To calculate stress accumulation rates on SAF, we use our catalog of derived slip rates (Fig. 1B, Table DR1), analytical expressions (*Okada*, 1992) for strain due to dislocations embedded in a homogenous elastic half-space, and constitutive relations for converting strain rates to stress rates.

We formulate the expressions as follows. For each SAF segment centroid, we calculate the partial derivatives, $\mathbf{G}_{\mathrm{TOT}}$, giving the strain rate tensor components resulting from unit dislocations on all segments in the SCFS. To convert strain rate, ϵ, to stress rate, σ, we assume a linear Hookean rheology, $\sigma_{ij} = \lambda\epsilon_{kk}\delta_{ij} + 2\mu\epsilon_{ij}$, where λ and μ are the Lamé parameters (assumed to be $\lambda = \mu = 3 \times 10^{10}$ Pa) and δ_{ij} is the Kronecker delta, summed over $i, j = 1 \ldots 3$. This can be expressed as a linear operator,

$$\mathbf{T} = \begin{bmatrix} \lambda+2\mu & \lambda & \lambda & 0 & 0 & 0 \\ \lambda & \lambda+2\mu & \lambda & 0 & 0 & 0 \\ \lambda & \lambda & \lambda+2\mu & 0 & 0 & 0 \\ 0 & 0 & 0 & 2\mu & 0 & 0 \\ 0 & 0 & 0 & 0 & 2\mu & 0 \\ 0 & 0 & 0 & 0 & 0 & 2\mu \end{bmatrix}, \tag{1}$$

multiplying the strain rate tensor components, $\boldsymbol{\epsilon} = [\epsilon_{11}, \epsilon_{22}, \epsilon_{33}, \epsilon_{12}, \epsilon_{13}, \epsilon_{23}]^{\mathsf{T}}$, so that stress rate can be calculated as $\boldsymbol{\sigma}_{\mathrm{TOT}} = \underline{\mathbf{T}}\mathbf{G}_{\mathrm{TOT}}u_{\mathrm{TOT}} = \mathbf{H}_{\mathrm{TOT}}u_{\mathrm{TOT}}$, where $\underline{\mathbf{T}}$ is a $6n_{\mathrm{SAF}} \times 6n_{\mathrm{SAF}}$ block diagonal matrix with entries $\mathbf{T}$, and $\mathbf{H} = \underline{\mathbf{T}}\mathbf{G}$ is a combined linear operator, and u_{TOT} is the vector of slip rates. $\mathbf{G}_{\mathrm{TOT}}$ is a $6n_{\mathrm{SAF}} \times 3n_{\mathrm{seg}}$ matrix, u_{TOT} is a $3n_{\mathrm{seg}} \times 1$ vector, and $\boldsymbol{\sigma}_{\mathrm{TOT}}$ is a $6n_{\mathrm{SAF}} \times 1$ vector, where n_{SAF} is the number of SAF segments and n_{seg} is the number of segments in the entire SCFS. For the case of self stress rate, we calculate

$$\boldsymbol{\sigma}_{\mathrm{SAF}} = \mathbf{H}_{\mathrm{SAF}}u_{\mathrm{SAF}}, \tag{2}$$

where $\mathbf{H}_{\mathrm{SAF}}$, a $6n_{\mathrm{SAF}} \times 3n_{\mathrm{SAF}}$ matrix, and u_{SAF}, a $3n_{\mathrm{SAF}} \times 1$ vector, are subsets of the full combined constitutive/partial derivative matrix and slip rate vector, respectively, with entries corresponding to SAF segments.

The results in Figs. 1 and 2 of the main text are expressed as shear stressing rates, τ, derived by rotating the full stress rate tensor onto each SAF segment's geometry, using the tensor transfor-

mation matrices

$$\mathbf{A} = \begin{bmatrix} \cos(\theta) & \sin(\theta) & 0 \\ -\sin(\theta) & \cos(\theta) & 0 \\ 0 & 0 & 1 \end{bmatrix},$$

$$\mathbf{B} = \begin{bmatrix} \cos(\delta) & 0 & \sin(\delta) \\ 0 & 1 & 0 \\ -\sin(\delta) & 0 & \cos(\delta) \end{bmatrix}, \quad (3)$$

$$\mathbf{C} = \begin{bmatrix} \cos(\beta) & -\sin(\beta) & 0 \\ \sin(\beta) & \cos(\beta) & 0 \\ 0 & 0 & 1 \end{bmatrix},$$

where θ is the segment strike, δ is the dip, and β is the rake of slip (equal to 180° for pure right-lateral slip). We determine τ and the fault normal stress, σ_{n}, by extracting the (2, 3) and (3, 3) components, respectively, of the transformed stress rate tensor, $\bar{\sigma}$, which is given by

$$\bar{\sigma} = \mathbf{C}^{\mathsf{T}}\mathbf{B}^{\mathsf{T}}\mathbf{A}^{\mathsf{T}}\sigma\mathbf{A}\mathbf{B}\mathbf{C}. \quad (4)$$

We define the shear stress rate difference (Fig. 2c) as

$$\Delta\tau' = \frac{\tau_{\mathrm{TOT}} - \tau_{\mathrm{SAF}}}{\tau_{\mathrm{TOT}}} \times 100, \quad (5)$$

the numerator of which reflects the rate of shear stress induced on the SAF by all other segments.

COULOMB FAILURE STRESS RATE

In addition to the shear stress accumulation rates presented in Fig. 2, we calculate Coulomb failure stress (CFS) accumulation rate, which reflects the balance between shear stress rate, τ, and normal stress rate, σ_{n}, modulated by the effective coefficient of friction, μ (***King et al.***, 1994):

$$\mathrm{CFS} = \tau - \mu\sigma_{\mathrm{n}}. \quad (6)$$

Because we calculate τ and σ_{n} for each SAF segment, CFS reflects the likelihood of right-lateral failure on that segment. We calculate CFS using an effective friction coefficient of $\mu = 0.4$ (***King et al.***, 1994). The patterns of self, total, and differential CFS (Fig. DR1) generally follow those of shear stress rate (Fig. 2).

CHANGES IN STRESS RATE WITH DEPTH

In Fig. 2, we show stress rates resolved on the SAF at the segment centroids, the depths of which are equal to half the locking depth. We also resolved shear stress on SAF planes at 25% and 75% of the locking depth and find broadly similar results (Figs. DR2, DR3). At 25% locking depth, stress rate magnitudes (Fig. DR2) are generally ∼15–20% lower than those of the 50% locking depth case (Fig. 2), and ∼60–70% higher at 75% locking depth (Fig. DR3). Stress rate differences are slightly larger for the 25% case (up to $\Delta\tau' = 47\%$ along the San Bernardino section away from

section junctions) (Fig. DR2c) and smaller for the 75% case (Fig. DR3c). These relationships indicate that fault system interaction is more effective in modulating stress close to the surface than at depth.

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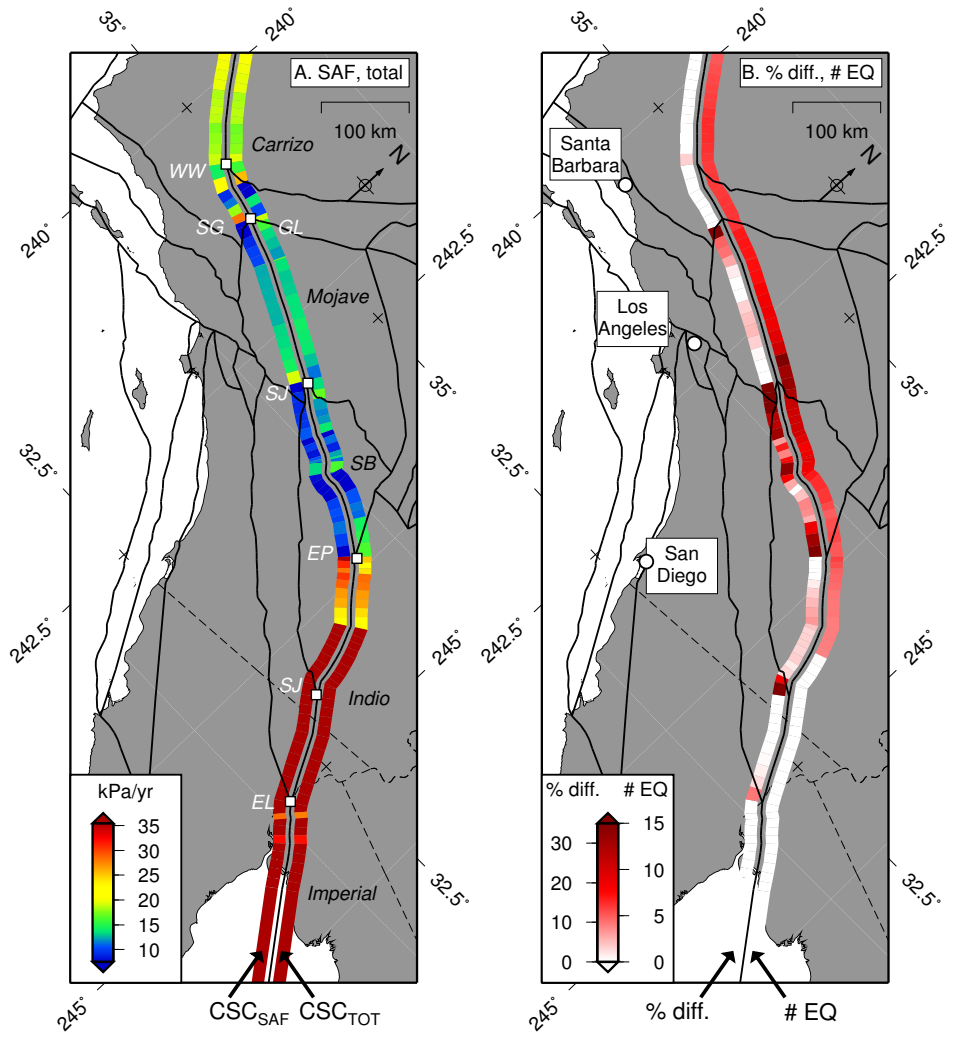

Figure DR1: Interseismic Coulomb failure stress (CFS) accumation rate resolved on the San Andreas fault (SAF). CFS rate calculated analytically (*Okada*, 1992) from the slip rates from our kinematically consistent block model, using an effective coefficient of friction of $\mu' = 0.4$. Two quantities are plotted in each panel, one to the left (southwest) and one to the right (northeast) of the SAF trace, as labeled at the bottom of the panel. A) Self CFS rate due to slip on SAF segments alone, $\mathrm{CSC_{SAF}}$, and total CFS rate due to slip on all faults, $\mathrm{CSC_{TOT}}$. Fault junctions are labeled in white; WW: White Wolf, GL: Garlock, SG: San Gabriel, SJ: San Jacinto, NF: North Frontal, EP: Eureka Peak, EL: Elsinore. Junctions bound labeled sections of the SAF (black italics); SB: San Bernardino. B) Difference between total and self-stress, normalized by self-stress ($\Delta\mathrm{CSC}' = (\mathrm{CSC_{TOT}} - \mathrm{CSC_{SAF}})/\mathrm{CSC_{SAF}} \times 100$, "% diff."), and mean number of paleoseismic earthquakes ("# EQ") on each segment, from the rupture models of *Biasi and Weldon* (2009).

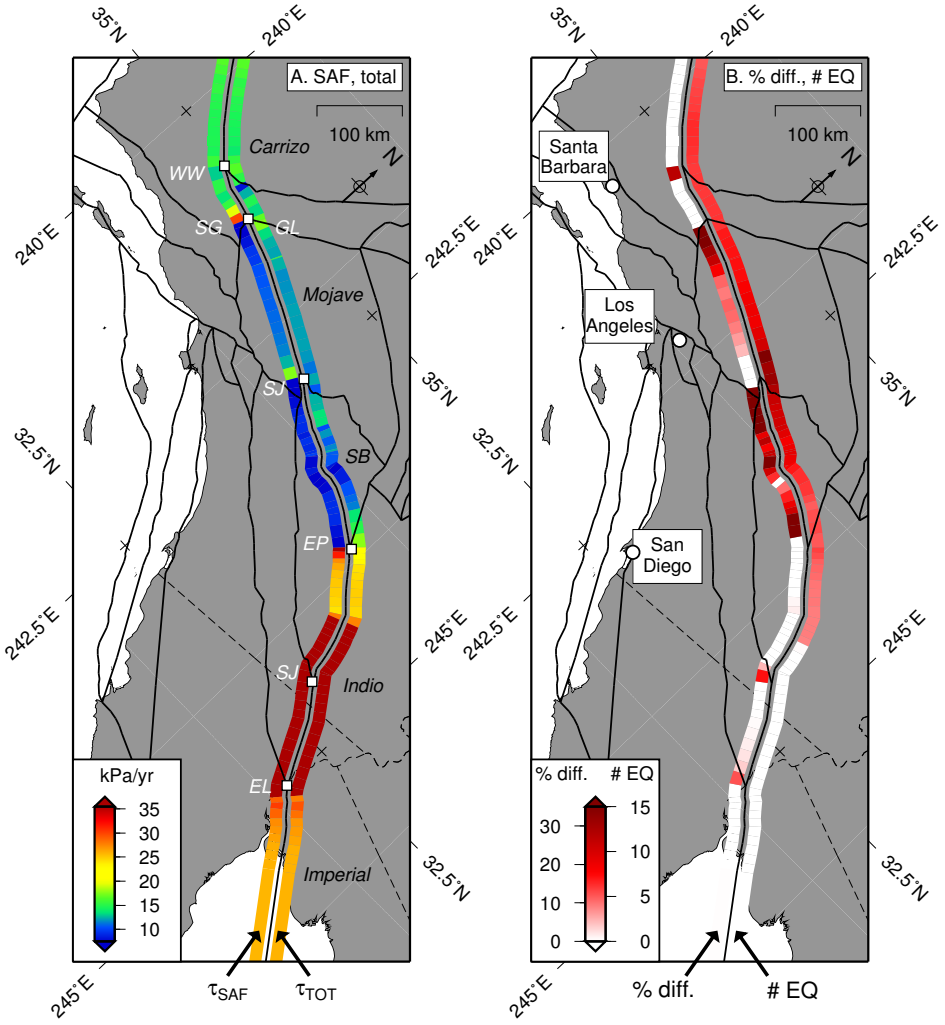

Figure DR2: Interseismic shear stressing rates calculated analytically (*Okada*, 1992) from the slip rates from our kinematically consistent block model. In contrast to Fig. 3 of the main text, in which shear stress was calculated at half the locking depth of each segment, values shown here reflect shear stress at 25% locking depth. A) Self shear stress rate due to slip on San Andreas fault (SAF) segments alone, τ_{SAF}, and total shear stress rate due to slip on all faults, τ_{TOT}. B) Difference between total and self-stress, normalized by self-stress ($\Delta\tau' = (\tau_{\mathrm{TOT}} - \tau_{\mathrm{SAF}})/\tau_{\mathrm{SAF}} \times 100$), and mean number of paleoseismic earthquakes on each segment, from the rupture models of *Biasi and Weldon* (2009). Labels and abbreviations are defined in Fig. DR1 caption.

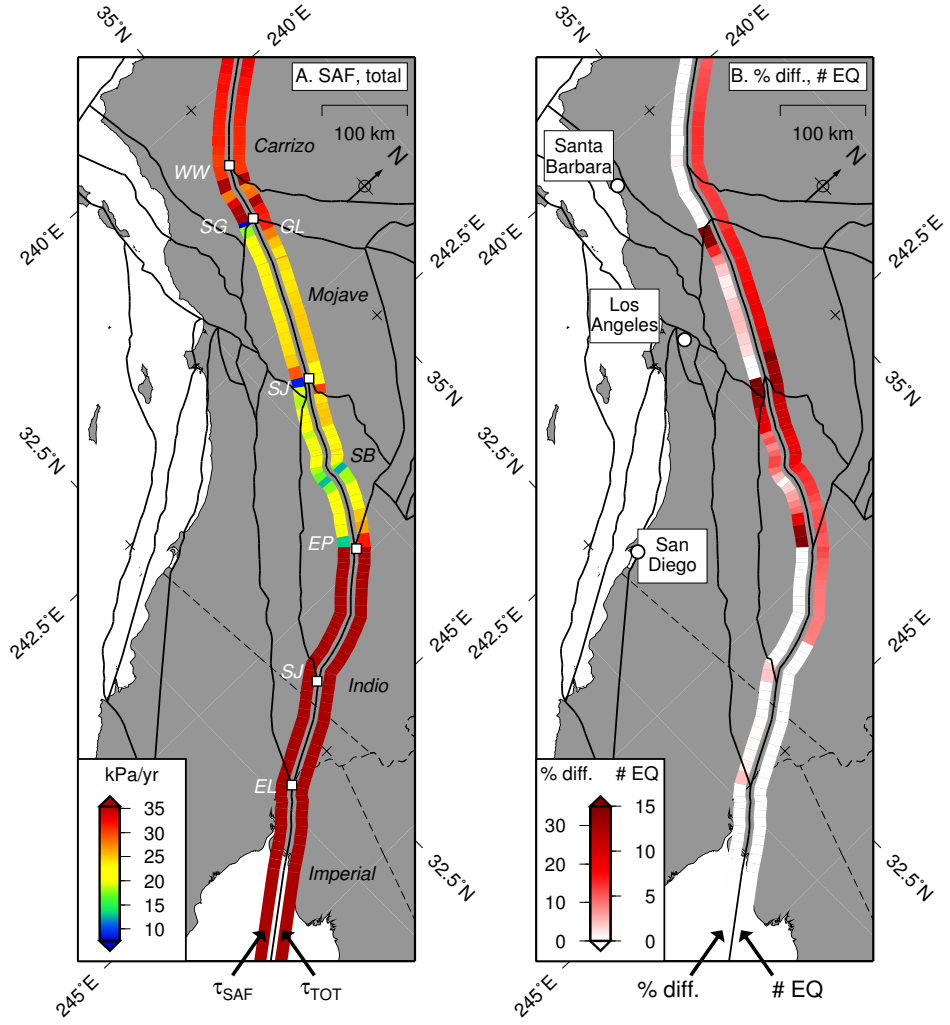

Figure DR3: Same as Fig. DR2, but shear stress rate is calculated at 75% locking depth on each segment.

Table DR1. Geometric parameters and estimated slip rates for southern California fault segments in our block model. Each named fault is divided into a number of segments (#), with endpoints given as (Lon-1, Lat-1) and (Lon-2, Lat-2), length as L (km), locking depth as Z (km), strike, and dip (following the right-hand rule). We estimate strike slip, U_s (with uncertainty S_s), and dip slip, U_d (with uncertainty S_d), on dipping faults, and U_s and tensile slip, U_t (with uncertainty S_t), on vertical faults. Segment names preceded by a letter label correspond to slip rates shown in Fig. 1b.

#	Lon-1	Lat-1	Lon-2	Lat-2	L(km)	Z(km)	strike	dip	U_s	S_s	U_d	S_d	U_t	S_t
a. SAF Carrizo														
1	239.815	35.639	239.869	35.583	7.908	22.0	141.8	90	31.5	0.2	0.0	0.0	-0.0	0.3
2	239.869	35.583	239.923	35.528	7.824	22.0	141.2	90	31.5	0.2	0.0	0.0	-0.1	0.3
3	239.923	35.528	239.977	35.473	7.826	22.0	141.2	90	31.5	0.2	0.0	0.0	0.0	0.3
4	239.977	35.473	240.031	35.418	7.828	22.0	141.2	90	31.5	0.2	0.0	0.0	0.2	0.3
5	240.031	35.418	240.085	35.362	7.917	22.0	141.7	90	31.4	0.2	0.0	0.0	0.7	0.3
6	240.085	35.362	240.140	35.307	7.889	22.0	140.7	90	31.5	0.2	0.0	0.0	0.3	0.4
7	240.140	35.307	240.188	35.264	6.467	22.0	137.5	90	31.4	0.2	0.0	0.0	-1.2	0.4
8	240.188	35.264	240.236	35.221	6.469	22.0	137.5	90	31.4	0.2	0.0	0.0	-1.1	0.4
9	240.236	35.221	240.284	35.177	6.553	22.0	138.1	90	31.4	0.2	0.0	0.0	-0.6	0.4
10	240.284	35.177	240.333	35.134	6.534	22.0	136.9	90	31.4	0.2	0.0	0.0	-1.1	0.4
11	240.333	35.134	240.399	35.085	8.109	22.0	132.1	90	31.2	0.2	0.0	0.0	-3.5	0.4
12	240.399	35.085	240.464	35.037	7.970	22.0	131.9	90	31.2	0.2	0.0	0.0	-3.4	0.4
13	240.464	35.037	240.529	34.988	8.047	22.0	132.5	90	31.2	0.2	0.0	0.0	-2.9	0.4
14	240.529	34.988	240.594	34.942	7.828	22.0	130.7	90	31.1	0.2	0.0	0.0	-3.7	0.5
b. SAF White Wolf-Garlock														
1	240.594	34.942	240.692	34.903	9.945	25.0	115.8	90	28.5	0.4	0.0	0.0	-8.4	0.7
2	240.692	34.903	240.790	34.864	9.949	25.0	115.7	90	28.5	0.4	0.0	0.0	-8.3	0.7
3	240.790	34.864	240.863	34.855	6.750	15.0	98.5	90	24.8	0.4	0.0	0.0	-16.2	0.7
4	240.863	34.855	240.936	34.846	6.750	15.0	98.5	90	24.8	0.4	0.0	0.0	-16.1	0.7
5	240.936	34.846	241.019	34.828	7.850	15.0	104.7	90	26.4	0.4	0.0	0.0	-13.2	0.7
6	241.019	34.828	241.103	34.811	7.913	15.0	103.8	90	26.1	0.4	0.0	0.0	-13.5	0.7
c. SAF Mojave														
1	241.103	34.811	241.144	34.792	4.303	15.0	119.3	90	16.4	0.8	0.0	0.0	-1.7	1.1
2	241.144	34.792	241.231	34.769	8.362	15.0	107.7	90	15.7	0.7	0.0	0.0	-4.9	1.1
3	241.231	34.769	241.318	34.746	8.364	15.0	107.7	90	15.7	0.7	0.0	0.0	-4.9	1.0
4	241.318	34.746	241.406	34.724	8.421	15.0	106.8	90	15.7	0.7	0.0	0.0	-5.1	1.0
5	241.406	34.724	241.493	34.701	8.368	15.0	107.7	90	15.7	0.7	0.0	0.0	-4.8	0.9
6	241.493	34.701	241.498	34.699	0.509	15.0	115.8	90	16.3	0.8	0.0	0.0	-2.5	0.8
7	241.498	34.699	241.597	34.662	9.958	15.0	114.3	90	16.2	0.8	0.0	0.0	-3.0	0.8
8	241.597	34.662	241.696	34.624	10.008	15.0	114.9	90	16.2	0.8	0.0	0.0	-2.8	0.7
9	241.696	34.624	241.795	34.587	9.965	15.0	114.3	90	16.2	0.8	0.0	0.0	-2.9	0.6
10	241.795	34.587	241.894	34.549	10.015	15.0	114.9	90	16.2	0.8	0.0	0.0	-2.7	0.6
11	241.894	34.549	241.993	34.512	9.973	15.0	114.3	90	16.2	0.8	0.0	0.0	-2.9	0.6
12	241.993	34.512	242.088	34.472	9.789	15.0	116.9	90	16.3	0.8	0.0	0.0	-2.1	0.6
13	242.088	34.472	242.184	34.432	9.875	15.0	116.7	90	16.3	0.8	0.0	0.0	-2.1	0.6
14	242.184	34.432	242.279	34.391	9.847	15.0	117.5	90	16.3	0.8	0.0	0.0	-1.8	0.7
15	242.279	34.391	242.375	34.351	9.882	15.0	116.7	90	16.3	0.8	0.0	0.0	-2.1	0.8
16	242.375	34.351	242.470	34.311	9.804	15.0	116.9	90	16.3	0.8	0.0	0.0	-2.0	0.9
d. SAF San Bernadino														
1	242.470	34.311	242.549	34.273	8.407	15.0	120.1	90	9.9	0.3	0.0	0.0	-3.3	0.6
2	242.549	34.273	242.613	34.232	7.446	15.0	127.6	90	10.2	0.3	0.0	0.0	-1.9	0.5
3	242.613	34.232	242.695	34.188	8.996	10.0	122.8	90	10.0	0.3	0.0	0.0	-2.6	0.5
4	242.695	34.188	242.754	34.161	6.210	10.0	118.8	90	9.8	0.3	0.0	0.0	-3.3	0.5
5	242.754	34.161	242.813	34.137	6.058	10.0	116.1	90	9.7	0.3	0.0	0.0	-3.6	0.4
6	242.813	34.137	242.883	34.102	7.535	10.0	121.0	90	9.9	0.3	0.0	0.0	-2.7	0.4
7	242.883	34.102	242.930	34.091	4.506	10.0	105.7	90	8.9	0.3	0.0	0.0	-5.2	0.4

Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

8 242.930 34.091 242.985 34.070 5.585 10.0 114.6 90 9.6 0.3 0.0 0.0 -3.7 0.4
9 242.985 34.070 243.053 34.049 6.696 10.0 110.3 90 9.3 0.3 0.0 0.0 -4.3 0.4
10 243.053 34.049 243.083 34.034 3.231 10.0 121.0 90 9.9 0.3 0.0 0.0 -2.4 0.3
11 243.083 34.034 243.098 34.026 1.645 10.0 122.6 90 10.0 0.3 0.0 0.0 -2.1 0.3
12 243.098 34.026 243.113 34.019 1.588 10.0 119.3 90 9.8 0.3 0.0 0.0 -2.7 0.3
13 243.113 34.019 243.177 33.959 8.903 10.0 138.4 90 10.2 0.3 0.0 0.0 0.7 0.2
14 243.177 33.959 243.202 33.951 2.475 10.0 111.0 90 9.4 0.3 0.0 0.0 -4.0 0.3
15 243.202 33.951 243.246 33.945 4.121 10.0 99.3 90 8.4 0.2 0.0 0.0 -5.7 0.3
16 243.246 33.945 243.307 33.950 5.666 10.0 84.4 90 6.6 0.2 0.0 0.0 -7.7 0.3
17 243.307 33.950 243.406 33.935 9.302 10.0 100.3 90 8.4 0.2 0.0 0.0 -5.4 0.3
18 243.406 33.935 243.502 33.900 9.689 10.0 113.6 90 9.5 0.3 0.0 0.0 -3.2 0.2
19 243.502 33.900 243.556 33.876 5.660 10.0 118.0 90 9.7 0.3 0.0 0.0 -2.4 0.2
20 243.556 33.876 243.611 33.852 5.743 10.0 117.6 90 9.7 0.3 0.0 0.0 -2.4 0.2
21 243.611 33.852 243.699 33.801 9.918 10.0 124.8 90 9.9 0.3 0.0 0.0 -1.1 0.2
22 243.699 33.801 243.788 33.750 9.998 10.0 124.4 90 9.9 0.3 0.0 0.0 -1.0 0.2
23 243.788 33.750 243.876 33.699 9.926 10.0 124.7 90 9.9 0.3 0.0 0.0 -0.8 0.2

e. SAF Indio
1 243.876 33.699 243.903 33.671 3.989 10.0 141.1 90 24.1 0.2 0.0 0.0 -4.4 0.2
2 243.903 33.671 243.945 33.638 5.346 10.0 133.2 90 23.3 0.2 0.0 0.0 -7.9 0.2
3 243.945 33.638 243.976 33.612 4.073 10.0 135.1 90 23.5 0.2 0.0 0.0 -7.4 0.2
4 243.976 33.612 244.019 33.567 6.391 10.0 141.3 90 24.2 0.2 0.0 0.0 -5.1 0.2
5 244.019 33.567 244.063 33.522 6.451 10.0 140.7 90 24.1 0.2 0.0 0.0 -5.7 0.2
6 244.063 33.522 244.117 33.472 7.479 10.0 137.8 90 23.8 0.2 0.0 0.0 -7.2 0.2
7 244.117 33.472 244.171 33.423 7.399 10.0 137.3 90 23.7 0.2 0.0 0.0 -7.9 0.3
8 244.171 33.423 244.228 33.376 7.436 10.0 134.5 90 23.3 0.2 0.0 0.0 -9.4 0.3
9 244.228 33.376 244.286 33.329 7.505 10.0 134.0 90 23.2 0.2 0.0 0.0 -10.0 0.3
10 244.286 33.329 244.308 33.286 5.191 10.0 156.7 90 25.3 0.2 0.0 0.0 -0.6 0.3
11 244.308 33.286 244.330 33.243 5.191 10.0 156.7 90 25.3 0.2 0.0 0.0 -0.9 0.3
12 244.330 33.243 244.352 33.197 5.499 5.0 158.1 90 25.4 0.2 0.0 0.0 -0.5 0.4
13 244.352 33.197 244.374 33.151 5.499 5.0 158.1 90 25.4 0.2 0.0 0.0 -0.8 0.4
14 244.374 33.151 244.399 33.084 7.788 5.0 162.6 90 25.4 0.2 0.0 0.0 0.8 0.4
15 244.399 33.084 244.423 33.017 7.761 5.0 163.2 90 25.4 0.2 0.0 0.0 0.7 0.4
16 244.423 33.017 244.435 32.958 6.639 2.5 170.3 90 25.1 0.2 0.0 0.0 3.4 0.4
17 244.435 32.958 244.446 32.899 6.624 2.5 171.1 90 25.1 0.2 0.0 0.0 3.4 0.4
18 244.446 32.899 244.465 32.872 3.482 2.5 149.3 90 24.5 0.2 0.0 0.0 -6.3 0.5
19 244.465 32.872 244.522 32.807 8.969 2.5 143.5 90 23.7 0.2 0.0 0.0 -9.1 0.5

f. SAF S. Indio
1 244.522 32.807 244.571 32.753 7.546 5.0 142.5 90 33.7 0.2 0.0 0.0 6.9 0.3
2 244.571 32.753 244.621 32.700 7.518 5.0 141.4 90 33.8 0.2 0.0 0.0 6.4 0.3
3 244.621 32.700 244.670 32.646 7.549 5.0 142.5 90 33.7 0.2 0.0 0.0 7.2 0.3
4 244.670 32.646 244.720 32.592 7.608 5.0 141.9 90 33.8 0.2 0.0 0.0 7.0 0.3
5 244.720 32.592 244.768 32.516 9.558 5.0 151.8 90 32.1 0.2 0.0 0.0 12.9 0.3
6 244.768 32.516 244.816 32.440 9.560 5.0 151.8 90 32.1 0.2 0.0 0.0 13.1 0.4
7 244.816 32.440 244.863 32.364 9.517 5.0 152.3 90 32.0 0.2 0.0 0.0 13.5 0.4
8 244.863 32.364 244.911 32.288 9.563 5.0 151.8 90 32.1 0.2 0.0 0.0 13.4 0.4
9 244.911 32.288 244.959 32.212 9.565 5.0 151.8 90 32.1 0.2 0.0 0.0 13.6 0.4
10 244.959 32.212 245.007 32.136 9.567 5.0 151.7 90 32.1 0.2 0.0 0.0 13.8 0.4

g. SAF Imperial
1 245.007 32.136 245.064 32.079 8.300 15.0 139.6 90 38.6 0.4 0.0 0.0 6.8 0.5
2 245.064 32.079 245.106 32.057 4.656 15.0 121.6 90 38.8 0.3 0.0 0.0 -5.4 0.5
3 245.106 32.057 245.147 32.013 6.229 15.0 141.5 90 38.3 0.4 0.0 0.0 8.3 0.5
4 245.147 32.013 245.199 31.965 7.244 15.0 137.3 90 38.8 0.4 0.0 0.0 5.5 0.5
5 245.199 31.965 245.251 31.926 6.548 15.0 131.3 90 39.2 0.4 0.0 0.0 1.6 0.6
6 245.251 31.926 245.298 31.876 7.107 15.0 141.3 90 38.3 0.4 0.0 0.0 8.5 0.5
7 245.298 31.876 245.344 31.826 7.049 15.0 141.8 90 38.2 0.4 0.0 0.0 9.0 0.6

Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

8 245.344 31.826 245.389 31.769 7.623 15.0 146.0 90 37.5 0.4 0.0 0.0 11.8 0.6
9 245.389 31.769 245.434 31.712 7.624 15.0 146.0 90 37.5 0.4 0.0 0.0 12.0 0.6
10 245.434 31.712 245.479 31.655 7.626 15.0 146.0 90 37.5 0.4 0.0 0.0 12.1 0.6

h. San Jacinto
1 242.470 34.311 242.520 34.254 7.821 15.0 143.9 90 12.0 0.8 0.0 0.0 2.6 1.0
2 242.520 34.254 242.566 34.232 4.890 15.0 119.9 90 12.1 0.7 0.0 0.0 -2.1 1.1
3 242.566 34.232 242.614 34.195 6.034 15.0 132.8 90 12.3 0.8 0.0 0.0 1.0 1.1
4 242.614 34.195 242.636 34.161 4.282 15.0 151.7 90 13.3 0.4 0.0 0.0 2.2 0.1
5 242.636 34.161 242.656 34.120 4.908 15.0 157.9 90 13.0 0.4 0.0 0.0 3.9 0.1
6 242.656 34.120 242.778 34.008 16.769 15.0 137.8 90 13.6 0.4 0.0 0.0 0.0 0.0
7 242.778 34.008 242.928 33.894 18.766 15.0 132.3 90 13.6 0.4 0.0 0.0 -0.0 0.0
8 242.928 33.894 242.988 33.847 7.616 15.0 133.2 90 13.6 0.4 0.0 0.0 1.2 0.0
9 242.988 33.847 243.073 33.791 10.025 15.0 128.3 90 13.7 0.4 0.0 0.0 0.6 0.0
10 243.073 33.791 243.104 33.743 6.049 15.0 151.6 90 12.1 0.3 0.0 0.0 6.5 0.2
11 243.104 33.743 243.159 33.702 6.831 15.0 131.7 90 13.7 0.4 0.0 0.0 2.5 0.1
12 243.159 33.702 243.451 33.513 34.261 15.0 127.6 90 13.9 0.4 0.0 0.0 3.0 0.1
13 243.451 33.513 243.457 33.471 4.692 15.0 173.2 90 6.8 0.2 0.0 0.0 13.0 0.4
14 243.457 33.471 243.530 33.422 8.695 15.0 128.7 90 14.1 0.4 0.0 0.0 5.0 0.1
15 243.530 33.422 243.717 33.265 24.622 15.0 135.0 90 13.4 0.4 0.0 0.0 7.7 0.2
16 243.717 33.265 243.795 33.208 9.634 15.0 131.0 90 14.0 0.4 0.0 0.0 8.0 0.2
17 243.795 33.208 243.836 33.184 4.658 15.0 124.8 90 14.8 0.4 0.0 0.0 7.0 0.2
18 243.836 33.184 243.871 33.145 5.419 15.0 142.9 90 11.8 0.3 0.0 0.0 11.6 0.3
19 243.871 33.145 243.942 33.099 8.363 15.0 127.6 90 14.6 0.4 0.0 0.0 8.5 0.2
20 243.942 33.099 243.989 33.031 8.726 15.0 149.8 90 10.1 0.3 0.0 0.0 14.0 0.4
21 243.989 33.031 244.057 33.003 7.072 15.0 116.0 90 16.4 0.5 0.0 0.0 6.5 0.2
22 244.057 33.003 244.191 32.928 15.037 15.0 123.5 90 15.4 0.4 0.0 0.0 9.4 0.3
23 244.191 32.928 244.302 32.886 11.381 15.0 114.1 90 16.8 0.5 0.0 0.0 7.7 0.2
24 244.302 32.886 244.336 32.899 3.493 15.0 65.6 90 17.2 0.5 0.0 0.0 -7.2 0.2
25 244.336 32.899 244.423 32.851 9.728 10.0 123.2 90 15.1 0.4 0.0 0.0 11.1 0.3
26 244.423 32.851 244.522 32.807 10.476 2.5 117.7 90 16.2 0.5 0.0 0.0 10.4 0.3

i. Elsinore
1 242.191 34.131 242.223 34.082 6.185 15.0 151.5 90 1.0 1.7 0.0 0.0 4.1 0.9
2 242.223 34.082 242.255 34.033 6.186 15.0 151.5 90 1.0 1.7 0.0 0.0 3.0 0.8
3 242.255 34.033 242.274 34.000 4.059 15.0 154.4 67 0.8 1.7 -5.6 2.0 0.0 0.0
4 242.274 34.000 242.292 33.967 4.021 15.0 155.6 67 0.8 1.7 -3.8 2.2 0.0 0.0
5 242.292 33.967 242.352 33.909 8.495 15.0 139.2 61 1.1 1.7 -0.2 2.3 0.0 0.0
6 242.352 33.909 242.403 33.854 7.712 15.0 142.3 53 1.1 1.7 2.1 2.3 0.0 0.0
7 242.403 33.854 242.452 33.815 6.268 15.0 133.6 90 0.8 1.6 0.0 0.0 -2.6 1.8
8 242.452 33.815 242.499 33.782 5.687 15.0 130.1 90 4.1 0.5 0.0 0.0 0.0 0.0
9 242.499 33.782 242.561 33.734 7.832 15.0 132.8 90 4.1 0.5 0.0 0.0 0.2 0.0
10 242.561 33.734 242.611 33.669 8.571 15.0 147.2 90 4.0 0.5 0.0 0.0 1.2 0.1
11 242.611 33.669 242.646 33.646 4.129 15.0 128.2 90 4.1 0.5 0.0 0.0 -0.2 0.0
12 242.646 33.646 242.762 33.571 13.605 15.0 127.7 90 4.1 0.5 0.0 0.0 -0.3 0.0
13 242.762 33.571 242.804 33.519 6.963 15.0 145.9 90 4.0 0.5 0.0 0.0 1.0 0.1
14 242.804 33.519 242.844 33.487 5.139 15.0 133.7 90 4.1 0.5 0.0 0.0 0.1 0.0
15 242.844 33.487 242.934 33.420 11.191 15.0 131.6 90 4.1 0.5 0.0 0.0 -0.0 0.0
16 242.934 33.420 242.969 33.386 4.982 15.0 139.2 90 4.1 0.5 0.0 0.0 0.5 0.1
17 242.969 33.386 242.998 33.357 4.199 15.0 140.0 90 4.1 0.5 0.0 0.0 0.5 0.1
18 242.998 33.357 243.048 33.334 5.308 15.0 118.7 90 4.0 0.5 0.0 0.0 -1.0 0.1
19 243.048 33.334 243.156 33.281 11.650 15.0 120.3 90 4.0 0.5 0.0 0.0 -0.9 0.1
20 243.156 33.281 243.209 33.248 6.147 15.0 126.5 90 4.1 0.5 0.0 0.0 -0.5 0.1
21 243.209 33.248 243.268 33.204 7.353 15.0 131.6 90 4.1 0.5 0.0 0.0 -0.1 0.0
22 243.268 33.204 243.310 33.169 5.514 15.0 134.7 90 4.1 0.5 0.0 0.0 0.1 0.0
23 243.310 33.169 243.372 33.124 7.640 15.0 130.8 90 4.1 0.5 0.0 0.0 -0.2 0.0
24 243.372 33.124 243.447 33.071 9.142 15.0 130.0 90 4.1 0.5 0.0 0.0 -0.3 0.0
25 243.447 33.071 243.496 33.026 6.772 15.0 137.5 90 4.1 0.5 0.0 0.0 0.2 0.0

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# Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

26 243.496 33.026 243.544 32.992 5.860 15.0 130.0 90 4.1 0.5 0.0 0.0 -0.4 0.0
27 243.544 32.992 243.556 32.988 1.206 15.0 111.6 90 3.8 0.4 0.0 0.0 -1.7 0.2
28 243.556 32.988 243.687 32.969 12.425 15.0 99.7 90 3.4 0.4 0.0 0.0 -2.4 0.3
29 243.687 32.969 243.755 32.891 10.737 15.0 143.7 90 4.1 0.5 0.0 0.0 0.6 0.1
30 243.755 32.891 243.822 32.839 8.519 15.0 132.6 90 4.1 0.5 0.0 0.0 -0.3 0.0
31 243.822 32.839 243.901 32.816 7.825 15.0 109.0 90 3.7 0.4 0.0 0.0 -1.9 0.2
32 243.901 32.816 243.959 32.787 6.313 15.0 120.6 90 4.0 0.5 0.0 0.0 -1.2 0.1
33 243.959 32.787 244.106 32.653 20.267 15.0 137.1 90 4.2 0.5 0.0 0.0 -0.0 0.0
34 244.106 32.653 244.251 32.566 16.683 15.0 125.3 90 4.1 0.5 0.0 0.0 -0.9 0.1
35 244.251 32.566 244.435 32.391 25.995 15.0 138.2 90 4.2 0.5 0.0 0.0 -0.0 0.0
36 244.435 32.391 244.546 32.315 13.424 15.0 128.9 90 4.1 0.5 0.0 0.0 -0.8 0.1
37 244.546 32.315 245.007 32.136 47.773 15.0 114.4 90 3.8 0.4 0.0 0.0 -1.8 0.2

Whittier
1 241.862 34.118 241.883 34.086 4.044 15.0 151.4 90 11.0 1.8 0.0 0.0 0.0 0.0
2 241.883 34.086 241.931 34.028 7.812 15.0 145.4 90 11.0 1.8 0.0 0.0 0.5 0.3
3 241.931 34.028 241.952 33.997 3.948 15.0 150.6 90 10.8 1.8 0.0 0.0 3.1 0.8
4 241.952 33.997 242.008 33.973 5.819 15.0 117.2 111 11.1 1.8 5.9 2.7 0.0 0.0
5 242.008 33.973 242.148 33.931 13.754 15.0 109.8 90 10.8 1.8 0.0 0.0 -0.8 1.4
6 242.148 33.931 242.208 33.909 6.061 15.0 113.7 90 4.2 1.6 0.0 0.0 -2.7 1.1
7 242.208 33.909 242.283 33.875 7.896 15.0 118.5 90 4.4 1.6 0.0 0.0 -1.1 1.2
8 242.283 33.875 242.364 33.853 7.882 15.0 108.0 90 4.2 1.5 0.0 0.0 -0.6 1.5
9 242.364 33.853 242.410 33.831 4.907 15.0 119.8 90 4.1 1.6 0.0 0.0 1.4 1.7
10 242.410 33.831 242.452 33.815 4.274 15.0 114.5 90 4.3 1.6 0.0 0.0 1.8 1.9

Puente Hills
1 241.611 34.074 241.664 34.034 6.605 15.0 132.2 90 -6.8 1.6 0.0 0.0 -2.2 1.5
2 241.664 34.034 241.736 33.992 8.120 15.0 125.0 144 -7.1 1.6 2.6 1.7 0.0 0.0
3 241.736 33.992 241.798 33.960 6.740 15.0 121.8 145 -7.2 1.6 3.1 1.6 0.0 0.0
4 241.798 33.960 241.956 33.895 16.291 15.0 116.2 90 -7.4 1.6 0.0 0.0 -3.0 1.3
5 241.956 33.895 242.033 33.876 7.428 15.0 106.5 147 -8.0 1.7 3.5 1.8 0.0 0.0
6 242.033 33.876 242.084 33.892 5.041 15.0 69.4 148 -8.4 2.0 -2.3 1.5 0.0 0.0
7 242.084 33.892 242.148 33.931 7.331 15.0 53.8 90 -7.6 2.0 0.0 0.0 3.5 1.3

Raymond Hills
1 241.611 34.074 241.716 34.111 10.523 15.0 67.0 134 2.6 1.4 7.5 2.1 0.0 0.0
2 241.716 34.111 241.733 34.115 1.630 15.0 74.2 90 3.2 1.4 0.0 0.0 -4.3 1.3
3 241.733 34.115 241.778 34.123 4.245 15.0 77.9 90 3.5 1.5 0.0 0.0 -3.9 1.3
4 241.778 34.123 241.806 34.132 2.769 15.0 68.9 90 2.9 1.4 0.0 0.0 -4.1 1.3
5 241.806 34.132 241.838 34.128 2.985 15.0 98.5 90 4.5 1.5 0.0 0.0 -1.9 1.2
6 241.838 34.128 241.861 34.119 2.345 15.0 115.2 90 4.8 1.5 0.0 0.0 -0.4 1.2
7 241.861 34.119 241.877 34.120 1.480 15.0 85.7 90 0.1 1.4 0.0 0.0 7.6 2.0
8 241.877 34.120 241.947 34.140 6.828 15.0 71.0 90 2.0 1.4 0.0 0.0 6.5 1.9
9 241.947 34.140 242.025 34.164 7.670 15.0 69.7 90 2.1 1.4 0.0 0.0 5.0 1.8

Santa Monica
1 240.485 33.989 240.653 33.980 15.556 15.0 93.6 90 -1.7 1.0 0.0 0.0 7.9 2.3
2 240.653 33.980 240.740 33.985 8.058 15.0 86.0 90 -0.7 1.0 0.0 0.0 7.4 2.1
3 240.740 33.985 240.772 33.941 5.707 15.0 148.8 90 -6.7 1.8 0.0 0.0 2.5 1.3
4 240.772 33.941 240.855 33.977 8.649 15.0 62.5 130 1.9 1.2 -10.2 2.7 0.0 0.0
5 240.855 33.977 240.980 33.972 11.565 15.0 92.7 135 -1.5 1.0 -8.7 2.4 0.0 0.0
6 240.980 33.972 241.065 33.949 8.260 15.0 108.0 132 -3.0 1.1 -7.4 2.2 0.0 0.0
7 241.065 33.949 241.181 33.960 10.792 15.0 83.5 134 -0.8 1.0 -7.5 2.1 0.0 0.0
8 241.181 33.960 241.257 33.975 7.218 15.0 76.7 134 -0.2 1.0 -6.9 1.9 0.0 0.0
9 241.257 33.975 241.305 33.985 4.572 15.0 75.9 134 -0.1 1.0 -6.5 1.9 0.0 0.0
10 241.305 33.985 241.448 34.021 13.801 15.0 73.1 139 0.1 1.0 -5.3 1.7 0.0 0.0
11 241.448 34.021 241.459 34.032 1.588 15.0 39.8 90 1.6 0.9 0.0 0.0 1.4 1.1
12 241.459 34.032 241.525 34.036 6.111 15.0 85.8 116 0.2 1.0 -4.4 2.2 0.0 0.0
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Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

13 241.525 34.036 241.566 34.052 4.181 15.0 64.9 90 0.8 0.9 0.0 0.0 1.5 1.0
14 241.566 34.052 241.611 34.074 4.818 15.0 59.6 136 0.9 0.9 -1.7 1.4 0.0 0.0

Malibu
1 239.489 34.022 239.569 33.991 8.151 15.0 114.9 90 1.7 0.7 0.0 0.0 -1.0 0.9
2 239.569 33.991 239.642 33.989 6.749 15.0 91.9 90 1.1 0.5 0.0 0.0 -1.8 1.0
3 239.642 33.989 239.700 33.986 5.369 15.0 93.5 90 1.2 0.5 0.0 0.0 -2.0 1.0
4 239.700 33.986 239.770 33.985 6.469 15.0 91.0 90 1.1 0.5 0.0 0.0 -2.2 1.0
5 239.770 33.985 239.820 33.974 4.779 15.0 104.8 90 1.6 0.6 0.0 0.0 -2.1 0.9
6 239.820 33.974 239.889 33.973 6.377 15.0 91.0 90 1.0 0.5 0.0 0.0 -2.6 0.9
7 239.889 33.973 240.034 33.987 13.489 15.0 83.3 90 0.6 0.5 0.0 0.0 -3.1 0.9
8 240.034 33.987 240.094 34.013 6.248 15.0 62.5 90 -0.6 0.5 0.0 0.0 -3.5 0.8
9 240.094 34.013 240.126 34.033 3.695 15.0 53.1 90 -1.2 0.5 0.0 0.0 -3.5 0.7
10 240.126 34.033 240.222 34.017 9.042 15.0 101.3 90 1.9 0.5 0.0 0.0 -3.4 0.7
11 240.222 34.017 240.275 34.007 5.020 15.0 102.8 90 2.0 0.5 0.0 0.0 -3.6 0.6
12 240.275 34.007 240.388 33.987 10.673 15.0 102.0 90 1.9 0.5 0.0 0.0 -3.9 0.6
13 240.388 33.987 240.485 33.989 8.965 15.0 88.6 90 0.9 0.5 0.0 0.0 -4.6 0.6

Oak Ridge
1 239.467 34.095 239.880 34.251 41.825 15.0 65.4 90 -4.8 0.6 0.0 0.0 -7.1 1.1
2 239.880 34.251 239.939 34.277 6.152 15.0 62.0 161 -5.2 0.6 6.3 1.0 0.0 0.0
3 239.939 34.277 240.021 34.306 8.206 15.0 66.9 159 -4.7 0.6 6.5 0.9 0.0 0.0
4 240.021 34.306 240.035 34.318 1.853 15.0 44.1 90 -6.6 0.7 0.0 0.0 -3.6 0.8
5 240.035 34.318 240.134 34.314 9.123 15.0 92.8 90 -1.7 0.6 0.0 0.0 -7.1 0.8
6 240.134 34.314 240.207 34.296 7.010 15.0 106.5 90 0.0 0.6 0.0 0.0 -7.0 0.8
7 240.207 34.296 240.259 34.264 5.960 15.0 126.5 90 2.4 0.7 0.0 0.0 -6.4 0.7
8 240.259 34.264 240.322 34.254 5.908 15.0 100.8 33 -0.6 0.6 7.8 0.8 0.0 0.0
9 240.322 34.254 240.394 34.263 6.706 15.0 81.4 33 -2.7 0.6 6.9 0.8 0.0 0.0
10 240.394 34.263 240.485 34.252 8.470 15.0 98.3 33 -0.9 0.6 7.2 0.8 0.0 0.0
11 240.485 34.252 240.568 34.236 7.849 15.0 103.0 90 -0.5 0.6 0.0 0.0 -5.8 0.6
12 240.568 34.236 240.649 34.233 7.470 15.0 92.5 32 -1.5 0.6 6.3 0.7 0.0 0.0
13 240.649 34.233 240.727 34.253 7.520 15.0 72.8 34 -3.2 0.6 5.2 0.7 0.0 0.0
14 240.727 34.253 240.801 34.264 6.924 15.0 79.8 90 -2.6 0.6 0.0 0.0 -4.3 0.6
15 240.801 34.264 240.907 34.317 11.393 15.0 58.9 90 -4.0 0.6 0.0 0.0 -2.8 0.6
16 240.907 34.317 240.957 34.351 5.949 15.0 50.6 90 -4.3 0.6 0.0 0.0 -1.9 0.7
17 240.957 34.351 241.015 34.347 5.355 15.0 94.7 68 -1.9 0.6 11.1 1.8 0.0 0.0
18 241.015 34.347 241.095 34.383 8.373 15.0 61.5 90 -3.8 0.6 0.0 0.0 -2.2 0.7
19 241.095 34.383 241.229 34.372 12.385 15.0 95.6 90 -2.0 0.6 0.0 0.0 -3.6 0.7
20 241.229 34.372 241.267 34.344 4.676 15.0 131.6 128 0.4 0.7 6.2 1.1 0.0 0.0
21 241.267 34.344 241.319 34.355 4.937 15.0 75.7 133 -2.9 0.6 3.3 1.2 0.0 0.0
22 241.319 34.355 241.388 34.310 8.077 15.0 128.2 121 0.0 0.7 6.7 1.4 0.0 0.0
23 241.388 34.310 241.453 34.302 6.049 15.0 98.4 126 -1.7 0.6 4.7 1.5 0.0 0.0
24 241.453 34.302 241.511 34.328 6.068 15.0 61.6 124 -2.9 0.7 1.8 1.6 0.0 0.0
25 241.511 34.328 241.562 34.335 4.757 15.0 80.6 90 -2.5 0.6 0.0 0.0 -1.7 1.0

Santa Ynez
1 239.357 34.460 239.693 34.514 31.439 15.0 78.9 90 -1.8 0.6 0.0 0.0 3.8 0.8
2 239.693 34.514 239.737 34.516 4.046 15.0 86.8 90 -2.2 0.5 0.0 0.0 3.1 0.7
3 239.737 34.516 239.792 34.526 5.170 15.0 77.6 90 -1.7 0.6 0.0 0.0 3.4 0.6
4 239.792 34.526 239.880 34.546 8.378 15.0 74.6 90 -1.5 0.6 0.0 0.0 3.3 0.6
5 239.880 34.546 239.969 34.564 8.409 15.0 76.2 90 -1.6 0.6 0.0 0.0 3.1 0.5
6 239.969 34.564 240.023 34.562 4.961 15.0 92.5 90 -2.4 0.5 0.0 0.0 2.4 0.5
7 240.023 34.562 240.065 34.549 4.116 15.0 110.5 90 -3.0 0.5 0.0 0.0 1.4 0.6
8 240.065 34.549 240.133 34.555 6.277 15.0 83.9 90 -2.1 0.5 0.0 0.0 2.5 0.5
9 240.133 34.555 240.194 34.550 5.626 15.0 95.6 70 -2.5 0.5 -5.6 1.4 0.0 0.0
10 240.194 34.550 240.268 34.522 7.470 15.0 114.6 90 -3.0 0.5 0.0 0.0 0.9 0.5
11 240.268 34.522 240.364 34.501 9.118 15.0 104.8 70 -2.8 0.5 -3.5 1.3 0.0 0.0
12 240.364 34.501 240.447 34.490 7.720 15.0 99.1 69 -2.7 0.5 -3.7 1.2 0.0 0.0

Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

13 240.447 34.490 240.499 34.491 4.778 15.0 88.7 69 -2.4 0.5 -4.7 1.2 0.0 0.0
14 240.499 34.491 240.565 34.500 6.143 15.0 80.6 90 -2.2 0.5 0.0 0.0 1.9 0.4
15 240.565 34.500 240.680 34.508 10.598 15.0 85.2 90 -2.3 0.5 0.0 0.0 1.5 0.4
16 240.680 34.508 240.770 34.531 8.649 15.0 72.8 90 -1.9 0.5 0.0 0.0 1.8 0.4
17 240.770 34.531 240.836 34.533 6.063 15.0 87.9 90 -2.3 0.5 0.0 0.0 1.1 0.5
18 240.836 34.533 241.028 34.582 18.440 15.0 72.8 90 -2.0 0.5 0.0 0.0 1.4 0.5
19 241.028 34.582 241.109 34.618 8.435 15.0 61.7 137 -1.7 0.6 -2.0 0.8 0.0 0.0
20 241.109 34.618 241.157 34.623 4.437 15.0 82.8 131 -2.1 0.5 -1.0 1.0 0.0 0.0
21 241.157 34.623 241.210 34.621 4.865 15.0 92.6 129 -2.1 0.5 -0.3 1.1 0.0 0.0
22 241.210 34.621 241.235 34.617 2.335 15.0 100.9 90 -2.1 0.6 0.0 0.0 -0.2 0.7

Hosgri
1 238.998 35.356 239.040 35.273 9.969 15.0 157.5 90 5.7 0.3 0.0 0.0 -2.7 0.3
2 239.040 35.273 239.084 35.194 9.636 15.0 155.4 90 5.6 0.3 0.0 0.0 -3.1 0.3
3 239.084 35.194 239.121 35.145 6.396 15.0 148.2 90 5.1 0.3 0.0 0.0 -3.9 0.3
4 239.121 35.145 239.134 35.110 4.060 15.0 163.0 90 6.0 0.3 0.0 0.0 -2.6 0.3
5 239.134 35.110 239.166 35.049 7.370 15.0 156.7 90 5.7 0.3 0.0 0.0 -3.3 0.3
6 239.166 35.049 239.195 34.977 8.415 15.0 161.7 90 5.9 0.3 0.0 0.0 -3.0 0.3
7 239.195 34.977 239.205 34.936 4.639 15.0 168.6 90 6.3 0.3 0.0 0.0 -2.4 0.3
8 239.205 34.936 239.234 34.895 5.264 15.0 149.8 90 5.1 0.3 0.0 0.0 -4.3 0.3
9 239.234 34.895 239.254 34.857 4.595 15.0 156.5 90 5.6 0.3 0.0 0.0 -3.8 0.3
10 239.254 34.857 239.267 34.797 6.762 15.0 169.9 90 6.4 0.3 0.0 0.0 -2.5 0.3
11 239.267 34.797 239.308 34.709 10.459 15.0 159.0 90 5.8 0.3 0.0 0.0 -3.8 0.4
12 239.308 34.709 239.312 34.665 4.895 15.0 175.7 90 6.6 0.3 0.0 0.0 -2.2 0.4
13 239.312 34.665 239.313 34.606 6.546 15.0 179.2 90 6.8 0.3 0.0 0.0 -1.9 0.4
14 239.313 34.606 239.335 34.533 8.346 15.0 166.0 90 6.1 0.3 0.0 0.0 -3.5 0.4
15 239.335 34.533 239.357 34.460 8.346 15.0 166.0 90 6.1 0.3 0.0 0.0 -3.7 0.4
16 239.357 34.460 239.379 34.387 8.347 15.0 166.0 90 10.3 0.9 0.0 0.0 -2.2 0.4
17 239.379 34.387 239.401 34.314 8.347 15.0 166.0 90 10.3 0.9 0.0 0.0 -2.2 0.4
18 239.401 34.314 239.423 34.241 8.347 15.0 165.9 90 10.3 0.9 0.0 0.0 -2.2 0.3
19 239.423 34.241 239.445 34.168 8.348 15.0 165.9 90 10.3 0.9 0.0 0.0 -2.2 0.3
20 239.445 34.168 239.467 34.095 8.348 15.0 165.9 90 10.3 0.9 0.0 0.0 -2.2 0.3
21 239.467 34.095 239.489 34.022 8.348 15.0 165.9 90 1.7 1.1 0.0 0.0 0.9 0.5

Santa Cruz-Santa Catalina
1 240.485 33.989 240.519 33.956 4.824 15.0 139.3 90 11.4 1.9 0.0 0.0 -6.8 1.7
2 240.519 33.956 240.637 33.893 12.957 15.0 122.6 90 9.0 1.4 0.0 0.0 -9.7 1.9
3 240.637 33.893 240.721 33.844 9.484 15.0 124.9 90 9.4 1.5 0.0 0.0 -9.1 1.7
4 240.721 33.844 240.797 33.791 9.169 15.0 129.9 90 10.1 1.6 0.0 0.0 -8.1 1.4
5 240.797 33.791 240.866 33.747 8.042 15.0 127.3 90 9.7 1.5 0.0 0.0 -8.3 1.3
6 240.866 33.747 240.908 33.716 5.194 15.0 131.4 90 10.3 1.6 0.0 0.0 -7.5 1.1
7 240.908 33.716 240.951 33.686 5.193 15.0 129.8 90 10.1 1.6 0.0 0.0 -7.7 1.1
8 240.951 33.686 240.990 33.652 5.225 15.0 136.2 90 10.8 1.6 0.0 0.0 -6.4 0.9
9 240.990 33.652 241.142 33.564 17.154 15.0 124.6 90 9.3 1.5 0.0 0.0 -8.2 1.0
10 241.142 33.564 241.152 33.528 4.099 15.0 166.9 90 12.3 1.5 0.0 0.0 0.3 0.9
11 241.152 33.528 241.202 33.500 5.588 15.0 123.8 90 9.3 1.6 0.0 0.0 -8.1 0.9
12 241.202 33.500 241.265 33.416 11.005 15.0 147.8 90 11.7 1.6 0.0 0.0 -3.5 0.9
13 241.265 33.416 241.354 33.360 10.351 15.0 126.8 90 9.8 1.6 0.0 0.0 -7.2 1.0
14 241.354 33.360 241.484 33.301 13.759 15.0 118.4 90 8.6 1.6 0.0 0.0 -8.4 1.1
15 241.484 33.301 241.659 33.249 17.293 15.0 109.4 90 7.2 1.7 0.0 0.0 -9.3 1.2
16 241.659 33.249 241.835 33.203 17.181 15.0 107.2 90 6.8 1.7 0.0 0.0 -9.2 1.4
17 241.835 33.203 241.907 33.191 6.844 15.0 101.2 90 5.8 1.8 0.0 0.0 -9.7 1.5
18 241.907 33.191 241.977 33.166 7.093 15.0 113.0 90 7.7 1.6 0.0 0.0 -8.1 1.8
19 241.977 33.166 242.042 33.114 8.369 15.0 133.5 90 10.0 1.3 0.0 0.0 -4.8 2.2
20 242.042 33.114 242.133 33.020 13.450 15.0 140.8 90 10.5 1.2 0.0 0.0 -3.3 2.4
21 242.133 33.020 242.144 33.003 2.147 15.0 151.4 90 10.9 1.2 0.0 0.0 -1.1 2.6
22 242.144 33.003 242.172 32.975 4.061 15.0 139.9 90 10.5 1.2 0.0 0.0 -3.2 2.6
23 242.172 32.975 242.230 32.935 7.006 15.0 129.3 90 9.7 1.4 0.0 0.0 -5.0 2.7

Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

24 242.230 32.935 242.301 32.830 13.407 15.0 150.3 90 10.8 1.2 0.0 0.0 -1.0 3.0
25 242.301 32.830 242.369 32.736 12.217 15.0 148.6 90 10.8 1.2 0.0 0.0 -1.0 3.3
26 242.369 32.736 242.396 32.685 6.197 15.0 155.9 90 10.8 1.2 0.0 0.0 0.5 3.5
27 242.396 32.685 242.455 32.604 10.552 15.0 148.3 90 10.8 1.2 0.0 0.0 -0.7 3.7
28 242.455 32.604 242.533 32.489 14.708 15.0 150.1 90 10.8 1.2 0.0 0.0 -0.1 3.9
29 242.533 32.489 242.556 32.455 4.346 15.0 150.2 90 10.8 1.2 0.0 0.0 0.1 4.1
30 242.556 32.455 242.570 32.449 1.475 15.0 116.8 90 9.1 2.4 0.0 0.0 -5.8 3.6
31 242.570 32.449 242.595 32.415 4.443 15.0 148.0 90 10.8 1.2 0.0 0.0 -0.2 4.3
32 242.595 32.415 242.647 32.320 11.616 15.0 155.1 90 10.7 1.2 0.0 0.0 1.2 4.4
33 242.647 32.320 242.670 32.265 6.472 15.0 160.4 90 10.6 1.4 0.0 0.0 2.4 4.6
34 242.670 32.265 242.756 32.169 13.381 15.0 142.7 90 10.8 1.3 0.0 0.0 -0.7 4.8
35 242.756 32.169 242.785 32.142 4.056 15.0 137.6 90 10.7 1.5 0.0 0.0 -1.5 5.0
36 242.785 32.142 242.832 32.070 9.134 15.0 150.9 90 10.8 1.2 0.0 0.0 1.1 5.2
37 242.832 32.070 242.889 32.023 7.493 15.0 134.1 90 10.7 1.8 0.0 0.0 -1.9 5.2
38 242.889 32.023 242.916 31.983 5.117 15.0 150.1 90 10.7 1.2 0.0 0.0 1.3 5.5
39 242.916 31.983 242.965 31.873 13.048 15.0 159.2 90 10.4 1.5 0.0 0.0 3.1 5.6
40 242.965 31.873 242.998 31.827 5.981 15.0 148.5 90 10.8 1.2 0.0 0.0 1.3 5.9
41 242.998 31.827 243.034 31.800 4.537 15.0 131.3 90 10.7 2.1 0.0 0.0 -1.8 5.8
42 243.034 31.800 243.103 31.755 8.223 15.0 127.3 90 10.6 2.5 0.0 0.0 -2.4 5.8
43 243.103 31.755 243.156 31.711 7.002 15.0 134.2 90 10.8 1.9 0.0 0.0 -1.0 6.1
44 243.156 31.711 243.199 31.686 4.930 15.0 124.2 90 10.5 2.8 0.0 0.0 -2.8 5.9
45 243.199 31.686 243.226 31.655 4.286 15.0 143.3 90 10.8 1.2 0.0 0.0 0.9 6.5
46 243.226 31.655 243.294 31.603 8.652 15.0 131.8 90 10.8 2.1 0.0 0.0 -1.1 6.4
47 243.294 31.603 243.361 31.581 6.811 15.0 111.0 90 9.7 4.1 0.0 0.0 -4.7 5.6

Palos Verdes
1 241.443 33.972 241.448 34.021 5.455 15.0 4.9 90 -1.2 1.2 0.0 0.0 -1.0 1.1
2 241.443 33.972 241.504 33.904 9.418 15.0 143.2 90 -1.6 1.6 0.0 0.0 0.0 0.0
3 241.504 33.904 241.561 33.865 6.820 15.0 129.3 90 -1.6 1.6 0.0 0.0 0.3 0.5
4 241.561 33.865 241.600 33.819 6.250 15.0 144.7 90 -1.6 1.6 0.0 0.0 -0.2 0.4
5 241.600 33.819 241.666 33.791 6.855 15.0 116.9 90 -1.5 1.5 0.0 0.0 0.5 0.9
6 241.666 33.791 241.746 33.749 8.753 15.0 122.1 90 -1.5 1.5 0.0 0.0 0.3 1.0
7 241.746 33.749 241.767 33.694 6.403 15.0 162.3 90 -1.4 1.6 0.0 0.0 -0.8 1.1
8 241.767 33.694 241.854 33.585 14.536 15.0 146.2 90 -1.5 1.7 0.0 0.0 -0.5 1.3
9 241.854 33.585 241.881 33.547 4.904 15.0 149.2 90 -1.5 1.7 0.0 0.0 -0.6 1.6
10 241.881 33.547 241.920 33.483 7.970 15.0 152.9 90 -1.5 1.7 0.0 0.0 -0.8 1.8
11 241.920 33.483 241.940 33.445 4.607 15.0 156.2 90 -1.4 1.7 0.0 0.0 -0.9 2.0
12 241.940 33.445 242.014 33.356 12.035 15.0 145.1 90 -1.6 1.6 0.0 0.0 -0.7 2.3
13 242.014 33.356 242.057 33.320 5.654 15.0 134.9 90 -1.7 1.7 0.0 0.0 -0.5 2.5
14 242.057 33.320 242.083 33.282 4.861 15.0 150.1 90 -1.5 1.7 0.0 0.0 -0.9 2.7
15 242.083 33.282 242.162 33.208 11.026 15.0 138.1 90 -1.7 1.7 0.0 0.0 -0.7 2.9
16 242.162 33.208 242.258 33.075 17.257 15.0 148.7 90 -1.5 1.7 0.0 0.0 -1.1 3.3
17 242.258 33.075 242.313 33.029 7.240 15.0 134.8 90 -1.7 1.7 0.0 0.0 -0.8 3.7
18 242.313 33.029 242.384 32.954 10.640 15.0 141.4 90 -1.6 1.7 0.0 0.0 -1.1 4.0
19 242.384 32.954 242.426 32.927 4.939 15.0 127.3 90 -1.8 2.0 0.0 0.0 -0.7 4.1
20 242.426 32.927 242.480 32.867 8.355 15.0 142.8 90 -1.6 1.6 0.0 0.0 -1.2 4.4
21 242.480 32.867 242.493 32.810 6.437 15.0 169.1 90 -0.9 2.5 0.0 0.0 -1.9 4.2
22 242.493 32.810 242.533 32.754 7.253 15.0 148.9 90 -1.5 1.7 0.0 0.0 -1.5 4.8
23 242.533 32.754 242.567 32.725 4.528 15.0 135.3 90 -1.8 1.8 0.0 0.0 -1.2 4.9
24 242.567 32.725 242.587 32.680 5.331 15.0 159.4 90 -1.1 2.1 0.0 0.0 -1.8 5.0
25 242.587 32.680 242.656 32.626 8.819 15.0 132.8 90 -1.9 1.9 0.0 0.0 -1.2 5.2
26 242.656 32.626 242.685 32.596 4.299 15.0 140.7 90 -1.7 1.7 0.0 0.0 -1.5 5.5
27 242.685 32.596 242.702 32.554 4.924 15.0 161.1 90 -1.0 2.3 0.0 0.0 -2.0 5.4
28 242.702 32.554 242.734 32.497 7.000 15.0 154.6 90 -1.3 1.9 0.0 0.0 -1.9 5.8
29 242.734 32.497 242.950 32.194 39.274 15.0 148.8 90 -1.5 1.7 0.0 0.0 -2.0 6.5
30 242.950 32.194 243.165 31.890 39.354 15.0 148.9 90 -1.5 1.7 0.0 0.0 -2.3 7.7
31 243.165 31.890 243.361 31.581 38.973 15.0 151.5 90 -1.4 1.8 0.0 0.0 -2.7 8.8

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# Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

Oceanside
1 241.611 34.074 241.616 34.040 3.800 15.0 173.0 90 -2.2 1.1 0.0 0.0 2.1 1.0
2 241.616 34.040 241.640 33.989 6.076 15.0 158.6 90 -1.6 1.2 0.0 0.0 2.5 0.9
3 241.640 33.989 241.671 33.948 5.375 15.0 147.8 90 -1.1 1.2 0.0 0.0 2.6 0.8
4 241.671 33.948 241.749 33.877 10.680 15.0 137.5 90 -0.6 1.2 0.0 0.0 2.6 0.8
5 241.749 33.877 241.794 33.827 6.935 15.0 143.1 90 -0.9 1.2 0.0 0.0 2.3 0.8
6 241.794 33.827 241.850 33.789 6.682 15.0 129.1 90 -0.3 1.2 0.0 0.0 2.3 0.8
7 241.850 33.789 241.937 33.718 11.269 15.0 134.3 90 -0.5 1.2 0.0 0.0 2.0 0.8
8 241.937 33.718 242.007 33.674 8.120 15.0 126.9 90 -0.2 1.2 0.0 0.0 1.8 0.8
9 242.007 33.674 242.101 33.581 13.508 15.0 139.8 90 -0.6 1.2 0.0 0.0 1.5 0.9
10 242.101 33.581 242.117 33.572 1.790 15.0 123.9 90 -0.2 1.2 0.0 0.0 1.4 0.9
11 242.117 33.572 242.184 33.525 8.117 15.0 129.9 90 -0.4 1.2 0.0 0.0 1.3 0.9
12 242.184 33.525 242.209 33.503 3.369 15.0 136.4 90 -0.5 1.2 0.0 0.0 1.1 1.0
13 242.209 33.503 242.218 33.495 1.219 15.0 136.7 90 -0.5 1.2 0.0 0.0 1.0 1.0
14 242.218 33.495 242.225 33.486 1.191 15.0 146.9 90 -0.7 1.2 0.0 0.0 0.9 1.0
15 242.225 33.486 242.236 33.473 1.768 15.0 144.7 90 -0.7 1.2 0.0 0.0 0.9 1.0
16 242.236 33.473 242.246 33.460 1.716 15.0 147.2 90 -0.7 1.2 0.0 0.0 0.8 1.0
17 242.246 33.460 242.293 33.414 6.718 15.0 139.4 90 -0.6 1.2 0.0 0.0 0.8 1.0
18 242.293 33.414 242.390 33.310 14.648 15.0 141.9 90 -0.6 1.2 0.0 0.0 0.5 1.1
19 242.390 33.310 242.443 33.264 7.099 15.0 135.9 90 -0.6 1.2 0.0 0.0 0.3 1.2
20 242.443 33.264 242.513 33.222 8.016 15.0 125.5 90 -0.5 1.2 0.0 0.0 0.2 1.2
21 242.513 33.222 242.575 33.130 11.728 15.0 150.4 90 -0.5 1.2 0.0 0.0 -0.2 1.3
22 242.575 33.130 242.624 33.085 6.770 15.0 137.5 90 -0.6 1.2 0.0 0.0 -0.3 1.4
23 242.624 33.085 242.682 33.008 10.113 15.0 147.6 90 -0.5 1.2 0.0 0.0 -0.6 1.5
24 242.682 33.008 242.692 32.965 4.860 15.0 168.9 90 -0.2 1.3 0.0 0.0 -0.9 1.5
25 242.692 32.965 242.739 32.858 12.655 15.0 159.7 90 -0.4 1.2 0.0 0.0 -1.1 1.6
26 242.739 32.858 242.777 32.828 4.871 15.0 133.1 90 -0.9 1.2 0.0 0.0 -1.0 1.7
27 242.777 32.828 242.812 32.764 7.818 15.0 155.2 90 -0.4 1.2 0.0 0.0 -1.4 1.8
28 242.812 32.764 242.868 32.707 8.216 15.0 140.3 90 -0.8 1.2 0.0 0.0 -1.4 1.8
29 242.868 32.707 242.918 32.580 14.845 15.0 161.6 90 -0.2 1.3 0.0 0.0 -1.9 1.9
30 242.918 32.580 243.579 31.953 93.342 15.0 138.0 90 -1.0 1.2 0.0 0.0 -2.9 2.5
31 243.579 31.953 244.239 31.325 93.640 15.0 137.9 90 -1.1 1.2 0.0 0.0 -5.1 3.4

Palos Verdes-Oceanside connector
1 243.361 31.581 243.471 31.580 10.442 15.0 90.6 90 4.3 2.7 0.0 0.0 -7.9 1.9
2 243.471 31.580 243.546 31.571 7.189 15.0 98.0 90 5.2 2.5 0.0 0.0 -7.2 2.2
3 243.546 31.571 243.611 31.553 6.486 15.0 107.9 90 6.4 2.1 0.0 0.0 -6.1 2.6
4 243.611 31.553 243.677 31.527 6.899 15.0 114.7 90 7.1 1.9 0.0 0.0 -5.2 2.8
5 243.677 31.527 244.239 31.325 57.937 15.0 112.6 90 6.8 2.0 0.0 0.0 -5.1 3.1

j. White Wolf
1 240.594 34.942 240.695 34.932 9.294 15.0 96.8 60 -0.4 0.3 6.0 1.3 0.0 0.0
2 240.695 34.932 240.805 34.942 10.110 15.0 83.7 62 -1.1 0.4 5.9 1.2 0.0 0.0
3 240.805 34.942 240.884 34.985 8.649 15.0 56.5 48 -2.2 0.5 2.9 0.6 0.0 0.0
4 240.884 34.985 240.969 34.986 7.762 15.0 89.2 43 -0.8 0.3 3.8 0.7 0.0 0.0
5 240.969 34.986 240.993 35.029 5.249 15.0 24.7 75 -2.8 0.6 1.6 1.0 0.0 0.0
6 240.993 35.029 241.189 35.148 22.220 15.0 53.5 75 -2.3 0.5 6.3 1.1 0.0 0.0
7 241.189 35.148 241.221 35.179 4.509 15.0 40.3 75 -2.6 0.5 3.8 0.7 0.0 0.0
8 241.221 35.179 241.265 35.211 5.354 15.0 48.4 75 -2.4 0.5 5.0 0.8 0.0 0.0
9 241.265 35.211 241.328 35.234 6.278 15.0 66.0 75 -1.9 0.5 7.5 1.1 0.0 0.0
10 241.328 35.234 241.398 35.269 7.461 15.0 58.6 75 -2.2 0.5 6.3 0.9 0.0 0.0
11 241.398 35.269 241.462 35.322 8.274 15.0 44.7 75 -2.5 0.5 3.9 0.7 0.0 0.0
12 241.462 35.322 241.513 35.373 7.315 15.0 39.3 75 -2.6 0.5 2.8 0.8 0.0 0.0
13 241.513 35.373 241.893 35.674 47.992 15.0 45.8 75 -2.5 0.5 3.2 1.1 0.0 0.0
14 241.893 35.674 241.995 35.770 14.094 15.0 40.9 75 -2.5 0.5 1.5 1.8 0.0 0.0
15 241.995 35.770 242.105 35.880 15.741 15.0 39.1 75 -2.5 0.5 0.9 2.1 0.0 0.0
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# Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

k. Garlock (west)
1 241.103 34.811 241.169 34.845 7.119 15.0 58.0 90 -1.7 0.5 0.0 0.0 -6.2 0.5
2 241.169 34.845 241.282 34.911 12.662 15.0 54.6 90 -2.1 0.5 0.0 0.0 -6.1 0.5
3 241.282 34.911 241.525 34.996 24.116 15.0 66.9 90 -0.7 0.5 0.0 0.0 -6.3 0.5
4 241.525 34.996 241.652 35.081 14.940 15.0 50.8 90 -2.5 0.5 0.0 0.0 -5.8 0.3
5 241.652 35.081 241.910 35.209 27.467 15.0 58.8 90 -1.6 0.5 0.0 0.0 -6.0 0.3
6 241.910 35.209 241.986 35.271 9.755 15.0 45.1 90 -3.0 0.6 0.0 0.0 -5.3 0.3

l. Garlock (central)
1 241.977 35.284 242.187 35.398 22.900 15.0 56.4 90 -3.8 2.1 0.0 0.0 3.5 2.5
2 242.187 35.398 242.309 35.441 12.063 15.0 66.7 90 -4.1 2.2 0.0 0.0 0.7 1.6
3 242.309 35.441 242.448 35.486 13.569 15.0 68.4 90 -4.1 2.2 0.0 0.0 -0.9 2.0
4 242.448 35.486 242.705 35.543 24.156 10.0 74.7 90 -1.3 1.0 0.0 0.0 -2.8 0.5
5 242.705 35.543 242.861 35.585 14.890 10.0 71.7 90 -1.4 1.0 0.0 0.0 -2.7 0.4
6 242.861 35.585 242.992 35.609 12.166 10.0 77.3 90 -1.2 0.9 0.0 0.0 -2.7 0.5

Garlock (east)
1 242.992 35.609 243.111 35.603 10.803 10.0 93.5 90 -4.0 0.8 0.0 0.0 2.5 0.8
2 243.111 35.603 243.220 35.609 9.899 10.0 86.1 90 -1.1 0.5 0.0 0.0 0.6 0.5
3 243.220 35.609 243.301 35.600 7.407 10.0 97.7 90 -1.2 0.5 0.0 0.0 0.4 0.5
4 243.301 35.600 243.608 35.596 27.824 10.0 90.8 90 -1.1 0.5 0.0 0.0 0.4 0.6

Garlock (east extension)
1 243.608 35.596 245.884 36.033 211.324 15.0 76.1 90 -2.2 0.2 0.0 0.0 -0.4 0.1

North Frontal
1 242.470 34.311 242.537 34.312 6.168 15.0 89.0 90 -2.0 0.1 0.0 0.0 6.9 0.4
2 242.537 34.312 242.612 34.286 7.483 15.0 112.6 90 -4.6 0.2 0.0 0.0 5.0 0.3
3 242.612 34.286 242.649 34.288 3.414 15.0 86.3 90 -2.0 0.1 0.0 0.0 6.2 0.3
4 242.649 34.288 242.665 34.306 2.481 15.0 36.4 90 3.4 0.2 0.0 0.0 5.3 0.3
5 242.665 34.306 242.696 34.316 3.061 15.0 68.7 90 0.1 0.0 0.0 0.0 6.1 0.3
6 242.696 34.316 242.731 34.318 3.229 15.0 86.1 90 -1.7 0.1 0.0 0.0 5.6 0.3
7 242.731 34.318 242.799 34.371 8.586 15.0 46.8 56 2.1 0.1 -8.9 0.5 0.0 0.0
8 242.799 34.371 242.855 34.444 9.596 15.0 32.4 51 3.2 0.2 -5.8 0.3 0.0 0.0
9 242.855 34.444 242.940 34.422 8.185 15.0 107.3 48 -2.3 0.1 -5.5 0.3 0.0 0.0
10 242.940 34.422 243.011 34.382 7.893 15.0 124.2 54 -3.2 0.2 -3.8 0.2 0.0 0.0
11 243.011 34.382 243.062 34.365 5.056 15.0 111.9 50 -2.7 0.1 -3.7 0.2 0.0 0.0
12 243.062 34.365 243.126 34.367 5.891 15.0 87.8 44 -1.6 0.1 -4.0 0.2 0.0 0.0
13 243.126 34.367 243.143 34.377 1.917 15.0 54.6 90 0.2 0.0 0.0 0.0 3.0 0.2
14 243.143 34.377 243.200 34.337 6.869 15.0 130.2 90 -2.8 0.1 0.0 0.0 0.6 0.0
15 243.200 34.337 243.290 34.346 8.341 15.0 83.1 42 -1.7 0.1 -2.7 0.1 0.0 0.0
16 243.290 34.346 243.357 34.340 6.201 15.0 96.1 39 -2.0 0.1 -1.3 0.1 0.0 0.0
17 243.357 34.340 243.411 34.321 5.398 15.0 113.0 41 -2.2 0.1 -0.0 0.0 0.0 0.0
18 243.411 34.321 243.475 34.310 6.016 15.0 101.7 42 -2.2 0.1 0.0 0.0 0.0 0.0
19 243.475 34.310 243.565 34.309 8.285 15.0 90.7 90 -2.2 0.1 0.0 0.0 -0.1 0.0

Eureka Peak
1 243.580 34.131 243.638 34.066 8.979 15.0 143.4 90 15.1 0.2 0.0 0.0 -2.5 0.1
2 243.638 34.066 243.671 34.008 7.119 15.0 154.6 90 15.4 0.2 0.0 0.0 0.0 0.0
3 243.671 34.008 243.817 33.794 27.309 15.0 150.3 90 15.3 0.2 0.0 0.0 -2.3 0.0
4 243.817 33.794 243.876 33.699 11.871 15.0 152.6 90 15.4 0.2 0.0 0.0 -3.0 0.1

Pinto Mountain
1 243.580 34.131 243.712 34.143 12.248 15.0 83.7 90 -7.2 0.3 0.0 0.0 8.1 0.3
2 243.712 34.143 243.765 34.145 4.893 15.0 87.4 90 -7.7 0.3 0.0 0.0 7.5 0.3
3 243.765 34.145 243.849 34.142 7.754 15.0 92.4 90 -8.3 0.3 0.0 0.0 6.7 0.4
4 243.849 34.142 244.021 34.116 16.126 15.0 100.3 90 -8.7 0.4 0.0 0.0 5.0 0.3
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Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

o. Johnson Valley-Lockhart
1 241.986 35.271 242.403 35.110 41.969 10.0 115.1 90 5.3 0.4 0.0 0.0 -2.9 0.6
2 242.403 35.110 242.488 35.076 8.620 10.0 115.9 90 5.3 0.4 0.0 0.0 -2.9 0.5
3 242.488 35.076 242.628 35.008 14.835 10.0 120.5 90 5.5 0.4 0.0 0.0 -2.6 0.5
4 242.628 35.008 242.793 34.929 17.432 10.0 120.1 90 5.5 0.4 0.0 0.0 -2.7 0.4
5 242.793 34.929 242.919 34.868 13.358 10.0 120.4 90 5.5 0.4 0.0 0.0 -2.8 0.4
6 242.919 34.868 243.072 34.765 18.070 10.0 129.2 90 5.9 0.4 0.0 0.0 -2.0 0.3
7 243.072 34.765 243.317 34.635 26.680 10.0 122.6 90 5.6 0.4 0.0 0.0 -2.8 0.2
8 243.317 34.635 243.423 34.565 12.444 10.0 128.6 90 5.8 0.4 0.0 0.0 -2.3 0.2
9 243.423 34.565 243.489 34.468 12.350 10.0 150.6 90 6.3 0.5 0.0 0.0 -0.0 0.0
10 243.489 34.468 243.565 34.309 18.972 10.0 158.4 90 6.2 0.5 0.0 0.0 0.8 0.1
11 243.565 34.309 243.571 34.275 3.812 15.0 171.7 90 6.0 0.5 0.0 0.0 -0.2 0.3
12 243.571 34.195 243.571 34.275 8.874 15.0 0.0 90 6.0 0.4 0.0 0.0 0.1 0.3
13 243.571 34.195 243.579 34.170 2.870 15.0 165.1 90 5.7 0.5 0.0 0.0 -1.9 0.3
14 243.579 34.170 243.580 34.131 4.327 15.0 178.8 90 6.0 0.4 0.0 0.0 -0.8 0.4

p. Calico-Blackwater
1 242.448 35.486 242.587 35.451 13.200 5.0 107.1 90 0.4 0.4 0.0 0.0 -0.4 0.4
2 242.587 35.451 242.687 35.368 12.935 5.0 135.4 90 0.5 0.5 0.0 0.0 -0.2 0.1
3 242.687 35.368 242.786 35.229 17.858 5.0 149.7 90 0.6 0.5 0.0 0.0 0.0 0.0
4 242.786 35.229 242.872 35.108 15.543 5.0 149.7 90 0.6 0.5 0.0 0.0 0.0 0.0
5 242.872 35.108 242.967 35.049 10.859 5.0 127.0 90 0.5 0.5 0.0 0.0 -0.2 0.2
6 242.967 35.049 243.063 34.990 10.937 5.0 126.7 90 0.5 0.5 0.0 0.0 -0.2 0.2
7 243.063 34.990 243.115 34.954 6.205 5.0 130.1 90 0.5 0.5 0.0 0.0 -0.2 0.1
8 243.115 34.954 243.233 34.922 11.350 5.0 108.2 90 0.4 0.4 0.0 0.0 -0.3 0.3
9 243.233 34.922 243.333 34.836 13.214 5.0 136.2 90 0.5 0.5 0.0 0.0 -0.1 0.1
10 243.333 34.836 243.381 34.768 8.729 5.0 149.8 90 0.5 0.5 0.0 0.0 0.1 0.1
11 243.381 34.768 243.472 34.668 13.876 5.0 143.1 90 0.5 0.5 0.0 0.0 0.0 0.0
12 243.472 34.668 243.551 34.586 11.629 5.0 141.4 90 0.5 0.5 0.0 0.0 -0.0 0.0
13 243.551 34.586 243.664 34.478 15.848 5.0 139.1 90 0.5 0.5 0.0 0.0 -0.0 0.0
14 243.664 34.478 243.672 34.435 4.826 5.0 171.2 90 0.5 0.4 0.0 0.0 0.3 0.3
15 243.672 34.435 243.729 34.389 7.314 5.0 134.2 90 0.5 0.5 0.0 0.0 -0.0 0.0
16 243.729 34.389 243.751 34.335 6.323 5.0 161.3 90 0.5 0.5 0.0 0.0 0.2 0.2
17 243.751 34.335 243.777 34.296 4.944 5.0 151.0 90 0.5 0.5 0.0 0.0 0.1 0.1
18 243.777 34.296 243.803 34.231 7.597 5.0 161.6 90 0.5 0.5 0.0 0.0 0.2 0.2
19 243.803 34.231 243.849 34.142 10.745 5.0 156.7 90 0.5 0.5 0.0 0.0 0.2 0.2

q. Goldstone-Billion
1 242.992 35.609 243.032 35.489 13.799 10.0 164.7 90 6.3 0.5 0.0 0.0 1.8 0.2
2 243.032 35.489 243.075 35.455 5.428 10.0 134.0 90 6.4 0.5 0.0 0.0 -1.6 0.1
3 243.075 35.455 243.118 35.397 7.527 10.0 148.7 90 6.6 0.6 0.0 0.0 0.2 0.0
4 243.118 35.397 243.262 35.226 23.053 10.0 145.3 90 6.6 0.6 0.0 0.0 -0.0 0.0
5 243.262 35.226 243.309 35.179 6.746 10.0 140.6 90 6.6 0.6 0.0 0.0 -0.4 0.0
6 243.309 35.179 243.517 34.814 44.724 10.0 154.8 90 6.5 0.5 0.0 0.0 1.6 0.1
7 243.517 34.814 243.553 34.767 6.168 10.0 147.7 90 6.7 0.6 0.0 0.0 1.1 0.1
8 243.553 34.767 243.602 34.685 10.144 10.0 153.7 90 6.5 0.5 0.0 0.0 1.9 0.2
9 243.602 34.685 243.616 34.636 5.585 10.0 166.7 90 5.9 0.5 0.0 0.0 3.4 0.3
10 243.616 34.636 243.626 34.587 5.513 10.0 170.4 90 5.7 0.5 0.0 0.0 3.8 0.3
11 243.626 34.587 243.742 34.489 15.218 10.0 135.6 90 6.9 0.6 0.0 0.0 -0.0 0.0
12 243.742 34.489 243.873 34.359 18.788 10.0 140.1 90 6.8 0.6 0.0 0.0 0.7 0.1
13 243.873 34.359 243.910 34.247 12.882 10.0 164.7 90 5.9 0.5 0.0 0.0 3.7 0.3
14 243.910 34.247 243.987 34.143 13.545 10.0 148.4 90 6.7 0.6 0.0 0.0 2.1 0.2
15 243.987 34.143 244.021 34.116 4.337 15.0 133.7 90 7.0 0.6 0.0 0.0 0.4 0.0

r. Ludlow
1 243.608 35.596 243.643 35.246 38.962 10.0 175.3 90 2.1 0.3 0.0 0.0 1.7 0.3
2 243.643 35.246 243.699 35.173 9.570 10.0 147.8 90 2.7 0.3 0.0 0.0 0.6 0.2
3 243.699 35.173 243.818 35.067 15.999 10.0 137.3 90 2.7 0.3 0.0 0.0 0.2 0.1

Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

4 243.749 34.961 243.818 35.067 13.340 10.0 28.2 90 0.7 0.1 0.0 0.0 2.7 0.3
5 243.749 34.961 243.797 34.909 7.246 10.0 142.7 90 2.7 0.3 0.0 0.0 0.5 0.1
6 243.783 34.826 243.797 34.909 9.296 10.0 7.9 90 1.6 0.2 0.0 0.0 2.3 0.3
7 243.783 34.826 243.811 34.785 5.220 10.0 150.6 90 2.7 0.3 0.0 0.0 0.9 0.2
8 243.811 34.785 243.839 34.707 9.025 10.0 163.5 90 2.4 0.3 0.0 0.0 1.5 0.2
9 243.839 34.707 244.123 34.443 39.202 10.0 138.3 90 2.8 0.3 0.0 0.0 0.4 0.2
10 244.021 34.116 244.123 34.443 37.470 10.0 14.5 90 1.2 0.3 0.0 0.0 2.6 0.4

Sierra Nevada
1 242.046 35.973 242.105 35.880 11.612 10.0 152.7 90 -0.5 1.7 0.0 0.0 7.9 4.1
2 242.096 35.761 242.105 35.880 13.229 10.0 3.5 90 -1.9 1.6 0.0 0.0 3.7 3.4
3 242.096 35.761 242.131 35.686 8.904 10.0 159.2 90 -0.6 1.6 0.0 0.0 2.8 2.5
4 242.091 35.612 242.131 35.686 8.974 10.0 23.8 90 -2.0 1.6 0.0 0.0 0.6 1.9
5 241.996 35.570 242.091 35.612 9.790 10.0 61.5 90 -1.6 1.8 0.0 0.0 -1.8 1.8
6 241.966 35.540 241.996 35.570 4.299 10.0 39.2 90 -2.4 1.9 0.0 0.0 -1.9 1.9
7 241.949 35.428 241.966 35.540 12.522 10.0 7.1 90 -3.2 2.2 0.0 0.0 -1.4 1.9
8 241.949 35.428 241.960 35.349 8.822 10.0 173.5 90 -3.6 2.5 0.0 0.0 -2.0 2.2
9 241.960 35.349 241.971 35.298 5.746 10.0 170.0 90 -3.8 2.6 0.0 0.0 -2.7 2.6
10 241.971 35.298 241.977 35.284 1.646 10.0 160.6 90 -4.2 2.9 0.0 0.0 -2.5 2.5
11 241.977 35.284 241.986 35.271 1.659 10.0 150.4 90 -0.1 0.5 0.0 0.0 2.3 0.6

Owens Valley
1 241.573 37.793 241.620 37.951 18.018 10.0 13.3 90 2.4 1.4 0.0 0.0 1.2 1.8
2 241.573 37.793 241.596 37.434 39.897 10.0 177.1 90 2.6 1.0 0.0 0.0 0.0 2.0
3 241.596 37.434 241.671 37.236 22.958 10.0 163.1 90 2.5 0.7 0.0 0.0 -1.1 2.2
4 241.671 37.236 241.803 36.933 35.616 10.0 160.7 90 2.4 0.7 0.0 0.0 -1.7 2.3
5 241.803 36.933 241.840 36.852 9.575 10.0 159.8 90 2.4 0.7 0.0 0.0 -2.2 2.5
6 241.840 36.852 241.881 36.776 9.193 10.0 156.5 90 2.2 0.6 0.0 0.0 -2.5 2.6
7 241.881 36.776 241.917 36.696 9.442 10.0 160.1 90 2.4 0.7 0.0 0.0 -2.5 2.7
8 241.917 36.696 241.930 36.637 6.650 10.0 169.9 90 2.8 0.9 0.0 0.0 -2.2 2.7
9 241.930 36.637 241.957 36.554 9.522 10.0 165.3 90 2.6 0.8 0.0 0.0 -2.5 2.8
10 241.957 36.554 241.980 36.507 5.608 10.0 158.4 90 2.3 0.6 0.0 0.0 -3.0 2.9
11 241.967 36.410 241.980 36.507 10.827 10.0 6.2 90 3.4 1.5 0.0 0.0 -1.7 2.6
12 241.967 36.410 241.977 36.350 6.718 10.0 172.3 90 1.0 0.4 0.0 0.0 4.2 0.4
13 241.960 36.295 241.977 36.350 6.291 10.0 14.0 90 -0.6 0.4 0.0 0.0 4.2 0.3
14 241.960 36.295 242.010 36.221 9.360 10.0 151.3 90 2.4 0.4 0.0 0.0 3.4 0.4
15 241.991 36.126 242.010 36.221 10.679 10.0 9.2 90 -0.2 0.4 0.0 0.0 4.1 0.4
16 241.991 36.126 242.015 36.082 5.339 10.0 156.1 90 2.0 0.4 0.0 0.0 3.4 0.4
17 242.015 36.082 242.046 35.973 12.413 10.0 167.0 90 1.3 0.4 0.0 0.0 3.6 0.4
18 242.046 35.973 242.119 35.897 10.701 10.0 142.0 90 1.6 2.4 0.0 0.0 -5.3 3.9
19 242.119 35.897 242.171 35.834 8.421 10.0 146.1 90 1.9 2.2 0.0 0.0 -4.0 3.2
20 242.171 35.834 242.346 35.610 29.469 10.0 147.4 90 2.0 2.2 0.0 0.0 -1.6 1.9
21 242.346 35.610 242.448 35.486 16.578 10.0 146.1 90 2.0 2.2 0.0 0.0 1.2 1.9

m. Panamint Valley
1 241.946 37.150 242.060 37.483 38.314 10.0 15.3 90 1.7 1.2 0.0 0.0 2.8 1.4
2 241.946 37.150 242.048 36.925 26.568 10.0 160.0 90 3.0 0.6 0.0 0.0 1.4 1.5
3 242.048 36.925 242.106 36.773 17.644 10.0 162.9 90 2.9 0.7 0.0 0.0 1.6 1.2
4 242.106 36.773 242.139 36.739 4.787 10.0 142.0 90 3.3 0.5 0.0 0.0 0.5 1.2
5 242.139 36.739 242.180 36.674 8.090 10.0 153.1 90 3.1 0.6 0.0 0.0 1.1 1.1
6 242.180 36.674 242.294 36.636 11.031 10.0 112.4 90 3.1 0.7 0.0 0.0 -1.2 1.0
7 242.294 36.636 242.342 36.615 4.885 10.0 118.5 90 3.2 0.7 0.0 0.0 -0.8 1.0
8 242.342 36.615 242.388 36.574 6.135 10.0 137.9 90 3.3 0.6 0.0 0.0 0.3 1.0
9 242.388 36.574 242.437 36.540 5.786 10.0 130.7 90 3.3 0.6 0.0 0.0 -0.1 0.9
10 242.437 36.540 242.525 36.498 9.157 10.0 120.6 90 3.3 0.6 0.0 0.0 -0.6 0.9
11 242.525 36.498 242.592 36.436 9.132 10.0 138.9 90 3.3 0.6 0.0 0.0 0.5 0.9
12 242.592 36.436 242.640 36.366 8.881 10.0 151.0 90 3.1 0.6 0.0 0.0 1.2 0.8
13 242.640 36.366 242.677 36.315 6.562 10.0 149.6 90 3.2 0.6 0.0 0.0 1.1 0.8

Lon-1 Lat-1 Lon-2 Lat-2 L(km) Z(km) strike dip U_s S_s U_d S_d U_t S_t

14 242.677 36.315 242.706 36.283 4.404 10.0 143.7 90 3.3 0.6 0.0 0.0 0.8 0.8
15 242.706 36.283 242.772 36.237 7.825 10.0 130.7 90 3.4 0.5 0.0 0.0 0.0 0.8
16 242.772 36.237 242.797 36.195 5.174 10.0 154.2 90 3.1 0.6 0.0 0.0 1.4 0.7
17 242.790 36.126 242.797 36.195 7.682 10.0 4.7 90 1.9 0.7 0.0 0.0 2.8 0.5
18 242.790 36.126 242.807 36.079 5.435 10.0 163.6 90 2.8 0.7 0.0 0.0 1.9 0.6
19 242.793 36.041 242.807 36.079 4.401 10.0 16.7 90 1.3 0.8 0.0 0.0 3.1 0.5
20 242.780 35.997 242.793 36.041 5.021 10.0 13.5 90 1.5 0.8 0.0 0.0 3.1 0.5
21 242.780 35.997 242.815 35.894 11.857 10.0 164.5 90 2.8 0.6 0.0 0.0 2.0 0.6
22 242.815 35.894 242.862 35.795 11.777 10.0 158.9 90 3.0 0.6 0.0 0.0 1.8 0.7
23 242.862 35.795 242.886 35.748 5.648 10.0 157.4 90 3.0 0.6 0.0 0.0 1.7 0.7
24 242.886 35.748 242.952 35.686 9.110 10.0 139.0 90 3.4 0.5 0.0 0.0 0.7 0.9
25 242.952 35.686 243.070 35.639 11.889 10.0 116.0 90 3.4 0.5 0.0 0.0 -0.7 0.9
26 243.070 35.639 243.111 35.603 5.454 10.0 137.1 90 3.4 0.5 0.0 0.0 0.6 1.0

n. Death Valley
1 241.620 37.951 242.060 37.483 64.832 10.0 143.1 90 6.1 0.6 0.0 0.0 -3.0 1.4
2 242.060 37.483 242.347 37.296 32.813 10.0 129.1 90 2.1 0.8 0.0 0.0 -3.6 1.3
3 242.347 37.296 242.452 37.188 15.181 10.0 142.1 90 2.8 0.6 0.0 0.0 -2.8 1.2
4 242.452 37.188 242.557 37.080 15.189 10.0 142.1 90 2.8 0.6 0.0 0.0 -2.7 1.1
5 242.557 37.080 242.593 37.054 4.310 10.0 132.0 90 2.3 0.7 0.0 0.0 -3.1 1.0
6 242.593 37.054 242.687 36.960 13.372 10.0 141.2 90 2.8 0.6 0.0 0.0 -2.6 1.0
7 242.687 36.960 242.717 36.914 5.762 10.0 152.4 90 3.2 0.5 0.0 0.0 -1.9 0.9
8 242.717 36.914 242.755 36.878 5.238 10.0 139.7 90 2.7 0.6 0.0 0.0 -2.6 0.8
9 242.755 36.878 242.820 36.799 10.511 10.0 146.5 90 3.0 0.5 0.0 0.0 -2.2 0.8
10 242.820 36.799 242.844 36.760 4.829 10.0 153.7 90 3.2 0.5 0.0 0.0 -1.7 0.8
11 242.844 36.760 242.900 36.709 7.553 10.0 138.5 90 2.7 0.6 0.0 0.0 -2.5 0.7
12 242.900 36.709 243.012 36.625 13.680 10.0 132.9 90 2.4 0.6 0.0 0.0 -2.6 0.6
13 243.012 36.625 243.056 36.595 5.155 10.0 130.2 90 2.3 0.6 0.0 0.0 -2.7 0.5
14 243.056 36.595 243.108 36.563 5.854 10.0 127.3 90 2.2 0.6 0.0 0.0 -2.7 0.5
15 243.108 36.563 243.121 36.535 3.318 10.0 159.5 90 3.3 0.5 0.0 0.0 -1.1 0.6
16 243.121 36.535 243.156 36.447 10.256 10.0 162.2 90 3.3 0.5 0.0 0.0 -0.9 0.5
17 243.156 36.447 243.173 36.398 5.647 10.0 164.3 90 3.4 0.5 0.0 0.0 -0.7 0.5
18 243.173 36.398 243.214 36.336 7.802 10.0 151.8 90 3.1 0.5 0.0 0.0 -1.4 0.4
19 243.214 36.336 243.229 36.301 4.111 10.0 160.9 90 3.3 0.5 0.0 0.0 -0.8 0.4
20 243.229 36.301 243.230 36.263 4.218 10.0 178.8 90 3.4 0.4 0.0 0.0 0.2 0.4
21 243.230 36.263 243.242 36.153 12.254 10.0 174.9 90 3.4 0.5 0.0 0.0 0.1 0.4
22 243.242 36.153 243.243 36.054 10.986 10.0 179.5 90 3.4 0.4 0.0 0.0 0.5 0.3
23 243.243 36.054 243.276 36.003 6.393 10.0 152.3 90 3.2 0.5 0.0 0.0 -1.1 0.2
24 243.276 36.003 243.292 35.926 8.665 10.0 170.4 90 3.4 0.5 0.0 0.0 0.0 0.1
25 243.292 35.926 243.336 35.877 6.733 10.0 143.8 90 3.1 0.4 0.0 0.0 -1.4 0.2
26 243.336 35.877 243.384 35.846 5.534 10.0 128.4 90 2.6 0.4 0.0 0.0 -2.1 0.3
27 243.384 35.846 243.399 35.791 6.251 10.0 167.5 90 3.3 0.5 0.0 0.0 -0.0 0.0
28 243.399 35.791 243.445 35.723 8.616 10.0 151.1 90 3.2 0.5 0.0 0.0 -0.9 0.2
29 243.445 35.723 243.484 35.703 4.169 10.0 122.2 90 2.4 0.3 0.0 0.0 -2.3 0.4
30 243.484 35.703 243.516 35.675 4.248 10.0 137.0 90 2.9 0.4 0.0 0.0 -1.6 0.3
31 243.516 35.675 243.551 35.627 6.198 10.0 149.2 90 3.2 0.5 0.0 0.0 -0.9 0.3
32 243.551 35.627 243.601 35.603 5.255 10.0 120.4 90 2.4 0.3 0.0 0.0 -2.2 0.5
33 243.601 35.603 243.608 35.596 1.003 10.0 140.8 90 3.0 0.4 0.0 0.0 -1.3 0.4

Table DR2. Nominally interseismic GPS velocity field used to constrain the block model. Columns give: station name, longitude, latitude, east velocity, north velocity, east uncertainty, north uncertainty

Station	Lon.	Lat.	V_e	V_n	S_e	S_n
0047_GPS	240.020	43.590	-2.069	1.357	0.610	0.600
02EX_GPS	239.750	40.130	-7.124	4.575	1.000	0.900
02FS_GPS	238.960	40.300	-6.575	5.905	0.700	0.600
02SS_GPS	238.960	41.510	-7.652	4.905	0.700	0.800
1008_GPS	240.360	38.330	-8.156	8.351	1.200	0.900
10BB_GPS	240.300	39.280	-7.764	6.353	0.800	0.900
3756_GPS	241.860	39.540	-6.805	3.588	0.800	0.900
43JD_GPS	240.340	39.850	-5.802	4.052	0.500	0.500
61RB_GPS	242.730	39.980	0.316	0.049	0.900	0.900
6683_GPS	242.390	38.880	-3.330	0.464	0.800	0.800
6FMK_GPS	243.290	41.220	-3.402	-0.177	0.700	0.700
79JR_GPS	243.170	39.970	-1.048	1.828	0.900	0.900
7MIR_GPS	239.310	43.170	-1.649	2.392	0.900	0.900
A210_GPS	239.860	39.360	-10.393	6.571	0.700	0.700
A250_GPS	240.230	39.100	-10.088	6.156	0.700	0.600
A255_GPS	240.350	39.220	-6.366	8.751	0.800	0.800
A275_GPS	240.590	39.350	-6.932	5.342	0.600	0.700
A290_GPS	240.810	39.430	-4.905	5.233	0.600	0.700
A295_GPS	240.920	39.460	-4.493	2.528	0.900	0.800
A300_GPS	240.080	38.780	-11.033	9.262	0.500	0.500
A435_GPS	241.930	38.690	-3.788	2.785	1.000	0.900
ADIN_GPS	239.050	41.180	-6.178	8.602	1.000	0.900
AGGI_GPS	241.870	39.000	-4.361	1.987	0.700	0.600
ALKA_GPS	239.980	41.550	-2.657	3.866	0.700	0.800
ALTU_GPS	239.500	41.510	-4.822	3.388	0.755	0.658
AURO_GPS	241.080	38.330	-5.596	6.721	1.300	0.800
B200_GPS	241.060	39.510	-6.076	3.522	0.600	0.600
B210_GPS	241.130	39.490	-5.772	2.419	0.800	0.700
B220_GPS	241.350	39.400	-8.063	2.510	0.800	0.700
B270_GPS	241.830	39.290	-4.234	1.389	0.900	0.700
B280_GPS	241.980	39.270	-2.723	0.483	0.800	0.700
B285_GPS	242.050	39.300	-2.014	4.579	2.000	1.600
B290_GPS	242.140	39.280	-4.909	-0.225	0.800	0.700
B300_GPS	240.760	38.990	-8.055	5.335	0.400	0.400
B387_GPS	241.860	39.670	-5.891	3.488	0.800	0.900
B428_GPS	244.890	41.100	-2.277	-0.556	0.800	0.900
BAMO_GPS	242.800	40.410	-4.432	1.446	0.600	0.600
BATT_GPS	243.130	40.610	-3.082	0.530	0.600	0.600
BEAV_GPS	238.200	43.130	-2.723	7.111	0.500	0.512
BELL_GPS	241.970	40.940	-4.347	1.283	1.000	0.800
BEOW_GPS	243.580	40.660	-3.038	0.309	0.800	0.900
BISC_GPS	239.660	40.560	-7.588	3.979	1.000	1.000
BLAB_GPS	240.940	39.580	-4.579	3.427	0.500	0.400
BLAC_GPS	241.800	41.450	-2.607	1.090	0.800	1.000
BLCK_GPS	238.240	44.290	-0.732	5.431	0.700	0.700
BLMT_GPS	242.190	42.310	-4.180	1.473	0.600	0.700
BNKS_GPS	244.080	40.770	-3.383	0.785	0.900	0.900
BNTA_GPS	242.530	39.010	-3.205	0.458	0.600	0.600
BORA_GPS	241.540	39.330	-4.554	2.502	0.600	0.700
BR02_GPS	237.670	44.170	1.002	2.351	1.300	1.200
BRAM_GPS	241.420	41.830	-2.100	1.107	0.800	0.900
BROT_GPS	239.400	43.810	-0.777	2.485	0.557	0.536
BUFF_GPS	242.190	39.150	-3.518	1.173	0.600	0.600
BURR_GPS	240.080	40.550	-5.652	2.462	0.700	0.800

BUTN_GPS 242.430 41.010 -1.999 -0.538 0.800 0.900
BX46_GPS 241.690 39.270 -4.848 2.395 0.900 0.600
C200_GPS 242.290 39.260 -2.498 -0.031 0.600 0.600
C220_GPS 242.590 39.360 -2.462 0.455 1.200 0.900
C240_GPS 242.860 39.490 -2.426 0.043 0.600 0.600
C260_GPS 243.060 39.400 -2.819 0.734 0.900 0.600
C280_GPS 243.380 39.480 -3.183 -0.982 0.800 0.600
C300_GPS 242.120 38.760 -3.965 1.276 0.400 0.400
C344_GPS 242.200 40.910 -2.230 -1.027 1.300 0.900
C753_GPS 239.380 44.310 -0.723 2.289 1.000 1.100
CARL_GPS 243.840 40.710 -2.010 1.196 1.200 1.100
CAST_GPS 249.320 39.190 -0.772 -0.055 0.356 0.338
CEDA_GPS 247.140 40.680 -3.301 -0.529 0.316 0.314
CEDR_GPS 239.740 41.550 -5.379 4.076 0.900 0.900
CHIL_GPS 240.800 39.360 -5.413 2.833 0.500 0.500
CHLK_GPS 240.120 39.510 -9.456 3.861 0.500 0.500
CHO1_GPS 238.340 39.430 -11.038 7.049 0.436 0.433
CMBB_GPS 239.610 38.030 -11.429 7.847 0.386 0.383
CNBY_GPS 239.130 41.430 -5.746 5.299 0.700 0.800
CNWY_GPS 240.820 38.080 -6.943 9.832 1.000 0.800
COON_GPS 247.880 40.650 -2.455 -0.515 0.337 0.353
CRTS_GPS 244.990 40.660 -2.218 -0.961 0.600 0.600
CTNP_GPS 240.530 41.900 -2.272 2.344 0.800 1.000
CUPO_GPS 237.980 44.190 -1.367 6.840 1.000 0.900
CUSG_GPS 242.960 40.000 -2.363 -1.062 0.700 0.700
D100_GPS 243.840 40.080 -3.880 -0.404 0.400 0.400
D200_GPS 243.690 39.530 -3.052 -0.396 0.600 0.500
D220_GPS 244.020 39.540 -6.323 -0.612 1.000 0.700
D240_GPS 244.200 39.380 -4.026 -1.321 1.000 0.600
D260_GPS 244.440 39.400 -3.304 -0.633 0.800 0.600
D280_GPS 244.920 39.420 -3.662 -2.257 0.800 0.700
D300_GPS 243.250 39.060 -4.239 -0.975 0.500 0.500
DECH_GPS 240.910 38.050 -11.139 8.428 0.500 0.500
DORF_GPS 239.060 39.820 -8.215 4.801 1.200 1.000
DRYX_GPS 238.910 44.210 1.523 6.907 0.800 0.800
DYER_GPS 241.960 37.740 -5.202 3.002 0.444 0.442
E100_GPS 245.350 39.900 -4.173 -0.379 0.500 0.500
E200_GPS 245.050 39.290 -3.866 0.036 0.500 0.500
E220_GPS 245.340 39.030 -4.671 -0.479 0.800 0.600
E240_GPS 245.550 39.070 -1.349 -0.190 0.800 0.600
E259_GPS 245.760 39.100 -3.129 -1.101 1.200 0.800
E280_GPS 246.110 39.040 -4.807 -2.419 1.000 0.700
E300_GPS 244.870 38.890 -3.825 -0.855 0.500 0.500
E843_GPS 239.390 40.450 -6.223 4.089 1.100 0.900
EARN_GPS 240.520 39.550 -8.617 3.844 0.400 0.400
EGAN_GPS 245.060 39.350 -3.058 -0.564 0.400 0.400
ELKO_GPS 244.180 40.910 -4.159 -0.020 0.400 0.400
F067_GPS 240.950 41.880 -3.636 -0.973 0.800 1.000
F091_GPS 239.460 43.390 -0.312 3.786 0.900 1.000
F100_GPS 246.420 39.550 -2.224 -1.436 0.500 0.500
F200_GPS 246.370 39.080 -3.881 -0.733 0.900 0.700
F220_GPS 246.620 39.020 -4.068 -0.247 1.000 0.700
F250_GPS 246.950 39.280 -1.811 -1.765 0.900 0.600
F270_GPS 247.160 39.320 -2.190 0.323 0.900 0.700
F279_GPS 241.850 39.230 -3.438 1.388 0.600 0.600
F280_GPS 247.450 39.370 -1.860 0.307 1.000 0.700
F300_GPS 246.330 38.790 -2.917 -0.331 0.500 0.500
FLRN_GPS 240.800 39.940 -5.853 2.733 0.400 0.400
FLS2_GPS 241.570 37.710 -7.419 6.500 1.200 1.100
FOOT_GPS 246.190 39.370 -3.461 -0.307 0.338 0.320

FRAZ_GPS 238.710 41.100 -9.916 7.514 0.900 0.900
FUSG_GPS 239.820 39.920 -8.339 3.872 1.200 0.900
G101_GPS 247.850 39.600 -3.501 -0.016 0.800 0.700
G200_GPS 247.760 39.140 -2.662 -0.611 0.800 0.600
G220_GPS 247.960 39.080 -5.753 -0.422 0.700 0.700
G250_GPS 248.260 38.900 -5.250 0.960 0.700 0.600
G298_GPS 241.810 40.120 -5.148 1.190 0.900 0.900
G300_GPS 247.410 38.600 -3.352 -0.591 0.500 0.500
GABB_GPS 242.080 38.970 -4.238 1.229 0.444 0.442
GARL_GPS 240.640 40.420 -5.417 2.740 0.400 0.400
GOLC_GPS 242.530 40.940 -2.698 0.658 0.900 0.900
GOSH_GPS 245.820 40.640 -3.625 -0.368 0.318 0.316
GUAN_GPS 240.520 42.020 -4.260 1.844 0.900 1.000
H100_GPS 248.980 39.290 -0.746 -0.782 0.500 0.500
H112_GPS 239.820 38.630 -10.370 8.872 0.700 0.800
H130_GPS 240.920 38.160 -11.227 7.128 1.100 0.900
H200_GPS 248.890 38.830 -2.108 -0.177 0.900 0.600
H300_GPS 248.640 38.480 -1.268 2.538 0.700 0.600
HEBE_GPS 248.630 40.510 -0.934 -0.239 0.335 0.333
HELI_GPS 238.980 39.730 -7.631 4.604 1.200 0.900
HELO_GPS 244.380 40.950 -3.338 -1.730 0.900 1.000
HHTT_GPS 238.260 40.870 -8.680 6.231 1.000 0.900
HICK_GPS 241.180 38.280 -6.693 7.117 1.000 1.000
HILD_GPS 238.490 42.250 -1.819 5.122 0.800 1.000
HLNB_GPS 238.730 41.480 -4.676 2.514 0.400 0.400
HORU_GPS 241.190 37.980 -9.723 10.317 0.800 0.800
HOTC_GPS 239.300 41.490 -2.624 3.292 0.900 0.900
HP26_GPS 240.010 40.240 -5.730 3.482 0.680 0.652
HSPR_GPS 240.350 40.920 -3.890 3.151 0.900 0.800
HSTN_GPS 239.070 44.260 0.043 3.001 0.800 0.800
HUSG_GPS 239.500 40.630 -5.295 5.385 0.800 0.700
HYAT_GPS 237.500 42.150 -1.719 5.857 1.100 1.100
J288_GPS 238.650 42.410 -1.388 2.917 0.800 1.000
J74X_GPS 241.750 40.940 -4.666 0.093 1.500 0.900
J789_GPS 238.170 42.870 -1.785 4.834 0.900 1.000
JNCT_GPS 240.530 38.360 -6.438 8.744 1.000 0.700
JUNI_GPS 240.070 42.930 -1.952 2.852 0.507 0.510
K102_GPS 242.320 40.160 -3.700 -0.433 0.900 0.900
K589_GPS 240.150 42.120 -2.583 0.159 1.000 1.000
L091_GPS 239.360 43.290 -1.332 2.690 0.900 1.000
LEWI_GPS 243.140 40.400 -2.869 -0.692 0.342 0.325
LIZZ_GPS 241.770 38.530 -3.718 3.292 0.600 0.600
LL92_GPS 243.020 40.360 -3.319 0.435 0.600 0.700
LOLA_GPS 241.440 40.070 -6.185 2.106 0.600 0.600
LOOP_GPS 241.010 42.720 -3.442 0.524 0.800 0.700
LOWE_GPS 242.360 40.030 -4.410 0.266 0.600 0.600
LUCK_GPS 241.230 38.420 -6.774 6.315 1.100 0.800
LUMP_GPS 238.850 39.630 -7.552 6.409 1.400 0.900
M504_GPS 238.470 41.720 -5.975 4.723 0.500 0.500
M753_GPS 239.580 44.400 0.406 3.082 1.000 1.300
MAGU_GPS 240.210 39.370 -9.562 6.057 0.400 0.400
MCAR_GPS 238.600 41.050 -10.131 3.818 1.000 1.000
MCOY_GPS 242.400 40.110 -4.799 1.064 0.600 0.600
MICK_GPS 241.580 42.660 -2.997 1.500 0.600 0.600
MINE_GPS 243.900 40.150 -3.569 0.286 0.343 0.343
MN54_GPS 241.940 39.200 -4.734 1.584 0.600 0.600
MOND_GPS 241.720 39.400 -5.531 1.594 0.700 0.700
MONI_GPS 243.280 39.150 -3.727 0.223 0.400 0.400
MOOR_GPS 245.200 41.110 -2.650 -1.972 1.000 1.000
MUSB_GPS 240.690 37.170 -11.115 8.876 0.379 0.393

N067_GPS 241.150 41.890 -2.418 2.718 0.800 0.900
N843_GPS 239.330 40.420 -6.131 4.191 1.400 0.900
NEWS_GPS 242.490 39.690 -4.490 0.467 0.481 0.487
OAKR_GPS 237.500 43.750 0.262 5.769 0.507 0.487
OBSD_GPS 240.760 41.880 -1.653 1.735 0.700 0.800
OREG_GPS 239.410 42.200 -3.441 2.688 0.900 1.000
ORVB_GPS 238.500 39.550 -10.790 7.022 0.400 0.400
OVRP_GPS 238.720 41.710 -6.154 3.614 0.400 0.400
P19A_GPS 240.530 40.580 -2.810 2.144 0.900 0.900
P208_GPS 240.080 39.110 -9.800 6.362 0.500 0.500
P515_GPS 240.220 41.000 -5.693 2.657 0.700 0.800
PARA_GPS 242.310 41.280 -2.281 0.268 0.900 0.900
PARS_GPS 239.930 42.210 -2.793 2.468 0.700 0.700
PERS_GPS 241.250 40.860 -7.218 0.514 1.200 0.900
PIBU_GPS 238.720 44.060 0.260 3.327 0.602 0.585
PITR_GPS 238.460 40.980 -4.151 9.623 1.000 1.000
PL20_GPS 239.280 42.260 -3.447 3.993 0.900 0.900
POST_GPS 241.960 39.040 -4.249 2.883 0.600 0.600
Q837_GPS 239.430 40.550 -7.809 3.588 1.000 0.900
QUIN_GPS 239.060 39.970 -9.600 6.301 0.400 0.400
R090_GPS 239.880 43.480 0.036 3.570 0.900 0.900
RAIL_GPS 244.340 38.280 -3.817 -0.209 0.444 0.442
RATT_GPS 241.300 40.000 -6.604 2.512 0.500 0.500
ROCO_GPS 238.900 42.430 -0.963 1.607 1.100 1.000
ROUN_GPS 238.540 41.430 -5.598 3.621 0.400 0.400
RUBY_GPS 244.880 40.620 -3.634 -0.207 0.335 0.333
RUST_GPS 237.650 42.620 -2.299 6.336 0.616 0.598
SAGE_GPS 239.960 39.790 -8.841 4.867 0.500 0.500
SHEL_GPS 241.680 39.040 -5.372 1.096 0.900 0.700
SHIN_GPS 239.770 40.590 -6.749 4.175 0.335 0.333
SHLD_GPS 240.980 41.870 -3.519 2.599 0.346 0.346
SHON_GPS 242.810 40.030 -5.472 1.045 0.700 0.800
SILV_GPS 238.940 43.120 -1.688 4.606 0.600 0.600
SIST_GPS 238.440 44.310 0.924 3.862 0.520 0.527
SLID_GPS 240.120 39.310 -9.908 5.598 0.473 0.411
SLR1_GPS 241.790 39.110 -6.256 3.391 0.600 0.600
SMEL_GPS 247.160 39.430 -3.077 -0.366 0.320 0.320
SMOK_GPS 240.350 40.620 -6.061 3.710 0.719 0.618
SNDS_GPS 241.580 39.150 -7.769 3.300 0.600 0.700
SODH_GPS 241.980 41.410 -2.096 2.183 0.600 0.700
STEA_GPS 237.260 43.340 -1.341 6.357 0.487 0.495
SUTB_GPS 238.180 39.210 -10.871 7.506 0.370 0.353
T128_GPS 242.760 42.930 -2.761 -0.853 0.900 1.000
TMBR_GPS 238.700 41.630 -4.664 5.615 0.400 0.400
TONO_GPS 242.820 38.100 -4.222 0.772 0.348 0.330
TRGO_GPS 240.870 40.770 -7.461 2.530 1.000 0.800
TUFF_GPS 238.790 42.440 -2.272 1.111 1.000 1.000
TUNG_GPS 241.740 40.400 -5.591 2.009 0.335 0.335
U698_GPS 241.700 43.170 -2.030 -1.405 0.900 1.000
UPSA_GPS 241.200 39.630 -6.647 3.055 0.342 0.323
UU83_GPS 239.680 39.320 -9.112 6.778 0.700 0.600
V209_GPS 240.460 39.080 -6.671 4.847 0.600 0.500
VALM_GPS 242.890 40.780 -6.384 0.241 0.800 0.900
VIDA_GPS 237.430 44.150 1.349 4.769 0.594 0.545
W072_GPS 239.230 43.010 -3.527 3.277 0.628 0.600
W078_GPS 241.420 38.610 -5.039 4.707 1.100 0.900
W67R_GPS 239.640 42.190 -4.621 2.879 0.700 0.800
W784_GPS 237.990 42.140 -1.776 2.040 1.000 1.000
WICK_GPS 238.310 43.680 -3.170 6.335 0.492 0.500
WILD_GPS 241.630 40.020 -5.374 4.098 0.700 0.700

WILO_GPS 243.590 41.210 -2.277 -0.792 0.600 0.700
X360_GPS 241.610 38.540 -3.030 2.899 1.000 0.900
Y090_GPS 239.690 43.430 -0.187 2.977 0.800 0.900
YBHB_GPS 237.290 41.730 -3.575 6.787 0.424 0.421
Z25X_GPS 242.310 38.770 -5.548 -0.932 1.000 0.900
KELY_GPS 309.050 66.990 0.569 -0.543 0.363 0.369
STJO_GPS 307.320 47.600 -1.395 -0.657 0.800 0.100
BRMU_GPS 295.300 32.310 0.117 -0.249 0.700 0.700
THU1_GPS 291.210 76.540 -1.933 -0.805 0.548 0.548
WES2_GPS 288.510 42.610 0.461 -1.144 0.418 0.409
NLIB_GPS 281.930 45.960 0.475 -0.605 0.360 0.360
ALGO_GPS 268.420 41.770 0.102 0.021 0.332 0.321
YELL_GPS 245.520 62.480 -0.434 -0.312 0.330 0.347
DRAO_GPS 240.380 49.320 1.065 1.366 0.353 0.361
FAIR_GPS 212.500 64.980 0.464 -3.506 0.365 0.354
BILI_GPS 166.440 68.080 2.113 -1.869 0.671 0.689
PETP_GPS 158.610 53.010 -5.856 10.623 1.600 1.600
MAGO_GPS 150.770 59.580 4.682 -5.544 1.500 1.600
YSSK_GPS 142.720 47.030 8.391 0.490 1.700 1.700
TIXI_GPS 128.870 71.630 -2.546 -1.133 1.500 1.500
0047_GPS 240.017 43.590 -2.069 1.357 0.610 0.600
0113_GPS 235.842 41.933 1.899 11.340 0.743 0.728
0209_GPS 238.742 41.671 -2.440 4.050 1.580 1.610
0226_GPS 240.006 40.245 -5.730 3.482 0.680 0.652
036C_GPS 244.168 41.511 -2.840 -0.620 0.800 0.750
1214_GPS 237.059 42.397 -0.300 6.590 1.750 1.010
16EM_GPS 243.534 42.656 -2.380 1.810 0.860 0.840
1882_GPS 239.335 47.768 1.730 2.530 0.520 0.550
217U_GPS 238.095 46.542 2.740 5.030 0.480 0.590
2780_GPS 235.676 43.344 5.080 11.270 0.580 0.450
4S9B_GPS 237.409 45.216 1.670 6.896 1.015 0.865
4Z9A_GPS 236.549 48.124 5.930 4.860 0.730 0.920
74LR_GPS 240.581 41.173 -4.190 2.250 0.700 0.730
A074_GPS 238.825 43.313 -1.550 4.450 0.700 0.690
A16N_GPS 235.940 44.587 6.729 9.813 0.442 0.409
A479_GPS 236.467 46.991 7.100 6.100 0.530 0.600
A515_GPS 239.575 48.594 0.700 1.770 0.950 0.920
A545_GPS 239.256 45.475 0.420 3.060 0.600 0.620
A699_GPS 241.549 43.216 -2.620 1.230 0.730 0.720
ACME_GPS 237.796 48.711 3.290 4.280 0.790 1.010
AHID_GPS 248.936 42.773 -0.893 -0.967 0.458 0.430
AIRP_GPS 242.185 44.833 -0.690 0.350 0.560 0.500
ALAM_GPS 244.842 37.358 -3.280 -0.160 0.390 0.380
ALCC_GPS 232.481 50.458 -0.190 3.010 0.730 0.750
ALEX_GPS 234.507 49.738 5.280 5.960 1.020 1.050
ALKA_GPS 240.001 42.954 -2.480 3.560 0.620 0.700
ALTA_GPS 238.253 42.209 -3.430 5.150 0.400 0.440
ANAW_GPS 233.453 49.789 5.880 5.890 0.740 0.780
ANNA_GPS 234.685 50.491 2.350 3.110 0.850 0.880
APEX_GLA 245.068 36.319 -3.390 -0.290 0.380 0.370
APSA_GPS 237.015 46.671 3.770 5.740 0.400 0.400
ARGU_GLA 242.478 36.050 -7.280 5.840 0.400 0.390
ARLI_GPS 237.842 48.162 2.670 2.900 0.440 0.450
ARLO_GPS 237.846 48.170 2.850 3.640 0.590 0.680
ARP0_GPS 237.193 46.477 8.840 3.690 1.450 1.670
ASH0_GPS 237.293 42.216 -5.030 7.500 0.680 0.750
ASTO_GPS 236.168 46.173 7.280 8.290 0.760 0.780
ATHE_GPS 241.529 45.813 -0.240 0.450 0.520 0.510
ATKI_GPS 236.747 49.337 3.110 3.500 1.170 0.930
AVA2_GPS 237.751 47.686 4.250 3.180 0.580 0.580

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AZAL_GPS 236.747 42.799 -0.600 8.340 0.750 0.740
B059_GPS 238.574 47.735 3.630 3.100 0.540 0.560
B073_GPS 241.271 40.848 -4.540 2.720 0.880 0.910
B197_GPS 237.245 47.501 4.920 5.580 0.580 0.640
B317_GPS 240.273 46.578 0.720 1.710 0.550 0.610
B737_GPS 236.803 44.149 2.420 5.000 0.910 0.990
B741_GPS 236.589 43.129 -0.680 8.530 0.660 0.720
BAKR_GPS 238.326 48.865 1.550 1.990 1.240 1.390
BAL2_GPS 235.934 44.830 7.390 9.810 0.570 0.590
BALL_GPS 235.842 49.347 4.770 5.270 0.550 0.600
BAMF_GPS 234.866 48.828 8.600 7.460 0.780 0.960
BATT_GPS 237.453 45.781 2.960 5.760 0.420 0.450
BCHD_GPS 236.349 48.316 5.530 4.820 1.310 0.930
BCHR_GPS 234.777 49.650 5.800 4.600 0.720 0.780
BCOV_GPS 233.157 50.544 2.790 4.200 0.690 0.710
BEAV_GPS 238.195 43.133 -2.723 7.111 0.500 0.512
BHAP_GPS 237.465 48.791 3.830 2.090 1.950 1.140
BIGC_GPS 236.419 46.146 4.740 6.430 0.540 0.600
BIGH_GPS 241.470 45.600 -0.370 1.030 1.080 0.920
BLCO_GPS 235.514 42.801 3.530 12.790 0.430 0.420
BLK4_GPS 237.536 43.160 -0.650 5.990 0.380 0.400
BLUE_GPS 236.740 47.955 5.690 5.160 0.380 0.400
BLYN_GNI 237.072 48.016 4.484 4.835 0.737 0.768
BM31_GPS 238.341 48.273 2.670 1.950 0.580 0.590
BOLI_GPS 236.164 42.792 -0.020 9.350 0.350 0.350
BOUN_GPS 237.004 49.078 3.680 3.990 1.230 0.940
BOVL_GPS 243.598 46.857 1.160 0.480 0.750 0.700
BRAE_GPS 236.588 45.065 3.670 6.520 0.950 0.970
BREW_GPS 240.317 48.132 1.370 1.600 0.610 0.640
BRIB_GPS 237.847 37.919 -14.986 16.112 0.418 0.415
BRMU_GPS 295.304 32.370 0.662 -0.271 0.435 0.386
BROW_GPS 237.556 47.306 3.730 2.800 0.980 1.180
BRWV_GPS 234.360 50.125 4.390 4.480 0.760 0.790
BSTR_GPS 236.274 43.660 2.230 8.720 0.610 0.620
BULC_GPS 232.890 50.961 -1.250 4.420 0.860 0.910
BURN_GPS 242.156 42.780 -1.901 1.618 0.541 0.541
BUST_GLA 243.549 36.745 -3.490 0.120 0.380 0.370
C033_GPS 240.189 47.242 1.720 1.550 0.760 0.740
C334_GPS 242.431 46.486 0.180 1.630 0.630 0.660
C715_GPS 236.900 44.633 4.210 7.020 0.880 1.140
CALV_GPS 232.046 51.544 -1.960 2.390 0.910 0.950
CAM4_GPS 236.222 43.002 -0.140 9.310 0.430 0.430
CANN_GPS 236.040 45.862 7.610 8.580 0.380 0.400
CAPS_GPS 237.401 48.513 5.180 3.210 0.920 1.080
CBL1_GPS 240.451 45.344 -0.170 2.110 0.530 0.570
CC25_GPS 241.411 46.973 0.620 1.760 0.520 0.520
CEDC_GPS 236.154 45.214 5.190 8.280 0.590 0.630
CHAB_1PS 237.881 37.724 -16.608 18.972 0.357 0.414
CHAS_GPS 237.009 45.524 3.180 6.140 0.420 0.470
CHAT_GPS 183.434 -43.956 -38.713 50.072 0.461 0.480
CHEM_GPS 236.297 48.920 4.863 4.379 0.550 0.555
CHLO_GLA 243.234 36.747 -3.600 0.560 0.380 0.370
CHO1_GPS 238.335 39.433 -10.947 6.924 0.509 0.508
CHUR_GPS 265.911 58.759 0.629 -0.261 0.386 0.400
CHWK_GPS 237.992 49.157 2.370 2.150 0.320 0.320
CHZZ_GPS 236.022 45.487 6.920 9.647 0.418 0.421
CLAT_GPS 236.795 46.105 4.730 6.810 1.060 1.110
CLCC_GPS 237.425 45.326 1.750 8.010 1.040 1.270
CLFH_GPS 237.639 45.296 1.340 5.100 0.590 0.640
CMB0_GPS 239.614 38.034 -10.903 7.929 0.443 0.442
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CME1_GPS 235.604 40.442 -9.170 30.720 0.568 0.568
CNDR_GPS 238.722 37.896 -12.961 7.586 0.485 0.482
CNSP_GPS 236.326 48.465 5.740 4.800 1.310 1.010
CNTR_GPS 236.297 46.973 8.500 7.370 0.520 0.590
COEU_GPS 243.204 47.743 0.860 0.160 0.520 0.510
COLR_GPS 237.170 44.208 2.350 6.400 1.000 1.020
COND_GPS 236.083 46.057 7.800 7.710 0.550 0.580
CORV_GPS 236.695 44.586 3.026 7.194 0.361 0.424
COVE_GPS 242.180 45.297 -0.740 0.820 0.790 1.030
COXI_GPS 231.401 50.813 -0.190 2.910 0.900 0.950
CPXF_GNI 237.743 46.840 2.540 4.531 0.593 0.611
CRAT_GLA 243.431 36.808 -3.390 0.280 0.380 0.370
CRES_GPS 238.056 43.530 -0.570 5.040 0.900 0.750
CROW_GPS 236.681 43.986 1.920 8.300 0.670 0.710
CRWN_GPS 241.014 47.971 1.360 -0.040 1.190 1.100
CSTL_GPS 237.081 46.283 3.750 6.440 0.620 0.690
CTHS_GPS 241.618 47.127 0.550 1.620 0.960 1.150
CUGR_GPS 237.765 44.119 0.980 5.120 1.210 1.030
CURT_GPS 236.401 44.377 3.490 8.260 0.500 0.530
D639_GPS 240.177 45.813 -0.040 2.420 0.490 0.540
D706_GPS 241.068 43.960 -1.410 1.270 0.760 0.710
DALL_GPS 238.825 45.618 1.390 3.340 0.350 0.410
DARL_GPS 236.607 43.242 -1.670 9.390 0.930 0.730
DAVI_GPS 235.680 49.599 4.430 5.200 0.540 0.570
DDSN_GPS 236.756 43.119 0.395 7.794 0.520 0.472
DELI_GPS 236.545 43.126 0.060 7.920 0.730 0.790
DIAB_GPS 238.084 37.879 -12.327 11.091 0.458 0.456
DISC_GPS 236.773 48.425 4.610 4.660 1.370 0.990
DOTT_GPS 236.725 46.631 4.850 6.810 0.460 0.520
DOUG_GPS 236.653 48.493 4.970 4.020 1.300 0.930
DUBO_GPS 264.134 50.259 -0.640 -0.762 0.367 0.332
DUNG_GPS 236.890 48.181 6.730 3.170 1.200 1.230
DUWA_GPS 237.613 47.595 4.870 5.340 1.170 1.460
E040_GPS 239.820 45.243 1.320 1.930 0.760 0.760
E072_GPS 243.588 43.075 -1.960 0.420 0.970 1.000
E141_GPS 236.709 44.391 4.720 7.210 0.590 0.630
E518_GPS 239.408 47.559 3.290 2.680 1.250 0.950
EA40_GPS 236.591 47.939 6.810 4.310 0.450 0.470
EARL_GPS 236.024 49.753 3.520 4.250 0.480 0.520
EASN_GPS 238.829 47.232 4.950 4.160 0.470 0.480
ECHO_GPS 245.736 37.916 -3.442 -0.423 0.367 0.364
EDDY_GPS 236.233 44.612 5.420 7.950 1.040 1.250
EGAN_GPS 245.061 39.345 -4.922 -0.196 0.436 0.436
ELIZ_GPS 232.877 49.873 5.180 6.260 0.700 0.730
ELKO_GPS 244.183 40.915 -4.255 0.130 0.400 0.364
ELKR_GPS 237.655 46.301 3.715 4.539 0.568 0.574
EOUT_GPS 248.071 41.253 -1.362 -0.151 0.427 0.361
ESTA_GPS 237.667 45.299 1.350 5.100 0.590 0.640
EZEL_GPS 236.837 44.079 1.990 7.120 0.820 0.940
F408_GPS 243.551 44.669 0.850 1.230 0.890 0.640
F735_GPS 238.803 44.269 -0.620 4.170 1.310 1.270
F751_GPS 235.801 43.340 4.490 11.560 0.970 1.110
F760_GPS 237.375 42.142 -3.230 5.430 0.770 0.890
FAAS_GPS 243.881 45.942 -0.250 -0.020 0.740 0.840
FALL_GPS 238.867 46.629 2.580 2.700 0.810 0.750
FARB_GPS 236.999 37.697 -28.543 37.791 0.573 0.571
FARO_GPS 236.661 42.423 -1.860 8.540 0.600 0.660
FARV_GPS 237.347 43.586 -0.050 7.450 0.660 0.750
FARW_GPS 236.624 47.015 5.600 6.690 0.500 0.560
FERR_GPS 241.845 48.278 -0.600 0.010 1.290 1.710

FHAM_GPS 236.140 44.019 4.520 9.560 1.560 1.540
FILB_GPS 234.302 49.883 4.430 4.210 0.750 0.790
FISH_GPS 235.732 42.046 2.692 10.639 0.622 0.570
FLAT_GPS 244.685 46.339 0.890 0.480 0.690 0.760
FLIN_GPS 258.022 54.726 -0.121 -1.188 0.328 0.342
FORE_GPS 241.042 45.138 0.500 1.260 0.690 0.830
FORK_GPS 235.604 47.937 12.920 9.180 0.530 0.540
FOSS_GPS 239.780 45.000 -0.750 2.150 0.920 0.920
FOUR_GPS 234.718 49.192 6.410 6.160 0.600 0.630
FRAN_GPS 236.500 46.541 6.110 7.650 0.480 0.510
FRDC_GPS 234.493 48.985 9.080 9.010 0.790 0.890
FRED_GPS 247.501 36.988 -1.830 -0.240 0.384 0.412
FRND_GPS 237.397 48.892 3.580 3.540 1.060 1.350
FTS1_GPS 236.044 46.205 8.520 8.740 0.260 0.260
G118_GPS 240.048 42.098 -3.520 3.680 0.670 0.750
G370_GPS 238.731 48.674 2.810 2.340 0.610 0.620
G404_GPS 243.627 46.142 0.380 0.430 0.720 0.830
G753_GPS 239.491 44.353 -0.950 1.840 1.370 1.120
GABR_GPS 236.180 49.203 4.570 4.390 0.700 0.660
GARL_GPS 240.645 40.417 -5.592 2.830 0.391 0.354
GARY_GPS 236.930 45.612 2.970 5.650 0.460 0.480
GENT_GPS 241.923 43.744 -1.810 1.120 1.200 0.840
GLAC_GPS 234.636 49.552 5.640 4.300 0.710 0.760
GLDH_GPS 237.213 47.549 5.420 4.590 0.410 0.430
GO89_GPS 235.572 42.421 3.710 12.820 0.440 0.390
GOBS_GPS 239.185 45.839 1.026 3.277 0.543 0.543
GODE_GPS 283.173 39.022 0.267 -0.008 0.298 0.297
GP14_GPS 235.822 47.114 13.540 12.580 0.450 0.500
GP17_GPS 238.375 47.138 2.490 2.850 0.630 0.640
GP29_GPS 238.406 48.486 1.160 2.290 0.580 0.570
GP35_GPS 236.351 46.334 6.730 7.080 0.610 0.640
GP37_GPS 237.857 48.917 2.560 1.700 0.700 0.860
GRAY_GPS 235.900 46.903 10.840 10.940 0.470 0.480
GREN_GPS 237.474 41.555 -4.430 4.380 1.130 1.390
GREV_GPS 235.721 47.304 14.790 12.390 0.330 0.350
GREY_GPS 235.296 48.996 7.240 7.160 0.630 0.670
GRND_GPS 236.361 45.082 4.210 6.490 0.470 0.480
GRSM_GPS 238.223 48.539 3.400 3.870 0.830 1.030
GTRG_GPS 246.759 43.244 -2.278 -0.261 0.430 0.367
GWEN_GPS 238.672 45.783 2.290 2.310 0.970 0.970
H318_GPS 243.813 41.962 -3.210 0.600 0.760 0.710
H428_GPS 239.785 45.745 0.760 2.130 1.300 1.510
HAFF_GPS 237.824 47.485 3.260 3.900 0.700 0.740
HAMI_GPS 235.935 44.602 6.590 8.960 0.420 0.440
HAND_GPS 235.041 49.069 6.120 6.110 0.600 0.630
HANS_GPS 236.430 45.885 5.100 6.580 0.500 0.520
HARD_GPS 232.619 50.698 -0.110 3.310 0.770 0.800
HEAD_GPS 235.924 46.300 9.560 10.480 0.730 0.740
HEBE_GPS 248.627 40.514 -0.934 -0.239 0.409 0.408
HELE_GPS 237.199 45.857 2.980 6.940 0.400 0.440
HKUS_GPS 234.159 50.335 3.370 4.180 0.760 0.780
HLID_GPS 245.586 43.563 -2.135 -0.137 0.384 0.444
HOLB_GPS 231.865 50.640 0.110 3.730 0.630 0.630
HOPB_GPS 236.925 38.995 -18.965 21.068 0.427 0.424
HOWE_GPS 237.120 44.990 2.810 6.810 0.470 0.490
HRMA_GPS 240.741 45.827 -0.250 1.380 0.490 0.510
HUBB_GPS 237.189 45.179 4.150 7.270 1.070 1.280
HUR2_GPS 236.471 47.990 6.600 5.650 0.450 0.470
HUSB_GPS 238.151 44.120 -3.350 11.080 0.770 0.790
HYAK_GPS 238.608 47.388 2.930 2.350 1.070 1.330

ICEB_GPS 237.115 48.420 4.950 4.140 0.580 0.500
ICEH_GPS 241.120 46.251 -0.780 1.480 1.420 1.180
ILLA_GPS 236.318 42.104 -1.157 8.633 0.791 0.682
IMP0_GPS 237.174 44.795 2.840 6.320 0.540 0.580
ISLE_GPS 236.051 45.273 5.680 9.480 1.410 1.530
J090_GPS 240.143 44.119 -0.810 2.270 0.480 0.510
JAIL_GPS 237.029 44.876 2.610 6.390 0.980 1.140
JENS_GPS 231.735 50.646 -1.470 3.840 0.920 0.940
JHRT_GPS 234.603 50.033 4.160 4.330 0.760 0.780
JOHN_GLA 243.901 36.459 -3.320 -0.260 0.380 0.370
JONY_GPS 240.372 44.623 -0.800 1.140 0.670 0.670
JOSE_GPS 242.748 45.349 -0.370 0.390 0.540 0.570
JRDR_GPS 235.897 48.465 6.730 5.240 1.260 1.080
JUNC_GPS 239.053 44.920 0.360 2.598 0.532 0.550
JUST_GPS 237.123 42.323 -2.460 7.360 0.460 0.530
JUSW_GPS 242.941 48.179 0.870 0.050 0.600 0.670
K024_GPS 242.268 48.208 0.430 1.410 0.870 1.000
KAMI_GPS 243.995 46.213 1.280 1.260 0.610 0.680
KELL_GPS 241.341 48.698 1.080 0.970 0.930 0.650
KELS_GPS 237.104 46.118 3.700 6.145 0.444 0.447
KING_GPS 232.229 51.854 -3.740 2.470 0.930 0.960
KINW_GPS 237.352 47.735 5.730 4.620 0.670 0.810
KLAS_GPS 236.280 46.089 6.480 7.210 0.640 0.710
KLUC_GPS 232.836 50.573 1.360 4.700 1.200 1.230
KOPR_GPS 232.101 50.486 2.750 2.860 0.840 0.860
KTBW_GNI 237.205 47.547 3.851 4.259 0.442 0.442
KWJ1_GPS 167.730 8.722 -69.881 44.642 0.559 0.534
L387_GPS 239.937 47.656 1.300 1.680 0.600 0.570
LANG_GPS 237.044 44.566 2.790 6.300 0.600 0.620
LARC_GPS 237.912 45.533 1.630 7.640 1.180 1.210
LATA_GPS 242.868 47.274 1.050 1.300 0.660 0.770
LAZA_GPS 236.176 48.612 5.170 4.170 1.150 0.980
LESL_GPS 236.762 43.706 1.500 6.380 0.680 0.830
LEV1_GPS 226.907 56.466 -3.165 2.754 0.602 0.682
LEWG_GPS 237.379 47.094 3.670 6.540 0.570 0.630
LINH_GPS 239.461 47.000 1.550 2.210 0.370 0.380
LITT_GLA 243.692 36.746 -3.330 -0.190 0.380 0.370
LK42_GPS 236.330 48.150 6.260 5.130 0.780 0.850
LKCP_GNI 238.169 47.944 2.026 3.293 0.492 0.472
LKWY_GPS 249.600 44.565 0.221 -3.584 0.364 0.574
LMUT_GPS 248.072 40.261 -2.821 -0.066 0.719 0.735
LOPE_GPS 240.646 41.997 -3.740 2.470 0.660 0.700
LOWL_GPS 237.205 43.922 2.200 5.630 1.080 1.070
LSII_GPS 240.663 47.185 0.580 0.950 0.450 0.480
LUCA_GPS 235.941 42.552 2.160 10.730 1.320 1.200
LUTZ_GPS 238.135 37.287 -20.350 22.834 0.456 0.453
M746_GPS 235.678 42.183 3.150 13.720 0.760 0.700
MACK_GPS 236.869 45.190 2.910 7.370 1.070 1.140
MAWY_GPS 249.311 44.973 0.563 0.599 0.397 0.424
MDMT_GPS 238.778 42.418 -5.226 6.176 0.602 0.587
MENZ_GPS 234.503 50.231 2.580 4.440 0.740 0.750
MERC_GLA 244.021 36.633 -3.240 -0.550 0.380 0.370
MESA_GPS 240.993 46.621 0.310 1.500 0.560 0.520
MHCB_GPS 238.357 37.342 -14.120 10.815 0.370 0.368
MILL_GPS 237.520 44.752 2.250 5.880 0.530 0.580
MKEA_GPS 204.544 19.801 -60.500 51.831 0.386 0.384
MOAK_GPS 233.942 50.104 4.630 4.060 0.780 0.820
MODB_1PS 239.697 41.902 -4.750 3.660 0.510 0.510
MOLA_GPS 237.580 37.947 -18.834 23.127 0.424 0.421
MONB_GPS 238.133 37.485 -16.218 16.149 0.458 0.456

MOON_GPS 236.165 44.777 5.220 8.370 0.500 0.460
MORT_GPS 237.730 46.551 3.440 5.120 0.320 0.330
MRS1_GNI 238.065 47.142 2.320 3.890 0.460 0.480
MRY5_GPS 236.448 44.504 4.150 7.850 0.570 0.560
MTAD_GPS 238.458 46.000 2.140 5.010 0.830 0.860
N274_GPS 236.212 45.907 5.420 8.350 0.680 0.730
N469_GPS 235.881 48.198 8.340 6.800 0.630 0.780
N748_GPS 236.618 42.621 -2.560 8.710 1.540 1.420
NACH_GPS 235.001 49.949 4.540 5.020 0.720 0.750
NAIU_GPS 247.770 41.016 -1.540 -0.860 0.320 0.310
NANO_GPS 235.914 49.295 4.480 4.920 0.330 0.320
NBCG_GPS 235.401 48.370 9.670 8.210 0.500 0.500
NEAH_GPS 235.375 48.298 10.238 8.419 0.466 0.492
NESK_GPS 236.034 45.134 7.360 9.320 0.390 0.400
NESM_GPS 236.772 44.925 3.410 7.410 0.620 0.650
NOMT_GPS 248.370 45.597 0.123 -0.510 0.430 0.433
NTKA_GPS 233.383 49.592 6.690 8.500 0.700 0.730
OFWY_GPS 249.168 44.452 -3.512 -0.534 0.826 0.763
OGIL_GPS 241.039 44.410 -1.660 1.910 0.740 0.710
OHLN_GPS 237.727 38.006 -15.935 17.510 0.778 0.778
OHME_GNI 239.674 47.480 2.650 1.640 0.970 1.000
OKAY_GPS 235.736 49.228 4.910 5.200 0.510 0.530
OLYM_GPS 237.092 46.967 3.990 5.600 0.380 0.320
OP25_GPS 236.076 46.972 10.380 8.700 0.450 0.470
ORCC_GPS 237.339 47.446 4.730 3.620 0.990 1.150
ORVB_GPS 238.500 39.555 -10.737 6.620 0.427 0.424
OVER_GPS 237.858 47.636 2.700 3.760 0.870 0.990
OYST_GPS 234.600 49.823 4.690 4.910 0.730 0.770
P75Z_GPS 235.825 43.124 1.990 10.090 0.540 0.560
PABH_GPS 235.795 47.213 13.566 11.745 0.381 0.381
PACH_GPS 234.957 48.865 8.180 7.170 0.560 0.580
PACI_GPS 237.125 42.336 -1.520 6.820 1.610 0.860
PACK_GPS 238.325 46.607 2.000 4.530 0.970 0.990
PAIN_GPS 237.728 47.908 2.920 3.040 0.810 0.880
PAIS_GPS 239.451 42.704 -2.220 2.590 0.780 0.920
PARK_GPS 236.540 46.268 6.650 8.130 0.500 0.570
PAUL_GPS 240.969 45.499 0.670 1.690 0.870 0.870
PBL1_GPS 237.581 37.853 -23.104 21.666 0.433 0.430
PETE_GPS 237.031 44.510 2.410 6.580 0.740 0.820
PGC4_GPS 236.549 48.648 4.700 4.120 0.530 0.530
PIER_GPS 233.878 49.619 7.000 5.230 0.730 0.770
PLUD_GPS 237.317 47.922 5.020 3.780 0.620 0.700
POCA_GPS 235.555 49.710 3.570 4.560 0.580 0.640
POIN_GLA 243.880 36.580 -3.170 -0.320 0.380 0.370
PONS_GPS 235.883 44.170 5.910 9.020 1.490 1.500
POTB_GPS 238.065 38.203 -11.287 8.540 0.461 0.458
POWE_GPS 235.544 49.807 4.560 4.370 0.600 0.670
PPT1_GPS 237.610 37.187 -28.966 35.352 0.433 0.430
PRAI_GPS 236.176 45.421 4.940 9.060 1.090 1.290
PRDS_GPS 245.707 50.871 0.653 -1.280 0.458 0.456
PRES_GPS 237.075 46.040 3.300 7.080 0.750 0.650
PRIN_GPS 239.135 44.301 -0.430 4.190 0.580 0.550
PROS_GPS 237.489 42.741 -1.890 6.770 0.710 0.800
PTAL_GPS 235.139 49.256 5.300 5.160 0.730 0.720
PTAN_GPS 236.505 48.117 5.190 5.270 0.660 0.650
PTHY_GPS 232.625 50.686 -0.100 4.850 0.730 0.700
PTS5_GPS 237.280 46.533 4.530 5.600 0.560 0.660
PTSG_GPS 235.745 41.783 2.599 11.685 0.392 0.373
PUPU_GNI 237.992 47.500 2.698 2.735 0.500 0.502
QUIN_GPS 239.056 39.975 -9.377 6.451 0.418 0.412

R378_GPS 239.744 48.508 -0.380 3.770 0.500 0.530
R409_GPS 242.751 45.929 0.410 0.500 0.460 0.490
R489_GPS 242.543 44.578 -1.250 1.380 0.720 0.590
RADA_GPS 234.159 49.084 9.310 7.380 0.600 0.650
RBUT_GPS 248.191 40.781 -1.360 -0.110 0.330 0.320
REDM_GPS 238.852 44.260 -0.013 3.521 0.515 0.515
REPO_GLA 243.532 36.840 -3.256 -1.988 1.014 1.016
REST_GPS 236.539 45.797 4.620 7.430 0.480 0.480
REUB_GPS 236.403 42.719 -1.220 8.900 0.340 0.340
RKBU_GPS 237.434 45.547 2.340 5.970 0.340 0.360
RKPT_GPS 237.900 42.473 -3.290 6.300 0.700 0.810
ROBI_GPS 232.399 51.186 -1.830 2.700 0.860 0.890
ROG2_GPS 235.572 42.430 4.200 13.170 0.970 0.900
ROGE_1HT 242.915 36.218 -4.700 2.830 0.400 0.390
ROSE_GPS 236.645 43.246 -0.890 7.520 0.400 0.410
ROSW_GPS 240.263 48.394 0.230 1.540 0.870 0.840
RPT1_GPS 237.625 47.388 3.230 4.000 0.390 0.390
RYAN_1HT 243.350 36.316 -3.591 1.061 0.594 0.594
S262_GPS 242.950 46.426 2.010 0.130 0.720 0.660
S300_GPS 238.442 37.667 -11.777 8.919 0.437 0.437
S381_GPS 243.742 48.731 1.260 -0.130 0.580 0.650
S389_GPS 239.930 48.157 0.920 1.450 0.510 0.550
S418_GPS 244.162 42.880 -2.760 -0.410 0.810 0.840
S509_GPS 241.287 47.761 1.380 0.680 1.120 0.850
SARD_GPS 237.686 43.963 1.770 4.590 0.650 0.670
SARG_GPS 239.523 46.602 0.970 1.820 0.570 0.610
SATS_GPS 236.459 46.966 6.010 7.530 0.760 0.810
SATU_GPS 236.829 48.774 4.220 4.190 1.330 1.050
SC00_GNI 239.275 46.951 1.442 2.191 0.502 0.485
SC02_GNI 236.992 48.546 3.529 3.397 0.608 0.594
SCAR_GPS 231.992 50.654 1.090 2.650 0.860 0.880
SCAZ_GPS 236.796 45.469 4.660 6.050 1.330 1.450
SCHO_GPS 237.125 47.824 6.180 5.260 0.790 0.830
SCOT_GPS 236.935 43.372 -0.210 7.060 0.350 0.360
SDNY_GPS 236.897 44.780 3.780 8.150 0.830 0.860
SDRO_GPS 237.772 48.508 3.060 3.320 0.520 0.560
SEAT_GPS 237.691 47.654 3.784 3.839 0.495 0.439
SECH_GPS 236.123 49.598 3.590 4.730 0.570 0.630
SEDR_GPS 237.776 48.522 2.901 3.252 0.480 0.464
SENT_GPS 234.042 49.956 4.550 3.930 1.020 1.040
SEYM_GPS 232.720 51.465 -0.270 3.430 0.880 0.920
SHEP_GPS 235.813 49.535 4.230 4.740 0.530 0.560
SHER_GPS 236.079 48.377 6.900 4.510 1.520 1.230
SHUS_GPS 232.191 50.781 -0.670 3.380 1.070 1.090
SILV_GPS 238.939 43.125 -2.120 4.470 1.450 1.320
SISK_GPS 236.303 45.483 5.950 8.570 0.480 0.450
SIST_GPS 238.444 44.306 0.924 3.862 0.520 0.527
SITA_GPS 237.447 47.571 1.780 4.020 1.590 1.870
SKIL_GPS 238.103 42.318 -3.680 6.210 0.880 0.920
SKUL_GLA 243.789 36.730 -3.470 -0.200 0.380 0.370
SKYO_GPS 238.872 44.634 0.050 1.950 0.660 0.830
SLID_GPS 240.116 39.314 -9.908 5.598 0.486 0.453
SLVR_GPS 238.428 48.079 2.900 3.720 1.200 1.540
SMEL_GPS 247.155 39.426 -3.077 -0.366 0.400 0.400
SMLT_GPS 243.824 47.546 0.710 0.090 0.580 0.640
SMYC_GLA 244.413 36.320 -3.520 -0.510 0.380 0.370
SNDR_GPS 236.859 47.237 4.550 6.000 0.570 0.580
SNI1_GPS 240.476 33.248 -31.784 34.473 0.416 0.404
SOAM_GPS 236.450 44.038 2.730 7.710 0.520 0.560
SOBE_GPS 236.190 46.663 7.630 9.330 0.490 0.550

SODB_GPS 238.074 37.166 -21.958 25.524 0.477 0.476
SOOS_GPS 235.886 43.885 5.800 10.740 0.680 0.730
SOR4_GPS 237.521 42.065 -3.720 6.340 0.380 0.380
SPAT_GPS 231.673 50.678 -0.380 4.820 0.870 0.900
SPIL_GPS 238.700 46.873 2.080 3.080 0.550 0.620
SPN1_GPS 242.576 47.518 0.290 0.340 0.470 0.470
SPOO_GPS 237.836 47.401 4.040 4.830 0.810 0.830
SPRO_GPS 237.126 45.269 2.970 6.250 0.450 0.430
STEV_GPS 238.117 45.692 2.060 4.340 0.610 0.670
STJO_GPS 307.322 47.595 0.473 0.039 0.414 0.414
STNN_GPS 240.215 41.583 -4.020 2.530 0.660 0.690
STOL_GPS 238.330 45.304 1.860 4.950 0.500 0.590
STRA_GPS 234.417 49.995 3.300 4.340 0.750 0.790
STRI_GLA 243.662 36.645 -3.230 0.150 0.380 0.370
SUAA_GPS 237.827 37.427 -22.133 25.520 0.453 0.450
T739_GPS 236.681 43.465 0.840 7.750 1.020 0.870
T758_GPS 235.607 42.586 -1.060 12.190 0.980 0.900
TAHU_GPS 236.887 47.387 5.670 5.600 0.450 0.480
THR3_GPS 244.897 42.087 -3.310 0.910 0.900 0.890
THUN_GPS 237.710 47.103 3.940 4.800 0.560 0.580
TIBB_GPS 237.552 37.891 -20.026 24.386 0.456 0.453
TID3_GPS 235.670 43.350 5.080 11.270 0.580 0.450
TIGR_GPS 238.015 47.509 2.600 3.270 0.400 0.410
TIMB_GPS 238.288 45.334 2.100 3.510 0.630 0.770
TOBY_GPS 235.336 49.490 4.090 5.300 0.670 0.700
TOKE_GPS 237.572 43.228 -0.990 4.880 0.660 0.710
TOMB_GPS 240.934 43.585 -1.870 1.120 0.720 0.760
TONA_GPS 240.548 48.694 1.620 0.440 0.870 0.940
TRIA_GPS 236.433 44.185 3.000 9.080 0.560 0.610
TRND_GPS 235.849 41.054 3.373 16.454 0.392 0.374
TSWY_GPS 249.403 43.674 -1.326 -0.802 0.505 0.507
TUCK_GPS 236.597 48.140 7.470 4.530 1.380 1.190
TURN_GPS 241.993 42.923 -2.610 0.290 0.880 0.770
TWIN_GPS 236.996 44.325 2.660 5.630 0.850 0.860
U701_GPS 242.417 44.259 -4.910 3.400 2.000 1.480
U727_GPS 236.453 44.594 4.030 8.630 0.570 0.670
U73H_GPS 239.782 44.631 -1.390 1.910 0.800 0.820
U76A_GPS 244.269 43.131 -0.120 -0.960 0.970 0.900
UCD1_GPS 238.249 38.536 -11.530 7.397 0.418 0.415
UCLU_GPS 234.458 48.926 9.010 7.640 0.310 0.300
V162_GPS 244.442 43.490 -2.570 0.260 1.240 0.850
V357_GPS 238.973 42.393 -3.400 4.720 0.690 0.820
V546_GPS 238.122 42.574 -1.940 6.070 0.610 0.670
V696_GPS 241.385 42.450 -2.240 0.740 0.870 0.750
VANC_GPS 237.256 45.672 5.850 4.900 1.030 1.120
VLBI_GPS 236.513 48.390 5.213 4.541 0.367 0.358
WALA_GPS 241.717 46.088 -0.100 0.310 0.500 0.520
WAS2_GPS 234.703 49.752 3.350 4.960 1.750 1.660
WELK_GPS 236.417 43.644 0.680 8.880 1.540 1.850
WHD1_GPS 237.304 48.313 5.300 4.390 0.840 0.900
WHEY_GPS 237.965 45.376 1.070 5.570 0.510 0.560
WHIT_GPS 224.778 60.751 0.640 2.978 0.461 0.458
WILD_GPS 241.629 40.015 -5.460 1.500 1.330 0.930
WILL_GPS 237.832 52.237 -0.604 0.581 0.435 0.435
WILS_GPS 239.479 47.012 2.780 1.420 0.590 0.550
WORD_GPS 237.232 48.141 4.820 3.690 0.640 0.620
WSLR_GPS 237.079 50.127 2.040 2.460 0.380 0.390
X537_GPS 235.943 46.516 8.810 11.060 0.560 0.620
Y109_GPS 238.865 45.233 0.720 2.500 0.460 0.480
Y129_GPS 242.284 42.013 -3.890 1.490 1.050 1.070

Y405_GPS 243.709 45.656 2.290 0.950 0.860 0.930
Y502_GPS 238.634 44.823 0.930 3.120 0.570 0.710
Y683_GPS 236.781 44.689 3.610 7.360 1.540 0.820
YALE_GPS 237.682 46.026 2.130 4.710 0.380 0.400
YAMB_GPS 236.861 45.070 3.150 6.650 0.530 0.560
YOUB_GPS 235.738 48.901 5.880 5.240 0.440 0.430
Z231_GPS 242.667 47.969 2.400 -0.050 1.130 1.380
Z264_GPS 242.112 48.541 0.840 0.720 0.440 0.460
Z478_GPS 236.888 47.033 5.550 6.670 0.470 0.510
RVAL_GPS 244.598 35.142 -2.375 0.701 0.709 0.707
1PDI_GPS 243.837 36.690 -1.554 1.111 0.753 0.758
SHOS_GPS 243.739 36.943 -1.685 1.663 0.752 0.753
SILV_GHT 243.709 35.397 -5.139 0.291 1.320 1.300
FUNE_GPS 243.525 36.397 -3.139 1.452 0.695 0.700
P_42_GHT 243.448 35.426 -4.634 1.925 1.420 1.370
BLAK_GPS 243.425 36.809 -3.124 1.908 1.370 1.370
CLAI_GPS 243.319 36.889 -4.246 1.507 1.370 1.380
P16X_GPS 243.254 36.828 -3.074 2.929 0.779 0.797
F23X_GPS 243.138 36.858 -3.431 2.976 0.750 0.766
MO93_GPS 243.071 36.792 -4.106 2.720 0.758 0.775
BM8Z_GPS 243.022 36.724 -3.242 2.544 0.718 0.725
GS36_GPS 242.958 35.168 -10.024 10.569 1.350 1.360
SCTY_GPS 242.863 37.218 -3.179 2.008 1.040 1.020
STOV_GPS 242.853 36.606 -4.935 3.430 0.757 0.763
GS13_GPS 242.851 35.522 -6.988 8.215 0.698 0.698
GS49_GHT 242.837 35.375 -6.795 11.520 1.300 1.290
PANA_GPS 242.826 36.294 -4.505 3.881 0.678 0.682
GS07_GPS 242.821 36.035 -6.044 5.207 0.698 0.700
GS14_GPS 242.801 35.615 -7.484 7.983 0.700 0.702
RAIN_GPS 242.792 34.975 -9.224 12.368 0.723 0.725
G165_GPS 242.788 36.543 -4.426 3.724 0.763 0.770
X137_GPS 242.720 36.402 -5.299 4.383 0.733 0.733
NEV1_GPS 242.714 37.061 -3.346 2.691 1.010 0.990
GS25_GPS 242.711 35.913 -6.568 6.654 0.698 0.698
M137_GPS 242.700 36.349 -4.904 6.120 0.758 0.766
GS47_GHT 242.683 35.214 -9.331 12.163 1.320 1.320
TRN1_GPS 242.672 35.813 -6.676 6.721 0.709 0.711
GS12_GPS 242.667 35.434 -8.219 10.032 0.704 0.705
GRAP_GPS 242.640 36.992 -3.753 2.477 1.030 1.010
GS20_GPS 242.599 35.769 -7.725 8.200 0.700 0.700
13DD_GPS 242.576 36.340 -6.362 6.102 0.747 0.763
GS27_GPS 242.546 36.053 -7.043 6.623 0.728 0.728
GS48_GPS 242.541 35.584 -8.703 10.695 1.340 1.360
HUNT_GPS 242.521 36.572 -5.277 4.147 1.060 1.050
GS24_GPS 242.518 35.925 -8.409 7.081 0.709 0.711
TINP_GPS 242.500 36.865 -3.966 3.879 1.020 1.010
FMTH_GPS 242.495 35.213 -9.901 12.249 1.320 1.320
JACK_GPS 242.460 36.532 -5.742 4.442 1.060 1.050
GS26_GCO 242.458 35.740 -8.598 8.733 1.170 1.170
GS43_GPS 242.454 36.067 -7.882 6.753 1.280 1.280
TEAK_GPS 242.454 36.759 -4.609 3.783 1.040 1.010
L166_GPS 242.450 36.279 -6.633 5.925 0.760 0.781
GS17_GPS 242.443 35.569 -9.729 10.485 0.700 0.702
GS45_GPS 242.443 36.002 -7.566 7.524 1.280 1.290
FLAT_GPS 242.439 36.519 -5.476 3.964 1.060 1.060
T19S_GPS 242.417 36.232 -7.588 6.121 0.768 0.789
GS11_GPS 242.415 35.429 -9.122 12.012 0.747 0.750
GS50_GPS 242.409 35.083 -10.772 13.997 1.330 1.320
LEEF_GPS 242.388 36.497 -6.008 5.568 1.060 1.070
GS42_GPS 242.368 36.107 -8.190 5.990 1.290 1.300

GS28_GPS 242.359 36.307 -6.582 5.536 0.673 0.669
GS34_GPS 242.328 36.094 -9.959 6.074 1.140 1.120
6813_GPS 242.325 36.150 -8.914 5.348 0.731 0.738
TABL_GPS 242.322 34.382 -20.099 19.628 0.721 0.721
JOBU_GPS 242.308 35.337 -8.855 12.474 0.686 0.687
MDAY_GPS 242.294 34.743 -13.129 15.444 0.737 0.733
GS16_GPS 242.294 35.470 -9.687 11.689 0.700 0.702
GS19_GPS 242.260 35.660 -9.932 11.302 0.702 0.702
GS35_GPS 242.244 36.217 -7.475 6.811 1.150 1.130
CERR_GPS 242.213 36.538 -7.687 6.259 0.726 0.742
HOLC_GNR 242.155 34.458 -18.278 21.088 0.698 0.698
TTAP_GPS 242.136 34.985 -11.569 15.029 0.702 0.702
GS18_GPS 242.130 35.584 -10.971 11.220 0.702 0.704
FORK_GGE 242.116 36.062 -7.775 8.371 1.100 1.110
GS09_GPS 242.102 35.115 -10.842 14.191 0.707 0.709
GS04_GPS 242.093 36.204 -8.833 8.021 0.696 0.698
BM25_GPS 242.056 36.045 -9.030 10.689 0.752 0.771
GS15_GPS 242.039 35.426 -11.198 11.820 0.705 0.707
GS22_GPS 242.031 35.845 -9.902 11.221 0.735 0.737
WAUC_GPS 242.013 37.092 -6.940 6.690 1.340 1.340
GS03_GPS 241.965 35.668 -10.929 11.659 0.733 0.738
FISH_GPS 241.954 37.737 -4.824 5.324 1.170 1.170
GS01_GPS 241.918 35.225 -11.608 13.572 0.705 0.705
GS02_GPS 241.900 35.494 -11.460 11.698 0.700 0.702
RITA_GPS 241.899 36.914 -8.215 6.223 0.691 0.693
BAMA_GPS 241.881 36.603 -8.723 8.254 0.696 0.698
3188_GPS 241.868 36.466 -9.532 9.371 1.010 0.980
KMED_GPS 241.864 36.023 -9.991 10.155 0.680 0.682
WSTG_GPS 241.848 37.271 -7.143 5.337 0.716 0.718
TROP_GPS 241.794 34.992 -12.529 14.860 0.805 0.802
WMTN_GPS 241.764 37.572 -5.130 5.167 0.705 0.709
ABER_GPS 241.712 36.979 -8.809 7.734 1.050 1.030
OVRO_GPS 241.706 37.233 -7.627 7.205 0.682 0.684
DEER_GPS 241.492 35.086 -12.328 14.733 0.700 0.700
0614_GPS 241.412 35.745 -11.829 10.553 0.689 0.689
SPRN_GPS 241.273 36.185 -11.578 10.421 0.841 0.735
ALRT_PBO 297.660 82.494 -0.083 -1.667 0.900 0.600
SCH2_PBO 293.167 54.832 0.846 0.665 0.474 0.524
THU3_PBO 291.175 76.537 -0.883 -0.439 0.200 0.200
NRC1_PBO 284.376 45.454 0.362 -0.560 0.474 0.418
GOGA_PBO 276.527 33.415 -3.377 -1.220 1.900 1.800
JFWS_PBO 269.752 42.914 -3.912 -5.761 1.600 1.600
RESO_PBO 265.106 74.691 -0.048 -0.251 1.100 1.900
KSU1_PBO 263.391 39.101 -2.239 -1.010 1.300 1.300
WMOK_PBO 261.219 34.738 -0.996 -1.457 1.100 1.100
P040_PBO 257.313 38.071 -0.475 -1.463 0.400 1.000
P039_PBO 256.846 36.448 -0.934 -0.052 0.500 0.400
P044_PBO 256.778 40.172 -0.698 -0.350 0.400 0.300
P038_PBO 256.593 34.147 -1.217 -0.346 0.500 0.500
P043_PBO 255.814 43.881 -0.962 -1.027 1.200 0.700
P054_PBO 255.559 45.846 -0.689 -0.721 1.400 0.900
P055_PBO 255.315 47.117 -0.642 -1.215 1.200 0.800
P042_PBO 255.089 42.052 -1.030 -0.010 0.400 0.300
P037_PBO 254.895 38.422 -0.764 -0.105 0.300 0.400
P035_PBO 254.816 34.601 -1.402 -0.103 0.500 0.500
P041_PBO 254.806 39.949 -0.608 -0.203 0.400 0.300
P036_PBO 254.706 36.420 -1.637 0.299 0.600 0.300
RG17_PBO 254.330 39.762 -3.115 -0.292 1.700 1.700
P123_PBO 254.089 36.635 -0.730 -0.486 1.100 0.800
P034_PBO 253.541 34.946 -1.091 0.027 0.300 0.300

SC01_PBO 253.033 34.068 -0.824 -1.161 0.800 0.700
P052_PBO 252.981 47.375 -0.536 -0.959 0.900 1.000
P026_PBO 252.805 32.659 -1.574 0.945 0.400 0.700
P032_PBO 252.744 41.742 -0.545 -0.254 0.800 0.500
P033_PBO 252.612 43.953 -0.564 -1.150 0.600 0.500
P107_PBO 252.120 35.132 -0.987 0.461 1.200 0.900
P028_PBO 252.092 36.032 -0.955 -0.338 0.500 1.100
P031_PBO 252.091 39.515 0.772 -1.638 1.200 0.800
P051_PBO 251.454 45.807 -0.298 -1.223 0.600 0.500
P012_PBO 250.666 38.097 -1.383 -0.504 1.000 0.800
P718_PBO 250.624 44.753 -2.039 -1.503 1.300 1.400
P011_PBO 250.481 36.150 -0.753 -0.600 1.200 0.800
BLW2_PBO 250.442 42.767 -1.912 -0.099 0.300 0.300
P722_PBO 250.429 45.457 -0.113 -0.898 0.900 0.500
P715_PBO 250.310 43.501 -0.886 -0.296 1.600 1.700
P717_PBO 250.103 44.485 -0.150 -1.391 1.200 1.200
P721_PBO 249.998 45.003 -0.731 -0.788 0.700 0.700
P015_PBO 249.991 34.264 -1.722 -0.188 0.500 0.400
P709_PBO 249.714 44.392 -0.654 -0.381 1.000 0.800
WLWY_PBO 249.713 44.640 4.755 -4.781 0.500 0.300
P720_PBO 249.694 44.943 -0.834 -0.381 0.700 0.600
P716_PBO 249.488 44.718 -10.443 0.924 0.900 0.600
P030_PBO 249.487 41.750 -1.152 -0.676 1.000 0.500
P461_PBO 249.241 45.354 0.580 -0.970 0.900 0.500
P711_PBO 249.139 44.636 11.353 3.432 0.900 0.500
P049_PBO 249.094 47.350 0.353 -0.967 1.200 1.400
P460_PBO 248.971 45.140 0.671 -0.664 0.800 0.900
P680_PBO 248.901 44.598 0.651 -2.462 0.600 0.800
P101_PBO 248.764 41.692 -0.156 -0.759 0.900 0.500
P050_PBO 248.752 48.809 0.806 -1.259 0.900 0.800
P119_PBO 248.742 40.732 -0.392 -0.958 1.100 1.300
P118_PBO 248.650 40.635 -1.095 -0.756 0.600 0.600
P089_PBO 248.585 40.807 -1.089 0.145 0.400 0.300
P360_PBO 248.549 44.318 -1.961 -2.754 0.500 0.500
P684_PBO 248.550 43.919 -2.175 -1.654 0.500 0.400
P112_PBO 248.550 39.817 -0.825 -0.354 0.500 0.600
BBID_PBO 248.474 44.185 -2.566 -2.452 0.600 0.800
HWUT_PBO 248.435 41.607 -0.760 0.049 1.600 1.600
P110_PBO 248.429 39.715 0.171 -1.451 0.700 0.500
MPUT_PBO 248.366 40.016 -2.519 1.051 0.600 0.400
P088_PBO 248.277 40.772 -0.591 -1.347 1.300 1.400
P117_PBO 248.249 40.435 -3.004 -2.247 1.400 1.600
P719_PBO 248.211 45.218 0.772 -1.646 1.400 1.500
P108_PBO 248.055 39.589 -1.735 -0.742 0.500 0.600
SPIC_PBO 247.873 39.306 -2.946 0.862 0.300 0.200
P106_PBO 247.738 39.459 -2.741 -0.535 1.100 1.100
P086_PBO 247.718 40.649 -2.498 0.966 0.400 0.400
P122_PBO 247.668 41.635 -2.262 -0.833 0.300 0.200
P016_PBO 247.639 40.078 -2.719 -0.232 1.400 1.100
FERN_PBO 247.545 35.342 -2.390 0.470 0.300 0.200
P105_PBO 247.496 39.388 -2.744 0.471 0.500 0.700
P706_PBO 247.476 45.043 -0.337 -1.128 1.400 1.400
P114_PBO 247.472 40.634 -2.699 -0.328 0.800 0.400
P045_PBO 247.383 45.383 -0.325 -1.826 1.200 1.300
P057_PBO 247.377 41.757 -2.758 -0.426 0.300 0.300
P681_PBO 247.364 44.400 -2.361 -1.926 1.200 1.300
P121_PBO 247.302 41.803 -2.857 -0.824 0.300 0.300
P104_PBO 247.283 39.186 -1.452 -1.024 1.600 1.100
P675_PBO 247.281 42.212 -3.342 -1.424 1.200 1.200
P678_PBO 247.195 43.449 -2.197 -1.522 1.600 1.300

P111_PBO 246.988 41.817 -2.657 -1.717 1.200 1.200
P084_PBO 246.946 40.494 -3.606 -0.916 1.100 1.100
P113_PBO 246.722 40.671 -3.200 -1.111 1.000 1.200
P046_PBO 246.668 47.030 0.433 -2.009 1.300 1.400
P082_PBO 246.495 39.269 -2.852 -0.505 1.300 1.300
P677_PBO 246.132 42.879 -2.522 -1.297 1.000 1.200
P081_PBO 246.129 39.067 -2.960 -0.297 1.100 1.100
P354_PBO 246.021 44.109 -1.277 -1.494 1.200 1.200
P003_PBO 245.995 32.723 -3.287 0.106 0.700 0.700
GNPS_PBO 245.811 34.309 -2.332 2.911 0.200 0.200
P080_PBO 245.723 39.119 -2.160 -0.287 1.600 1.700
P623_PBO 245.401 34.189 -3.637 0.420 0.400 0.400
GMPK_PBO 245.173 33.051 -3.478 2.626 0.300 0.200
IID2_PBO 244.968 32.706 -3.893 2.321 0.570 0.616
IMPS_PBO 244.855 34.158 -2.556 0.639 0.589 0.572
P626_PBO 244.762 35.291 -3.400 0.035 0.600 0.500
P005_PBO 244.721 39.910 -2.935 -1.064 1.500 1.600
P509_PBO 244.706 32.891 -1.585 3.137 0.600 0.600
P511_PBO 244.704 33.887 -4.550 0.637 0.400 0.400
P500_PBO 244.700 32.690 -6.392 8.937 0.500 0.500
P510_PBO 244.657 33.144 -3.976 1.538 0.600 0.600
P622_PBO 244.634 35.163 -3.605 0.038 0.600 0.500
P501_PBO 244.602 32.876 -4.686 6.439 0.400 0.400
P502_PBO 244.578 32.982 -4.682 3.940 0.500 0.600
P508_PBO 244.571 33.248 -4.873 1.940 0.400 0.400
P499_PBO 244.512 32.980 -6.783 5.041 0.600 0.700
IVCO_PBO 244.493 32.829 -14.864 20.255 0.626 0.534
P506_PBO 244.490 33.081 -6.579 4.042 0.800 0.800
P076_PBO 244.487 39.536 -2.349 -0.458 1.500 1.600
GLRS_PBO 244.479 33.275 -6.872 1.742 0.300 0.500
P621_PBO 244.456 35.473 -3.995 0.042 0.600 0.500
P102_PBO 244.444 39.925 -2.635 0.243 1.500 1.500
P498_PBO 244.430 32.898 -15.286 21.843 0.500 0.500
P497_PBO 244.423 32.835 -16.488 22.143 0.500 0.600
P496_PBO 244.404 32.751 -23.391 28.044 0.500 0.900
P507_PBO 244.388 33.200 -8.963 0.209 0.602 0.644
P495_PBO 244.372 33.045 -11.281 15.244 0.400 0.400
HNPS_PBO 244.365 33.705 -5.858 2.745 0.200 0.300
P611_PBO 244.350 35.205 -4.805 0.045 0.900 1.000
GMRC_PBO 244.340 34.784 -3.720 1.045 0.200 0.200
P505_PBO 244.313 33.424 -5.868 3.346 1.000 0.900
P494_PBO 244.268 32.760 -22.791 26.547 0.600 0.500
CRRS_PBO 244.265 33.070 -14.236 18.442 0.596 0.577
P610_PBO 244.236 34.426 -3.533 0.848 1.100 1.100
P504_PBO 244.234 33.516 -8.565 4.148 0.500 0.500
P607_PBO 244.179 33.741 -6.357 2.849 0.900 1.000
P075_PBO 244.111 39.374 0.643 -5.650 1.500 1.600
I40A_PBO 244.089 34.727 -4.023 1.551 0.400 0.500
OPBL_PBO 244.082 34.370 -2.935 2.651 0.300 0.200
SLMS_PBO 244.022 33.292 -13.573 16.453 0.200 0.200
BEMT_PBO 244.002 34.001 -5.948 5.653 0.300 0.200
P074_PBO 243.950 39.546 -2.751 -0.646 1.400 1.500
BMHL_PBO 243.947 34.251 -3.740 4.454 0.200 0.200
BKAP_PBO 243.920 35.287 -4.903 1.155 0.200 0.200
P601_PBO 243.920 33.959 -6.550 5.455 0.900 1.000
OPCP_PBO 243.917 34.367 -2.836 4.355 0.200 0.200
USGC_PBO 243.915 33.030 -23.913 24.402 0.570 0.574
P618_PBO 243.896 35.142 -4.709 0.155 0.500 0.600
NBPS_PBO 243.852 34.509 -3.431 3.256 0.200 0.300
OPCX_PBO 243.851 34.430 -2.934 4.156 0.300 0.200

P066_PBO 243.830 32.617 -27.898 26.957 0.300 0.300
LDSW_PBO 243.791 34.699 -6.025 2.158 0.300 0.500
P600_PBO 243.788 33.866 -9.654 9.558 0.300 0.400
P491_PBO 243.773 33.575 -15.164 14.858 0.400 0.400
SDHL_PBO 243.721 34.255 -5.921 5.183 0.707 0.629
P087_PBO 243.721 40.363 -2.523 0.659 1.500 1.600
OPRD_PBO 243.708 34.533 -6.431 5.860 0.200 0.200
SHOS_PBO 243.701 35.971 -4.480 1.160 0.200 0.200
OPCL_PBO 243.695 34.428 -5.735 7.860 0.200 0.300
P486_PBO 243.678 33.260 -23.476 22.060 0.300 0.300
CDMT_PBO 243.664 34.829 -7.321 2.961 0.200 0.200
P480_PBO 243.651 32.976 -27.186 25.261 0.300 0.300
CTMS_PBO 243.630 34.124 -7.045 11.662 0.200 0.200
P485_PBO 243.591 33.210 -26.278 24.363 1.200 1.200
P073_PBO 243.576 39.501 -2.954 0.763 1.400 1.500
P490_PBO 243.574 33.523 -18.172 17.873 0.607 0.620
AGMT_PBO 243.571 34.594 -8.129 7.763 0.200 0.200
HCMN_PBO 243.570 34.755 -8.623 4.463 0.200 0.200
LDES_PBO 243.567 34.267 -6.004 10.248 0.698 0.700
P599_PBO 243.463 34.217 -8.943 13.165 1.100 1.100
P483_PBO 243.431 33.059 -26.984 26.066 0.300 0.300
P617_PBO 243.428 35.321 -5.004 2.866 1.100 1.100
P484_PBO 243.379 33.376 -24.473 22.967 0.400 0.400
RDMT_PBO 243.375 34.644 -10.928 8.768 0.300 0.200
P482_PBO 243.329 33.240 -26.078 24.969 0.400 0.300
DSSC_PBO 243.288 33.733 -18.360 19.870 0.400 0.300
P085_PBO 243.264 40.495 -2.920 -0.630 1.500 1.500
P072_PBO 243.259 39.521 -3.655 0.470 0.400 0.400
P615_PBO 243.237 35.205 -6.509 5.371 1.100 1.100
P479_PBO 243.217 33.493 -23.769 22.971 0.800 0.500
ORMT_PBO 243.185 34.675 -11.528 10.872 0.200 0.200
P606_PBO 243.120 34.462 -12.235 11.773 0.500 0.500
BBRY_PBO 243.116 34.264 -12.942 14.774 0.300 0.300
GOLD_PBO 243.111 35.425 -6.511 6.274 0.246 0.259
WOMT_PBO 243.068 34.669 -11.928 11.875 0.200 0.200
LNMT_PBO 243.060 35.090 -7.614 9.275 0.200 0.200
P473_PBO 243.050 32.734 -29.096 27.375 0.300 0.300
P584_PBO 243.048 33.893 -17.756 19.475 0.300 0.300
BSRY_PBO 242.988 34.919 -10.020 11.076 0.200 0.200
TOIY_PBO 242.951 39.542 -3.955 1.277 0.300 0.200
BILL_PBO 242.935 33.578 -25.467 25.678 0.200 0.300
P478_PBO 242.928 33.236 -27.279 26.878 0.200 0.900
P472_PBO 242.895 32.889 -28.691 27.179 0.300 0.300
P589_PBO 242.890 34.621 -13.131 13.479 0.300 0.300
P477_PBO 242.887 33.503 -24.970 24.879 0.400 0.400
PPBF_PBO 242.818 33.836 -22.655 24.236 0.574 0.557
P002_PBO 242.813 39.521 -3.557 0.281 1.700 1.700
P476_PBO 242.810 33.440 -27.273 27.281 0.400 0.400
BAMO_PBO 242.795 40.413 -3.725 1.981 0.300 0.300
P474_PBO 242.751 33.355 -27.606 27.439 0.626 0.654
P588_PBO 242.732 34.785 -10.026 11.882 0.600 0.400
P586_PBO 242.719 34.535 -13.834 13.383 0.700 0.500
P612_PBO 242.684 34.187 -18.247 17.384 0.500 0.800
MLFP_PBO 242.682 33.918 -23.456 24.484 0.200 0.200
P577_PBO 242.681 34.305 -16.743 16.384 0.300 0.400
SCIA_PBO 242.612 34.607 -14.391 15.547 0.552 0.557
P594_PBO 242.610 35.897 -8.487 7.385 0.300 0.400
P470_PBO 242.606 34.462 -15.158 14.848 0.682 0.687
P071_PBO 242.599 39.347 -2.364 0.485 1.700 1.800
P595_PBO 242.597 35.698 -8.194 7.686 0.600 0.600

P464_PBO 242.590 36.159 -7.078 4.886 1.200 1.300
ECFS_PBO 242.588 33.648 -25.666 26.886 0.200 0.200
MAT2_PBO 242.563 33.857 -24.054 25.669 0.505 0.512
EWPP_PBO 242.474 34.104 -23.951 22.688 0.200 0.200
P471_PBO 242.459 33.562 -26.470 26.289 0.500 0.600
P583_PBO 242.457 34.987 -9.820 12.189 0.400 0.400
CPBN_PBO 242.427 35.072 -9.417 11.889 0.500 0.500
P069_PBO 242.395 39.288 -1.267 0.890 1.700 1.700
CNPP_PBO 242.391 33.858 -24.859 25.790 0.200 0.200
SBCC_PBO 242.339 33.553 -27.570 28.391 0.200 0.200
CCCC_PBO 242.329 35.565 -9.500 10.492 0.200 0.200
RAMT_PBO 242.317 35.339 -8.608 11.892 0.200 0.200
PHLB_PBO 242.306 34.925 -11.264 14.707 0.587 0.592
P094_PBO 242.296 37.201 -6.242 1.792 1.800 1.900
P581_PBO 242.271 34.510 -15.637 16.293 0.500 0.500
LORS_PBO 242.246 34.133 -24.824 23.004 0.570 0.574
HOLM_PBO 242.239 70.736 1.367 0.594 0.700 0.700
CHMS_PBO 242.172 34.640 -14.233 15.395 0.200 0.300
SPMS_PBO 242.151 33.993 -25.589 25.572 0.545 0.550
AZU1_PBO 242.104 34.126 -25.493 23.838 0.652 0.555
PBPP_PBO 242.077 34.508 -16.703 18.590 0.570 0.619
CGDM_PBO 242.035 34.244 -24.847 22.398 0.600 1.100
P068_PBO 242.015 39.306 -3.168 0.499 1.700 1.800
P579_PBO 241.994 35.039 -10.020 12.999 1.200 1.200
P022_PBO 241.986 45.232 -0.754 0.900 0.700 0.600
P591_PBO 241.984 35.152 -10.116 12.600 0.500 0.400
RHCL_PBO 241.974 34.019 -27.755 25.100 0.300 0.600
BEPK_PBO 241.926 35.878 -9.990 11.501 0.300 0.600
BKMS_PBO 241.905 33.962 -28.858 30.001 0.300 0.500
P468_PBO 241.882 36.976 -8.152 5.202 1.600 1.700
P099_PBO 241.841 39.212 -3.772 2.503 1.500 1.600
BTDM_PBO 241.812 34.293 -25.647 23.304 0.300 0.300
P562_PBO 241.811 34.982 -11.115 15.289 0.492 0.498
RSTP_PBO 241.807 34.875 -12.826 15.804 0.200 0.200
VDCY_PBO 241.780 34.179 -26.451 24.204 0.300 0.200
PKRD_PBO 241.767 34.072 -26.954 24.505 0.300 0.300
CRHS_PBO 241.727 33.824 -27.564 28.705 0.574 0.600
LASC_PBO 241.693 33.928 -27.628 27.356 0.709 0.712
PVRS_PBO 241.679 33.774 -28.881 29.721 0.587 0.596
ECCO_PBO 241.671 33.887 -27.654 29.122 0.589 0.596
CAT2_PBO 241.666 33.312 -29.881 32.007 0.200 0.200
DSHS_PBO 241.651 34.024 -27.257 26.607 0.400 0.400
P627_PBO 241.621 37.973 -4.717 5.908 1.700 1.700
P651_PBO 241.613 37.563 -5.932 6.108 1.700 1.800
LFRS_PBO 241.587 34.095 -28.377 26.224 0.566 0.572
THCP_PBO 241.585 35.158 -12.517 13.109 0.200 0.200
P133_PBO 241.540 38.725 -3.591 4.210 1.600 1.600
P653_PBO 241.528 37.737 -3.826 6.310 1.700 1.800
ISLK_PBO 241.526 35.662 -11.786 10.431 0.594 0.579
CAT1_PBO 241.517 33.446 -29.873 32.636 0.520 0.550
VNCX_PBO 241.515 34.293 -26.401 24.246 0.561 0.566
VIMT_PBO 241.486 34.126 -27.254 28.011 0.300 0.300
P560_PBO 241.459 34.822 -16.529 17.812 0.400 0.500
P556_PBO 241.455 34.771 -15.431 15.712 0.700 0.800
P650_PBO 241.445 37.891 -5.421 6.612 1.700 1.800
P020_PBO 241.434 47.002 0.108 0.812 0.200 0.300
LAPC_PBO 241.425 34.182 -27.367 28.474 0.577 0.581
P558_PBO 241.388 35.139 -13.519 12.213 1.200 1.200
CTDM_PBO 241.387 34.517 -25.611 21.425 0.606 0.610
P559_PBO 241.382 34.839 -15.629 16.113 0.600 0.600

CBHS_PBO 241.370 34.139 -28.238 29.232 0.561 0.566
P557_PBO 241.344 34.944 -16.026 14.014 0.600 0.500
P643_PBO 241.302 37.562 -2.233 7.815 1.600 1.700
P021_PBO 241.270 48.675 0.568 -0.084 0.500 0.800
P649_PBO 241.264 37.903 -5.421 7.216 1.800 1.800
P453_PBO 241.255 47.759 0.534 0.216 0.600 0.500
P567_PBO 241.246 35.421 -12.609 10.017 0.400 0.400
SFDM_PBO 241.245 34.460 -26.543 23.517 0.300 0.400
P571_PBO 241.233 36.231 -10.681 8.517 0.500 0.900
P642_PBO 241.183 37.591 -13.033 2.218 1.600 1.600
P646_PBO 241.180 37.677 -5.230 7.518 1.600 1.700
EDPP_PBO 241.170 34.946 -17.326 16.818 0.200 0.300
TOST_PBO 241.163 34.248 -28.469 30.023 0.592 0.618
P554_PBO 241.152 34.792 -19.632 19.319 1.400 1.400
P639_PBO 241.131 37.655 -6.631 7.219 1.700 1.700
MPWD_PBO 241.122 34.296 -28.916 29.444 0.594 0.598
P553_PBO 241.121 34.835 -19.730 17.319 0.400 0.500
FMVT_PBO 241.116 34.356 -28.247 28.820 0.300 0.300
P134_PBO 241.070 38.981 -5.384 4.021 1.600 1.600
CIRX_PBO 241.063 34.110 -29.156 30.321 0.300 0.200
P130_PBO 241.062 39.268 -4.174 4.021 1.600 1.700
WGPP_PBO 241.016 35.011 -17.225 16.522 0.200 0.300
P454_PBO 241.007 47.954 2.540 -1.278 1.400 1.500
P630_PBO 241.000 37.613 -6.433 8.422 1.600 1.600
KBRC_PBO 240.992 34.399 -28.046 26.022 1.300 1.400
P648_PBO 240.981 37.800 -9.826 8.623 1.700 1.800
BAR1_PBO 240.970 33.480 -30.978 33.823 0.200 0.300
CSCI_PBO 240.961 34.168 -29.354 30.923 0.300 0.200
P451_PBO 240.959 46.793 0.098 1.023 0.600 0.600
P056_PBO 240.937 36.027 -13.189 5.724 0.500 1.100
SOMT_PBO 240.936 34.320 -29.249 30.324 0.300 0.300
P128_PBO 240.931 39.486 -4.367 3.424 1.700 1.700
P632_PBO 240.914 37.786 -11.527 8.624 1.700 1.700
NHRG_PBO 240.859 34.499 -27.543 23.625 0.300 0.300
OVLS_PBO 240.858 34.327 -28.889 29.202 0.656 0.640
P551_PBO 240.845 34.856 -22.431 17.626 1.800 2.000
RSVY_PBO 240.816 34.541 -28.342 24.126 0.300 0.500
HVYS_PBO 240.812 34.441 -28.446 25.027 0.300 0.300
P566_PBO 240.771 36.324 -11.980 8.127 0.400 0.600
P565_PBO 240.763 35.744 -14.300 7.828 0.700 1.400
VNCO_PBO 240.762 34.276 -31.052 29.428 0.200 0.500
P549_PBO 240.674 34.600 -29.241 21.430 1.700 1.700
BVPP_PBO 240.652 35.157 -18.321 14.630 0.200 0.200
OZST_PBO 240.647 34.683 -28.787 24.343 0.644 0.634
ANA1_PBO 240.637 34.015 -30.861 35.831 0.400 1.200
CSST_PBO 240.629 34.408 -29.647 27.031 0.200 0.300
P563_PBO 240.579 35.419 -13.812 12.132 0.700 0.600
P452_PBO 240.513 47.404 0.317 0.433 0.600 0.500
P095_PBO 240.463 39.698 -6.561 4.334 0.800 0.600
P450_PBO 240.456 45.953 0.364 1.535 0.600 0.400
P127_PBO 240.400 39.499 -7.369 4.336 0.600 0.600
P145_PBO 240.376 41.358 -4.002 3.036 0.600 0.600
P449_PBO 240.369 46.260 0.375 1.437 0.800 0.800
P543_PBO 240.287 35.319 -16.017 17.038 1.200 1.300
RCA2_PBO 240.280 34.500 -31.831 30.441 0.656 0.642
P139_PBO 240.278 39.908 -4.855 4.839 1.600 1.700
P544_PBO 240.262 35.731 -12.103 11.239 0.500 0.600
P725_PBO 240.254 37.089 -10.655 8.739 1.500 1.600
CRU1_PBO 240.215 34.029 -30.977 35.222 0.579 0.572
COPR_PBO 240.120 34.415 -30.649 29.242 0.300 0.200

P547_PBO 240.091 35.935 -9.796 11.443 0.500 0.600
P537_PBO 240.065 35.317 -22.018 23.644 1.200 1.400
P017_PBO 240.064 41.276 -1.907 2.944 2.000 2.000
BBDM_PBO 240.018 34.582 -32.544 32.745 0.900 0.500
P541_PBO 239.999 35.687 -13.206 14.645 0.500 0.600
P448_PBO 239.995 45.911 0.460 1.645 0.600 0.400
FGST_PBO 239.991 34.733 -30.539 32.045 0.300 0.200
P536_PBO 239.975 35.280 -24.620 26.346 1.300 1.400
P307_PBO 239.942 36.947 -12.861 9.646 1.100 0.700
SRS1_PBO 239.935 34.004 -31.465 35.646 0.200 0.200
P535_PBO 239.899 35.235 -26.222 28.747 1.900 1.900
P538_PBO 239.888 35.534 -22.011 23.748 1.200 1.200
P540_PBO 239.869 35.801 -12.402 13.548 0.700 0.800
TJRN_PBO 239.867 34.483 -31.648 33.648 0.200 0.300
P546_PBO 239.845 35.928 -9.598 13.049 0.600 0.700
P539_PBO 239.818 35.703 -15.306 18.949 0.400 0.400
P305_PBO 239.803 37.352 -11.248 7.849 0.500 0.500
P515_PBO 239.760 34.871 -30.435 31.150 1.100 1.100
P532_PBO 239.733 35.634 -22.809 27.751 0.300 0.400
P300_PBO 239.723 36.304 -14.085 7.451 0.300 0.300
ORES_PBO 239.721 34.739 -31.504 34.268 0.598 0.624
P298_PBO 239.706 36.016 -9.195 13.552 1.600 1.600
P310_PBO 239.666 38.736 -11.199 8.353 1.600 1.700
P280_PBO 239.652 35.544 -24.912 29.853 1.200 1.200
MIG1_PBO 239.649 34.038 -31.665 36.453 0.300 0.300
P529_PBO 239.646 35.440 -27.016 30.153 1.200 1.200
P304_PBO 239.643 36.739 -11.270 9.053 0.600 0.700
P296_PBO 239.636 36.052 -8.994 13.653 1.500 1.500
P533_PBO 239.629 35.748 -22.805 29.153 1.100 1.100
P388_PBO 239.622 42.469 -2.466 3.354 1.100 0.900
P516_PBO 239.617 35.106 -30.028 30.554 0.600 0.600
P514_PBO 239.590 35.011 -29.231 32.354 1.300 1.300
GR8V_PBO 239.584 36.399 -12.082 10.554 0.500 0.600
CARH_PBO 239.569 35.888 -21.993 28.043 0.589 0.762
P294_PBO 239.560 36.123 -9.692 11.055 1.100 1.100
MASW_PBO 239.557 35.833 -23.602 28.855 0.400 0.300
LAND_PBO 239.527 35.900 -22.600 29.156 0.500 0.400
HOGS_PBO 239.521 35.867 -23.201 29.556 0.400 0.300
P530_PBO 239.520 35.625 -25.910 31.456 0.500 0.800
P146_PBO 239.463 39.337 -10.479 7.357 1.300 1.300
P293_PBO 239.457 36.089 -8.994 12.057 1.400 1.500
P528_PBO 239.455 35.328 -27.421 33.257 1.400 1.400
P297_PBO 239.448 35.974 -29.398 34.258 0.500 0.600
LOWS_PBO 239.406 35.829 -25.403 31.959 0.400 0.400
P527_PBO 239.395 35.754 -26.506 31.659 1.400 1.400
VNDP_PBO 239.384 34.556 -32.538 34.830 0.355 0.359
P302_PBO 239.381 36.635 -12.175 8.559 0.500 0.300
P306_PBO 239.356 37.795 -12.434 7.260 1.200 1.300
USLO_PBO 239.339 35.312 -28.822 34.860 0.400 0.500
P445_PBO 239.328 45.590 0.245 2.560 0.600 0.500
P140_PBO 239.307 38.829 -12.198 7.061 1.300 1.300
P287_PBO 239.302 36.025 -32.097 31.661 1.000 0.400
P303_PBO 239.295 37.054 -11.061 8.561 0.500 0.400
P301_PBO 239.257 36.806 -10.870 8.362 0.500 0.300
CRBT_PBO 239.249 35.792 -27.005 33.462 0.400 0.500
P148_PBO 239.194 40.419 -6.342 3.863 1.300 1.400
P525_PBO 239.192 35.426 -29.918 34.063 1.600 1.600
P295_PBO 239.158 35.697 -27.109 33.764 0.300 0.700
P526_PBO 239.130 35.636 -26.911 35.465 0.500 1.300
P288_PBO 239.121 36.140 -29.994 32.065 0.900 0.700

P284_PBO 239.093 35.933 -29.601 31.566 0.500 0.300
P065_PBO 239.067 46.844 1.089 1.466 1.700 1.800
P309_PBO 239.049 38.090 -9.825 7.767 0.600 0.700
P285_PBO 239.019 36.417 -12.585 12.467 1.200 1.200
P067_PBO 238.997 35.552 -29.415 34.268 0.600 1.700
P252_PBO 238.942 37.170 -11.358 7.869 0.500 0.600
P278_PBO 238.939 35.711 -29.210 35.569 0.600 0.700
P249_PBO 238.936 36.612 -11.878 7.569 1.100 1.100
P444_PBO 238.932 48.730 0.456 3.769 1.200 1.300
P260_PBO 238.916 37.711 -11.540 7.570 1.200 0.600
P276_PBO 238.905 38.645 -10.807 7.070 0.600 0.500
P259_PBO 238.899 37.433 -12.049 4.470 0.900 0.400
P175_PBO 238.865 36.426 -28.885 32.871 1.100 1.100
QCYN_PBO 238.863 36.161 -29.594 35.271 1.000 0.700
P247_PBO 238.812 36.560 -28.581 33.572 1.100 1.100
P275_PBO 238.785 38.322 -11.319 6.473 1.200 1.300
P255_PBO 238.675 37.582 -11.645 8.275 1.000 1.000
P244_PBO 238.645 37.011 -13.566 9.076 0.500 0.500
P273_PBO 238.612 38.116 -10.327 5.976 0.800 0.900
P242_PBO 238.537 36.954 -19.068 18.578 0.700 1.000
P257_PBO 238.536 37.755 -10.840 7.678 0.500 0.500
HCRO_PBO 238.530 40.816 -7.069 5.717 1.181 0.843
P674_PBO 238.510 41.616 -5.803 3.379 1.300 1.400
P672_PBO 238.493 41.712 -3.800 4.679 0.800 1.000
P240_PBO 238.458 37.008 -20.667 22.980 0.900 0.600
P387_PBO 238.426 44.297 1.893 2.081 1.400 1.500
P234_PBO 238.409 36.859 -27.972 30.181 1.200 1.200
P256_PBO 238.395 37.932 -11.934 8.281 0.500 0.500
P442_PBO 238.384 48.260 1.336 0.682 1.400 1.200
P268_PBO 238.354 38.474 -14.216 7.182 1.500 0.500
P217_PBO 238.349 37.104 -21.464 22.082 0.500 0.700
P432_PBO 238.317 46.623 1.876 2.983 0.400 0.300
P228_PBO 238.313 37.602 -12.047 11.083 0.500 0.500
P218_PBO 238.286 37.204 -21.461 22.084 1.200 0.700
P271_PBO 238.285 38.657 -11.709 6.984 0.600 0.400
P210_PBO 238.268 36.816 -29.374 32.484 0.800 0.400
P380_PBO 238.220 42.260 -2.082 5.485 0.900 0.400
P227_PBO 238.210 37.533 -13.749 12.685 0.700 0.700
P171_PBO 238.207 36.486 -29.786 35.986 0.300 0.800
P267_PBO 238.177 38.380 -8.520 9.986 1.100 1.400
P226_PBO 238.174 37.337 -22.057 21.186 1.100 1.200
P266_PBO 238.156 38.184 -11.627 7.587 0.800 0.700
P212_PBO 238.137 36.962 -27.970 30.887 1.300 1.300
P429_PBO 238.123 45.676 1.941 5.087 1.100 1.200
P231_PBO 238.095 36.622 -30.582 35.788 1.700 1.800
P272_PBO 238.057 39.145 -10.693 4.689 1.300 0.900
P265_PBO 238.046 38.530 -9.715 7.189 1.800 0.800
P229_PBO 238.022 37.749 -15.443 14.790 1.200 0.400
P431_PBO 238.012 46.572 -0.628 3.090 1.400 1.500
P213_PBO 238.009 37.202 -22.562 27.090 0.700 0.400
P344_PBO 237.972 39.929 -10.566 5.991 1.400 1.400
P270_PBO 237.945 39.244 -8.791 6.591 1.000 0.900
P225_PBO 237.942 37.714 -15.245 17.092 0.500 0.400
P222_PBO 237.917 37.539 -21.251 24.792 0.800 0.400
P262_PBO 237.904 38.025 -13.534 14.492 1.300 1.100
P701_PBO 237.867 46.195 -0.742 2.193 1.400 1.600
WINT_PBO 237.859 37.653 -19.219 21.004 0.558 0.490
P696_PBO 237.848 46.197 0.858 3.694 1.200 0.900
P695_PBO 237.836 46.199 -1.242 4.894 1.100 1.800
P694_PBO 237.818 46.300 2.261 4.294 1.400 1.400

P264_PBO 237.805 38.444 -11.920 10.695 0.700 0.400
P703_PBO 237.804 46.145 0.855 2.895 1.500 1.600
P693_PBO 237.798 46.210 4.058 2.395 1.800 1.100
SLAC_PBO 237.796 37.417 -23.956 28.495 0.400 0.300
P655_PBO 237.794 41.294 -3.719 5.495 1.400 1.500
P261_PBO 237.782 38.153 -12.530 14.295 0.800 0.500
P224_PBO 237.781 37.864 -16.240 18.795 0.700 0.700
P691_PBO 237.773 46.231 0.958 3.295 1.400 1.600
P345_PBO 237.729 40.271 -8.255 6.196 0.900 0.600
P208_PBO 237.696 39.109 -10.197 6.897 0.900 1.200
P705_PBO 237.689 46.173 1.956 5.097 1.400 1.500
P349_PBO 237.681 40.731 -6.639 5.597 0.900 0.600
P427_PBO 237.659 45.430 2.429 5.298 0.900 0.700
P687_PBO 237.645 46.110 4.553 6.398 0.600 0.500
P689_PBO 237.639 46.190 4.056 4.198 0.800 0.900
P181_PBO 237.623 37.915 -19.339 24.799 0.500 0.900
P060_PBO 237.585 40.998 -5.130 6.300 1.000 0.500
P421_PBO 237.571 46.532 5.868 3.100 0.600 0.700
P200_PBO 237.548 38.240 -14.428 18.500 0.800 0.500
P440_PBO 237.507 48.856 1.751 2.801 1.000 1.100
P199_PBO 237.497 38.264 -15.228 18.901 0.700 0.500
P426_PBO 237.485 47.803 1.513 1.402 1.300 1.400
PCOL_PBO 237.429 47.172 4.490 6.203 1.100 1.100
P206_PBO 237.424 38.778 -12.910 14.203 1.400 1.300
P379_PBO 237.423 44.497 2.494 5.703 1.200 1.200
P412_PBO 237.411 45.221 1.670 6.896 1.015 0.865
P341_PBO 237.393 40.651 -6.544 7.104 1.000 0.800
P198_PBO 237.393 38.260 -17.528 22.304 0.500 0.400
P370_PBO 237.344 42.191 -1.089 7.305 0.900 1.200
P438_PBO 237.330 48.419 1.034 1.105 1.400 1.400
P414_PBO 237.307 45.835 4.541 4.706 1.100 1.100
P196_PBO 237.257 38.298 -18.028 25.207 1.200 1.100
P197_PBO 237.233 38.429 -16.123 26.007 0.800 0.700
P420_PBO 237.134 46.589 3.967 5.510 0.700 0.800
P377_PBO 237.113 44.052 3.976 5.310 1.200 1.300
P439_PBO 237.091 48.708 4.143 3.511 0.500 0.500
TWHL_PBO 237.077 47.016 4.182 5.811 0.400 0.200
P338_PBO 237.077 40.748 -6.942 6.711 0.900 0.800
P423_PBO 237.059 47.288 4.692 4.811 0.400 0.400
P371_PBO 236.942 43.363 0.650 6.914 1.000 0.600
P183_PBO 236.931 38.314 -22.329 32.614 1.100 1.100
P376_PBO 236.898 44.941 2.506 6.515 0.300 0.600
P192_PBO 236.895 39.320 -15.294 14.915 0.700 0.800
P436_PBO 236.866 48.045 4.618 3.916 0.700 0.900
P406_PBO 236.848 45.190 3.715 5.116 1.100 1.600
P411_PBO 236.843 45.538 5.527 5.016 1.200 1.300
P332_PBO 236.825 40.547 -6.851 7.716 1.000 0.700
P182_PBO 236.819 38.495 -22.323 32.617 1.500 1.600
P190_PBO 236.796 39.242 -17.797 18.117 0.700 0.400
P188_PBO 236.770 38.668 -24.217 27.118 1.900 2.000
P409_PBO 236.761 45.851 4.938 5.518 0.600 1.400
P319_PBO 236.705 39.707 -16.481 10.219 0.400 0.400
P417_PBO 236.702 46.575 4.864 5.419 0.500 0.800
P373_PBO 236.667 43.623 1.258 7.120 0.600 1.000
P189_PBO 236.652 38.987 -21.007 26.020 0.500 0.500
P318_PBO 236.628 39.452 -18.091 14.421 1.200 1.300
P408_PBO 236.623 46.201 5.050 5.821 0.600 0.800
P368_PBO 236.617 42.504 -1.383 8.021 0.900 1.100
P404_PBO 236.610 45.159 4.212 6.021 0.900 1.500
P418_PBO 236.592 47.237 3.687 4.022 1.300 1.400

P369_PBO 236.571 43.140 0.940 8.122 0.700 0.800
P430_PBO 236.564 47.004 5.778 6.422 0.600 0.600
P435_PBO 236.497 48.060 6.116 4.824 0.800 1.400
P317_PBO 236.448 39.906 -17.876 13.625 1.200 1.200
P313_PBO 236.435 39.554 -21.888 20.625 1.200 1.200
P314_PBO 236.418 39.686 -22.384 19.326 0.400 0.400
P374_PBO 236.409 44.382 3.583 6.326 1.100 1.100
P187_PBO 236.397 39.352 -21.396 23.726 0.500 1.200
P405_PBO 236.356 45.629 5.828 6.527 1.200 1.300
P324_PBO 236.344 40.257 -11.864 13.327 1.100 1.100
P164_PBO 236.307 40.119 -14.323 15.034 0.505 0.492
P312_PBO 236.302 39.529 -21.490 23.428 1.200 1.200
P326_PBO 236.301 40.575 -5.393 7.992 0.654 0.640
SC03_PBO 236.294 47.817 6.806 6.328 0.900 0.800
P315_PBO 236.283 39.864 -22.178 19.929 0.500 0.600
P059_PBO 236.274 38.928 -24.811 37.229 1.500 1.500
P415_PBO 236.270 46.656 6.864 7.729 0.500 0.500
P165_PBO 236.147 40.246 -12.066 16.432 1.200 1.200
P395_PBO 236.142 45.022 6.504 8.532 0.800 1.000
P170_PBO 236.137 40.880 -0.004 13.794 1.080 0.975
P166_PBO 236.137 40.435 -6.559 15.532 0.500 0.800
P167_PBO 236.120 40.544 -4.355 14.432 0.900 0.800
P168_PBO 236.119 40.669 -1.288 13.780 0.520 0.687
P325_PBO 236.117 41.152 2.654 10.816 0.748 0.738
P156_PBO 236.094 40.024 -19.174 22.233 1.200 1.300
P398_PBO 236.084 46.926 7.872 8.133 1.300 1.400
P169_PBO 236.032 40.791 0.853 15.334 0.600 0.400
P061_PBO 235.986 42.967 2.030 9.235 1.100 1.400
P163_PBO 235.943 40.220 -14.768 23.536 1.100 1.200
P058_PBO 235.925 40.876 1.355 17.036 0.700 0.700
P316_PBO 235.914 41.559 1.179 9.037 1.300 1.400
P158_PBO 235.893 40.422 -5.961 22.937 0.500 0.500
P160_PBO 235.867 40.551 -4.200 20.072 0.689 0.616
P403_PBO 235.859 48.062 12.111 12.938 0.800 1.100
P161_PBO 235.787 40.637 0.146 21.740 0.900 1.000
P162_PBO 235.763 40.691 3.548 20.940 0.500 0.500
P159_PBO 235.717 40.505 -2.059 24.741 1.500 1.600
P157_PBO 235.692 40.248 -19.168 31.542 1.100 1.100
P401_PBO 235.443 47.937 15.123 10.497 0.471 0.496
AIS1_PBO 228.400 55.069 -0.203 4.198 0.800 0.500
AB51_PBO 227.086 56.798 -2.856 3.325 0.700 0.800
AB49_PBO 226.932 55.580 -1.200 4.228 1.100 1.200
INVK_PBO 226.473 68.306 0.535 0.937 0.400 0.900
AB50_PBO 225.455 58.417 -0.518 0.958 1.100 0.800
AB48_PBO 225.353 56.245 -1.194 6.860 0.700 0.900
AB44_PBO 224.772 59.528 1.313 4.071 1.300 1.100
BIS1_PBO 224.461 56.854 -3.783 7.878 0.300 0.600
GUS2_PBO 224.303 58.418 -0.731 1.781 0.400 0.600
AB41_PBO 218.842 64.777 1.715 -11.715 1.500 1.600
AC65_PBO 216.296 62.832 -12.486 26.731 1.800 0.800
AB37_PBO 214.548 62.967 -26.208 14.161 0.500 0.800
AC57_PBO 214.257 61.139 -13.573 24.266 1.400 1.400
AC63_PBO 214.153 63.502 6.104 -4.032 0.500 0.800
AC62_PBO 213.687 63.084 -22.317 6.976 0.500 0.500
CLGO_PBO 212.140 64.874 2.418 -6.499 0.500 0.700
PBOC_PBO 211.665 70.256 -2.415 1.509 0.600 0.500
GRNR_PBO 211.022 63.836 -1.734 -2.080 0.500 0.600
ATW2_PBO 210.868 61.598 -12.709 11.022 0.700 0.800
AC15_PBO 210.276 60.481 -12.355 16.931 1.600 1.400
AC53_PBO 209.931 61.769 -5.419 -0.363 1.500 1.600

AB33_PBO 209.827 67.251 3.157 -8.061 1.400 1.500
AC06_PBO 209.109 59.764 -2.697 4.450 1.300 1.200
SELD_PBO 208.293 59.446 1.380 -9.138 0.800 0.900
KOD5_PBO 207.807 57.618 -9.287 19.670 0.500 0.800
AC39_PBO 207.606 58.610 3.042 -8.827 1.500 1.700
AC17_PBO 207.596 60.664 1.107 -14.527 1.500 1.600
AB28_PBO 207.185 62.094 1.447 -12.121 1.200 1.200
AC34_PBO 206.721 57.220 -11.917 14.186 1.200 1.200
AC59_PBO 206.415 59.567 2.953 -13.310 0.500 0.600
AC27_PBO 205.837 59.253 3.133 -11.301 0.700 0.700
AC45_PBO 205.819 56.564 -14.652 24.799 1.200 1.200
AC02_PBO 205.817 56.951 -14.140 14.199 1.300 1.700
AB22_PBO 205.302 59.899 5.145 -10.994 1.200 1.300
MAUI_PBO 203.743 20.707 -59.690 53.128 0.600 0.700
SG27_PBO 203.390 71.323 0.672 -2.567 0.500 1.400
AB13_PBO 201.496 56.307 -6.332 4.458 1.300 1.400
AC21_PBO 200.872 55.921 -8.954 4.766 1.600 1.800
KOKB_PBO 200.335 22.126 -59.844 52.241 0.632 0.592
AB15_PBO 200.122 61.040 2.990 -6.625 1.400 1.600
AC41_PBO 199.593 55.909 -3.977 0.882 1.300 1.400
AB07_PBO 199.523 55.349 -8.395 4.282 0.600 0.800
AC31_PBO 197.761 64.638 3.557 -7.497 1.200 1.300
BAY2_PBO 197.293 55.190 -6.238 -2.691 0.500 1.200
AB11_PBO 194.627 64.564 4.194 -6.162 1.300 1.300
AV15_PBO 194.290 54.100 -8.923 -4.459 1.100 1.600
AV06_PBO 194.234 54.147 -3.523 -3.558 1.000 1.400
AV14_PBO 194.158 54.119 -2.425 -5.158 1.200 1.300
AV12_PBO 194.102 54.211 -1.523 -1.257 1.000 1.800
AV10_PBO 194.066 54.098 -3.927 -4.357 1.400 1.900
AV08_PBO 193.972 54.136 -3.328 -3.156 0.800 1.600
AV09_PBO 193.458 53.876 -6.344 -3.051 0.900 1.300
AB21_PBO 183.337 51.864 -11.283 5.330 1.800 1.900
LLCO_GPS 243.839 31.257 -32.331 31.783 0.920 0.910
SPMX_GPS 244.534 31.045 -32.751 30.337 1.040 1.050
CICE_GPS 243.333 31.871 -29.954 30.882 0.980 0.990
PENA_GPS 246.480 31.354 -2.985 1.997 0.830 0.810
MAYR_GPS 244.757 31.988 -25.281 27.259 1.210 1.120
SCIP_GPS 241.512 32.914 -31.659 33.573 0.970 0.990
BLUF_GPS 241.481 32.927 -30.585 35.334 0.880 0.910
TWIN_GPS 240.521 33.232 -31.040 35.542 0.890 0.910
BRSH_GPS 241.595 33.407 -29.362 33.790 0.860 0.920
SBIS_GPS 240.959 33.472 -31.318 35.145 0.930 0.980
SNRI_GPS 239.894 33.951 -30.864 36.098 0.940 0.930
CENT_GPS 240.247 33.995 -29.811 34.414 0.920 0.920
VTIS_GPS 241.706 33.713 -28.534 30.755 1.020 1.050
PVHS_GPS 241.628 33.779 -27.745 29.748 1.120 1.140
TORP_GPS 241.669 33.798 -28.521 30.387 0.910 0.940
WRHS_GPS 241.572 33.958 -27.816 28.301 1.160 1.180
AOA1_GPS 241.170 34.157 -29.142 30.306 0.860 0.890
SPK1_GPS 241.354 34.059 -28.523 29.879 0.870 0.900
UCLP_GPS 241.558 34.069 -27.226 27.771 0.860 0.890
OXCO_GPS 241.438 34.179 -26.753 30.876 0.990 1.000
MCDS_GPS 241.457 34.202 -26.457 30.475 0.990 1.000
LEEP_GPS 241.678 34.135 -27.511 25.886 0.860 0.890
OXYC_GPS 241.793 34.129 -27.186 24.512 1.150 1.170
CIT1_GPS 241.873 34.137 -26.016 24.639 0.840 0.870
BRAN_GPS 241.723 34.185 -27.119 24.555 0.860 0.890
1101_GPS 243.017 32.569 -28.147 30.114 1.050 1.190
OTAY_GPS 243.159 32.601 -26.763 29.209 1.480 1.210
VA01_GPS 243.442 32.245 -28.561 29.428 1.080 1.100

1102_GPS 243.523 32.607 -28.041 29.035 1.030 1.120
LPUR_GPS 244.657 32.356 -19.825 27.333 0.890 0.890
SD17_GPS 242.852 32.818 -29.209 29.221 1.200 1.500
SOLJ_GPS 242.747 32.840 -28.260 30.155 1.110 1.090
SIO3_GPS 242.750 32.865 -28.394 28.615 0.730 0.760
1106_GPS 243.198 32.844 -28.021 28.587 0.960 1.040
SD18_GPS 243.069 32.912 -28.230 29.862 1.030 1.140
1107_GPS 242.723 33.130 -29.084 30.186 1.010 1.110
SD21_GPS 243.381 32.824 -27.291 28.431 0.950 1.030
OCTI_GPS 243.998 32.734 -28.101 28.357 0.970 0.960
BORD_GPS 244.494 32.664 -21.202 26.349 1.090 1.070
T124_GPS 244.500 32.738 -21.183 20.719 0.920 0.930
OCOT_GPS 244.204 32.790 -24.832 27.120 0.910 0.910
E122_GPS 244.406 32.800 -17.154 22.102 1.320 1.160
COLL_GPS 244.498 32.827 -14.864 20.255 0.626 0.534
SD35_GPS 243.429 32.914 -29.609 28.779 1.080 1.180
MONP_GPS 243.578 32.892 -27.929 27.943 0.790 0.810
SD15_GPS 243.402 33.074 -27.797 27.880 1.200 1.740
L589_GPS 244.239 32.951 -22.811 25.678 0.920 0.890
ORIE_GPS 244.594 32.917 -3.299 4.535 0.950 0.910
HAMA_GPS 244.499 33.038 -8.675 2.169 1.800 1.720
CPEI_GPS 245.086 32.251 -8.913 7.697 1.120 1.130
MONT_GPS 244.925 32.559 -6.620 1.493 1.100 1.120
ASA1_GPS 244.754 32.629 -8.018 7.749 1.050 0.960
JUNC_GPS 244.938 32.709 -4.012 2.552 1.050 0.990
GLOC_GPS 244.753 32.840 -4.513 -0.321 0.920 0.880
YUMA_GPS 245.797 32.939 -1.616 2.961 1.040 0.960
0301_GPS 242.435 33.375 -27.443 29.967 0.970 1.020
0303_GPS 242.841 33.332 -26.545 29.301 1.260 1.440
PMOB_GPS 243.140 33.357 -25.496 27.040 1.000 1.020
SCMS_GPS 242.365 33.444 -28.723 31.060 1.020 1.040
DANA_GPS 242.291 33.464 -28.115 30.922 0.950 0.980
1202_GPS 242.320 33.469 -27.775 29.841 0.940 0.960
KITE_GPS 242.284 33.554 -28.241 30.663 1.080 0.990
SJOA_GPS 242.184 33.602 -28.326 30.807 1.240 1.260
TRAK_GPS 242.197 33.618 -26.112 29.436 0.850 0.880
YUNG_GPS 242.855 33.430 -27.159 27.601 0.980 1.040
ROSA_GLA 242.811 33.505 -25.598 28.232 1.160 1.150
RDEC_GPS 243.068 33.468 -24.325 27.072 1.160 1.250
A586_GPS 243.164 33.484 -24.013 27.239 1.080 1.140
CARY_GPS 243.265 33.545 -21.870 25.815 1.010 1.060
LAKE_GPS 242.645 33.620 -25.484 28.329 1.150 1.240
DASH_GPS 242.914 33.636 -23.507 27.278 1.030 1.070
R293_GPS 243.152 33.630 -22.225 26.429 1.050 1.120
MVFD_GPS 243.475 33.211 -24.873 26.527 1.080 1.100
1108_GPS 243.307 33.234 -26.733 27.363 1.010 1.100
1109_GPS 243.753 33.160 -23.474 24.356 0.940 1.030
SDG6_GPS 243.297 33.382 -25.094 27.284 0.960 1.000
1110_GPS 244.112 33.177 -15.159 16.273 0.940 0.970
EXTR_GPS 244.138 33.179 -15.889 14.492 1.560 1.510
COAC_GPS 244.593 33.196 -3.147 3.095 1.050 0.980
1111_GPS 244.481 33.231 -5.045 1.399 1.040 1.030
DHLG_GPS 244.212 33.390 -11.776 9.899 0.860 0.880
07NE_GPS 244.248 33.412 -10.491 8.198 1.190 1.220
CRAV_GPS 243.299 33.543 -21.691 24.954 0.970 0.990
HOWY_GPS 243.283 33.550 -21.829 25.884 0.980 1.020
TBLM_GPS 243.411 33.527 -20.219 23.959 1.010 1.050
G114_GPS 243.387 33.550 -19.132 23.640 1.040 1.080
LOKT_GPS 243.426 33.553 -18.982 22.159 0.900 0.930
ROBO_GPS 243.939 33.441 -12.295 16.929 1.050 1.050

M586_GPS 243.311 33.555 -20.959 25.523 1.150 1.180
ANZA_GLA 243.338 33.556 -20.779 24.892 0.890 0.910
G109_GPS 243.366 33.557 -20.550 24.921 1.050 1.080
G120_GPS 243.397 33.565 -19.758 23.490 1.160 1.200
RCUT_GPS 243.404 33.568 -18.738 22.950 1.050 1.080
0821_GPS 243.429 33.561 -18.770 20.279 1.440 1.670
G128_GPS 243.442 33.562 -17.120 22.638 1.250 1.330
G125_GPS 243.421 33.564 -20.039 22.209 1.240 1.270
TOME_GLA 243.320 33.619 -19.062 23.293 0.990 1.060
ROCH_GLA 243.390 33.611 -18.266 22.650 0.810 0.830
PMCN_GPS 243.483 33.571 -17.989 22.267 1.010 1.050
D138_GPS 243.502 33.571 -16.630 19.896 1.170 1.210
PF6__GLA 243.516 33.581 -16.707 19.395 1.020 1.070
GREN_GPS 243.553 33.574 -16.560 18.434 1.120 1.140
PF1__GPS 243.570 33.584 -15.618 19.483 0.960 1.000
PF5C_GPS 243.523 33.603 -16.332 20.605 1.180 1.150
PINY_GPS 243.541 33.609 -16.191 18.364 0.950 0.920
PIN1_GLA 243.542 33.612 -16.390 19.534 0.800 0.820
ASBS_GPS 243.538 33.620 -15.698 18.505 0.940 1.000
BNDY_GPS 243.562 33.599 -16.764 21.084 1.170 1.180
T138_GPS 243.580 33.609 -16.452 21.363 1.650 1.590
JOES_GPS 243.410 33.646 -17.397 20.999 0.940 0.950
L587_GPS 243.589 33.623 -18.068 19.863 1.430 1.410
WHAY_GPS 243.528 33.684 -14.991 19.665 0.970 0.970
RSRT_GPS 243.609 33.688 -13.052 17.582 0.970 1.000
CAHU_GPS 243.726 33.639 -12.678 15.897 1.050 1.080
VORO_GPS 243.840 33.628 -12.114 13.243 1.280 1.190
TRAN_GPS 244.167 33.429 -11.445 9.451 0.970 0.980
S_31_GPS 244.230 33.427 -8.627 8.339 1.300 1.270
25SE_GPS 244.217 33.441 -10.523 8.679 1.070 1.120
SIPH_GPS 244.322 33.427 -6.999 3.485 0.920 0.940
VARN_GPS 244.086 33.503 -12.313 7.904 1.060 1.020
PAIN_GPS 243.992 33.612 -8.992 7.657 1.050 1.070
N125_GPS 244.138 33.640 -5.159 3.792 1.640 1.660
1113_GPS 244.036 33.677 -7.076 4.596 1.180 1.380
BLAC_GLA 244.280 33.664 -4.176 1.817 0.860 0.880
FIFT_GPS 242.091 33.748 -26.885 29.950 1.090 1.230
SAN1_GLA 242.465 33.709 -25.575 26.776 1.120 1.100
CCCS_GPS 242.135 33.863 -26.296 25.778 1.040 1.070
OAKD_GPS 242.402 33.847 -25.267 26.788 0.920 0.960
0819_GPS 242.453 33.884 -24.609 26.506 0.930 0.960
SJUA_GPS 242.262 33.914 -25.616 26.334 0.860 0.880
METZ_GLA 242.768 33.796 -23.020 25.864 1.170 1.120
INDO_GLA 243.223 33.794 -14.893 23.407 1.030 1.060
LAST_GLA 242.691 33.837 -23.408 26.257 0.970 1.070
SGHS_GPS 241.891 34.089 -24.239 24.478 1.190 1.210
SNTZ_GPS 242.116 34.042 -22.178 24.849 1.400 1.180
LIMP_GPS 242.451 33.975 -24.234 26.006 1.110 1.140
SANO_GPS 242.487 34.018 -22.734 24.555 1.020 1.050
JUR3_GPS 242.557 34.032 -23.122 24.682 0.920 0.930
STEE_GPS 242.470 34.077 -23.348 25.685 1.170 1.200
PSEB_GPS 242.311 34.121 -23.962 22.612 1.070 1.110
VERN_GPS 242.274 34.137 -24.367 21.493 1.210 1.200
THRT_GPS 242.503 34.136 -22.843 21.134 1.690 1.870
ANGA_GPS 242.395 34.172 -22.641 23.158 1.210 1.240
SANS_GPS 242.496 34.212 -20.773 20.564 1.080 1.090
BRI2_GLA 242.861 34.014 -17.055 21.210 0.940 0.990
0818_GPS 242.896 34.022 -17.684 20.569 1.080 1.110
RTHS_GPS 242.647 34.089 -22.069 22.249 0.960 0.990
BRYN_GPS 242.734 34.063 -21.669 23.495 1.540 1.750

CRFP_GPS 242.900 34.039 -18.890 19.999 0.830 0.860
CHER_GLA 243.048 34.003 -14.933 20.713 1.090 1.100
WD91_GLA 243.288 33.714 -18.236 22.384 0.960 1.000
PTHP_GPS 243.701 33.714 -12.727 15.788 0.930 0.940
DUNP_GPS 243.719 33.750 -11.148 14.008 1.060 1.050
COCH_GLA 243.842 33.740 -9.384 9.553 0.990 1.020
GAPP_GLA 243.829 33.749 -8.772 10.324 0.970 0.990
BERD_GPS 243.825 33.810 -7.445 8.164 1.050 1.050
WIDC_GPS 243.608 33.935 -10.546 17.902 0.930 0.950
DESO_GPS 244.600 33.715 -2.082 1.145 1.030 0.960
JTRE_GPS 244.236 33.834 -1.900 2.868 1.130 1.130
F726_GPS 244.001 33.974 -4.757 4.357 1.570 1.700
FORD_GPS 245.011 33.609 -2.121 0.930 1.790 1.720
1114_GPS 244.757 33.681 -3.575 1.679 1.240 1.060
BLYT_GPS 245.285 33.610 -2.868 1.420 0.800 0.810
COXO_GPS 244.773 34.040 -0.711 1.039 1.830 1.760
ENDD_GPS 245.519 34.044 -0.910 1.221 1.210 0.990
HARV_GPS 239.318 34.469 -32.739 34.162 0.850 0.900
LACU_GPS 240.286 34.494 -30.698 30.462 0.960 0.960
RUS1_GPS 239.373 34.571 -29.703 36.709 1.320 1.230
ALVA_GPS 239.383 34.593 -31.057 35.479 1.350 1.230
GAVI_GPS 239.801 34.502 -29.833 33.182 1.030 0.980
SNP2_GPS 240.990 34.440 -29.341 26.294 1.260 1.280
ROCK_GPS 241.324 34.236 -27.485 30.340 0.880 0.910
CHT3_GPS 241.359 34.257 -27.810 29.939 0.840 0.870
CSN1_GPS 241.476 34.254 -27.004 26.394 0.900 0.930
DELO_GPS 241.489 34.258 -24.993 26.514 1.110 1.160
OATT_GPS 241.399 34.330 -30.291 24.067 1.250 1.280
PICO_GNR 241.399 34.331 -28.021 26.197 0.810 0.840
CMP9_GPS 241.589 34.353 -26.280 24.490 0.870 0.900
0102_GPS 240.736 34.566 -29.500 25.324 1.290 1.170
MUNS_GPS 240.700 34.636 -27.650 24.475 0.970 0.950
LVMS_GPS 240.896 34.734 -24.689 21.027 1.140 1.170
WKPK_GPS 241.259 34.569 -24.969 21.394 0.514 0.494
QHTP_GPS 241.755 34.629 -19.131 19.353 1.150 1.170
LOSP_GPS 239.394 34.894 -30.686 35.288 0.970 0.960
LAMO_GPS 239.743 34.798 -31.031 34.814 1.260 1.160
7HLI_GPS 239.700 34.960 -29.106 34.176 1.530 1.430
SALI_GPS 240.286 34.823 -28.409 29.722 0.890 0.920
0504_GPS 240.162 35.003 -27.296 28.747 0.980 1.000
LGO7_GPS 240.240 35.036 -25.799 25.904 0.890 0.920
MADC_GPS 239.933 35.076 -27.400 30.696 0.940 0.930
YAM2_GPS 240.516 34.852 -25.237 25.103 1.040 0.980
FZHS_GPS 241.107 34.800 -20.907 19.999 1.010 1.030
CUYA_GPS 240.511 34.928 -23.616 23.373 1.200 1.140
PATW_GPS 240.568 34.960 -21.149 21.191 0.900 0.910
J976_GPS 240.821 35.002 -15.354 17.630 1.070 1.100
DBL1_GPS 241.513 35.033 -14.194 14.873 1.110 1.200
WEED_GPS 241.068 35.223 -12.850 11.241 1.160 1.250
JACK_GPS 241.340 35.089 -13.584 14.700 1.220 1.310
RSPG_GPS 241.330 35.138 -13.951 13.440 0.990 1.080
PORT_GPS 241.843 35.087 -10.619 14.400 0.970 1.000
SUMT_GPS 241.591 35.134 -10.199 13.550 1.080 1.210
PAJA_GPS 241.705 35.121 -11.336 14.025 1.210 1.320
0617_GPS 241.375 35.274 -12.295 12.778 0.960 1.020
BLAN_GPS 238.716 35.665 -29.395 37.577 1.000 1.010
0509_GPS 238.516 35.992 -29.539 36.375 1.040 1.030
BLHL_GPS 239.168 35.359 -28.812 36.108 0.820 0.860
TESS_GPS 239.302 35.386 -27.448 34.942 0.920 0.960
POZO_GPS 239.701 35.346 -25.740 30.556 1.140 1.080

BARR_GPS 239.427 35.456 -27.432 33.707 0.870 0.910
ALMO_GPS 239.547 35.552 -25.419 32.082 0.840 0.870
L623_GPS 239.707 35.583 -24.155 29.526 1.420 1.030
GOUD_GPS 240.234 35.414 -13.755 16.684 1.390 1.190
POSO_GPS 239.887 35.520 -20.827 25.478 0.950 0.920
C616_GPS 239.999 35.575 -16.365 19.304 0.960 0.920
H623_GPS 239.654 35.607 -24.847 30.578 1.090 1.010
REDH_GPS 239.739 35.605 -23.409 27.394 0.830 0.860
P807_GPS 240.146 35.603 -12.631 15.518 0.920 0.890
FIBR_GPS 240.606 35.398 -13.590 13.059 0.880 0.880
TAR0_GPS 239.953 35.889 -8.686 16.016 0.940 0.930
0609_GPS 240.712 36.289 -10.836 11.815 1.000 1.020
CHIL_GPS 241.974 34.333 -24.406 22.685 0.840 0.880
CUTT_GPS 242.395 34.362 -17.320 22.048 1.840 1.600
CAJO_GLA 242.549 34.347 -17.718 18.752 0.910 0.940
DVPB_GPS 242.140 34.413 -22.189 20.598 1.110 1.140
0705_GLA 242.235 34.493 -15.780 18.175 1.350 1.050
MILU_GLA 242.708 34.281 -17.730 19.046 0.950 0.980
AVRY_GPS 242.846 34.468 -14.664 14.281 1.010 1.030
PT65_GLA 242.932 34.454 -15.450 15.068 1.190 0.990
VNPS_GPS 241.879 34.502 -22.268 20.548 1.120 1.150
DIP0_GPS 242.569 34.635 -14.071 14.932 1.760 1.810
0817_GPS 242.758 34.537 -14.413 14.774 1.000 1.050
ITER_GPS 242.770 34.630 -12.928 14.004 1.120 1.170
SUNH_GPS 242.703 34.749 -15.284 13.086 1.720 1.720
0805_GPS 242.471 35.007 -8.908 13.775 1.960 1.480
HODG_GPS 242.830 34.834 -11.715 13.762 1.590 1.730
SOAP_GPS 243.019 34.904 -10.521 11.544 0.890 0.910
0809_GPS 244.673 34.806 -1.434 0.632 1.550 1.260
0803_GPS 243.585 35.072 -6.181 2.063 1.090 1.140
NEED_GPS 245.396 34.807 -2.714 1.286 1.110 0.980
0806_GPS 242.386 35.366 -7.998 11.529 1.350 1.150
PAOS_GPS 242.294 35.513 -9.085 11.262 1.380 1.360
MOJ1_GPS 243.109 35.332 -5.007 7.375 0.395 0.396
MOJM_GPS 243.112 35.331 -5.007 7.375 0.395 0.396
INYO_GPS 242.188 35.647 -9.495 11.416 0.930 0.940
0801_GPS 244.577 35.541 -1.892 1.626 1.220 1.530
0915_GPS 243.700 35.867 -3.537 2.558 1.050 1.090
0914_GPS 242.671 35.978 -6.277 5.778 0.940 0.920
0912_GPS 243.584 36.304 -2.603 2.023 0.930 1.030
0607_GPS 239.646 36.501 -7.627 10.478 1.240 1.050
0605_GPS 240.882 36.738 -9.374 11.598 1.100 1.030
INDE_GPS 241.815 36.781 -6.608 8.591 1.220 1.010
MN71_GPS 243.851 36.994 -1.687 0.453 1.040 1.030
RICM_GPS 279.616 25.614 -0.335 0.412 0.342 0.335
MDO1_GPS 255.985 30.680 -0.980 0.153 0.402 0.401
PIE1_GPS 251.881 34.301 -0.892 -0.221 0.405 0.405
H217_GPS 237.058 40.652 -4.948 6.067 1.040 0.810
0221_GPS 237.064 40.370 -6.406 4.830 0.870 0.760
0108_GPS 236.507 40.815 -3.816 7.714 1.000 0.820
01NE_GPS 236.325 40.439 -6.259 13.021 0.990 0.620
01QF_GPS 236.675 40.815 -4.377 6.038 1.050 0.900
01RE_GPS 236.377 40.944 -2.752 8.703 0.690 0.660
01PA_GPS 235.744 40.589 0.515 21.995 0.890 0.850
1468_GPS 235.844 40.448 -5.210 24.761 1.810 0.950
01XD_GPS 236.156 41.874 1.971 8.923 1.120 1.020
BEAR_GPS 235.706 40.498 -3.857 27.120 0.400 0.360
COOS_GPS 235.734 40.257 -18.984 30.838 0.520 0.440
CVR3_GPS 236.752 39.771 -13.257 9.834 1.110 0.890
CW07_GPS 235.905 41.192 4.018 13.181 0.930 0.930

GORD_GPS 236.063 41.986 0.338 7.954 0.770 0.610
GRSH_GPS 236.022 40.306 -10.275 20.077 0.460 0.390
HORS_GPS 236.267 40.875 -0.903 8.744 0.690 0.600
H111_GPS 235.967 41.522 2.999 10.611 1.450 1.320
HP12_GPS 236.211 41.993 2.158 8.529 1.650 1.460
HP14_GPS 236.799 39.795 -9.893 7.393 0.790 0.630
HP15_GPS 236.165 39.777 -23.242 24.349 0.630 0.530
HP16_GPS 236.477 40.460 -6.674 7.036 0.710 0.580
HP19_GPS 235.883 40.975 4.040 14.577 0.500 0.460
HP21_GPS 236.807 41.842 0.291 6.468 0.720 0.600
KNEE_GPS 236.025 40.727 -0.297 14.929 0.560 0.480
KNGP_GPS 235.876 40.157 -35.502 46.832 0.970 0.960
L229_GPS 235.623 40.452 -6.902 32.104 1.400 1.110
LASS_GPS 236.446 40.334 -8.982 8.507 0.560 0.490
P229_GPS 235.628 40.392 -7.750 28.597 0.880 0.720
POIR_GPS 236.969 39.729 -7.697 6.354 0.800 0.640
SIS3_GPS 235.798 40.715 4.230 19.251 0.770 0.670
TAB3_GPS 235.806 40.630 0.066 19.356 1.230 1.080
BARN_GPS 288.840 44.099 0.484 0.154 0.900 0.800
USNO_GPS 282.934 38.919 -0.460 0.237 0.500 0.500
AMC2_GPS 255.475 38.803 -1.536 -0.189 0.600 0.500
PKDB_GPS 239.458 35.945 -23.488 30.760 0.500 0.500
JAST_GPS 239.279 38.340 -11.357 7.015 0.600 0.600
05UH_GPS 239.004 36.410 -10.644 13.498 1.000 0.700
ONIE_GPS 238.940 37.080 -11.897 7.916 0.500 0.500
H104_GPS 238.822 37.464 -11.326 7.652 0.500 0.500
05WG_GPS 238.816 36.571 -29.534 34.854 0.900 0.900
OSI2_GPS 238.799 36.294 -27.701 35.660 1.100 0.900
05WF_GPS 238.730 36.696 -17.318 19.780 0.900 0.900
PACH_GPS 238.712 37.008 -14.048 12.685 0.600 0.600
TURK_GPS 238.701 36.900 -11.875 9.589 0.600 0.600
0512_GPS 238.677 36.420 -26.289 36.596 0.800 0.700
05YF_GPS 238.675 36.793 -12.203 12.496 0.600 0.600
OSR1_GPS 238.625 37.508 -13.046 8.312 0.500 0.600
05VE_GPS 238.571 36.493 -29.288 34.828 0.700 0.600
RAIL_BVU 238.538 36.909 -17.296 20.538 0.700 0.700
MOCH_GPS 238.444 37.477 -13.980 9.166 0.500 0.500
MEDA_GPS 238.434 37.755 -12.518 8.169 0.700 0.800
77RT_GPS 238.432 36.873 -24.621 27.570 0.600 0.600
GAMB_GPS 238.423 36.055 -25.412 33.273 1.800 1.800
PGN4_GPS 238.415 36.887 -23.120 28.375 0.600 0.600
GILR_GPS 238.384 36.980 -20.103 22.584 0.500 0.500
TORO_GPS 238.372 36.540 -26.406 32.588 1.800 1.800
BORO_GPS 238.341 36.722 -30.169 34.697 1.600 0.800
SALI_GPS 238.334 36.698 -28.375 33.499 1.400 0.800
05YC_GPS 238.332 36.791 -28.955 33.099 0.600 0.500
04AL_GPS 238.327 36.914 -26.527 31.601 0.700 0.600
B112_GPS 238.325 37.694 -10.850 8.502 1.000 1.100
USG7_GPS 238.297 37.622 -12.169 11.410 0.800 0.900
PERR_GPS 238.294 37.184 -19.370 21.111 1.500 1.600
METC_GPS 238.286 37.229 -20.961 21.613 0.600 0.500
MINN_GPS 238.278 37.954 -14.098 6.016 1.200 1.300
COY__GPS 238.262 37.219 -21.367 21.921 0.500 0.500
0513_GPS 238.250 36.763 -28.173 33.425 0.600 0.500
05ZB_GPS 238.229 36.846 -28.557 32.430 0.700 0.600
FORD_GPS 238.228 36.589 -26.816 37.331 1.200 1.100
CAAA_GPS 238.217 37.186 -22.082 22.634 0.500 0.500
MAZZ_GPS 238.212 37.137 -22.293 24.536 0.500 0.600
JOBE_GPS 238.208 37.922 -11.915 9.237 0.700 0.700
MULL_GPS 238.201 36.749 -31.883 35.539 0.700 0.700

NDDD_GPS 238.191 37.069 -22.612 28.241 0.500 0.500
SARE_GPS 238.190 37.594 -13.493 11.842 0.600 0.600
FEIF_GPS 238.186 36.235 -27.805 36.243 1.800 1.700
CORR_GPS 238.167 37.012 -25.229 31.449 0.500 0.500
LP4__GPS 238.161 37.050 -25.121 29.551 0.700 0.700
LOMA_GPS 238.156 37.111 -21.707 26.352 0.600 0.600
MOLR_GPS 238.149 36.288 -27.798 34.755 1.700 1.700
SHER_GPS 238.130 37.541 -14.414 18.160 0.600 0.600
ALLI_GPS 238.129 37.499 -15.423 16.560 0.600 0.600
LEON_GPS 238.126 36.946 -27.950 32.961 0.600 0.600
MILS_GPS 238.112 37.540 -15.817 16.965 0.600 0.600
LP2__GPS 238.091 37.104 -24.219 28.672 0.600 0.600
1582_GPS 238.081 37.507 -16.329 16.874 1.000 1.100
PORT_GPS 238.080 37.004 -26.244 32.674 0.500 0.500
GREG_GPS 238.076 36.982 -28.749 32.476 0.500 0.500
SOBR_GPS 238.071 36.449 -29.472 36.677 1.800 1.700
CAIS_GPS 238.065 37.513 -16.630 17.679 1.000 0.800
FIRE_GPS 238.062 37.047 -26.537 31.380 0.600 0.600
SUNS_GPS 238.060 37.643 -16.601 16.481 0.600 0.600
BURD_GPS 238.053 37.110 -25.423 28.183 0.500 0.400
3814_GPS 238.048 37.806 -13.866 12.785 1.000 1.000
WINE_1PS 238.048 37.532 -14.528 16.485 1.400 1.400
BRUC_GPS 238.039 37.073 -25.034 31.987 0.500 0.500
VASO_GPS 238.034 37.247 -20.895 24.689 0.800 0.800
ODAM_GPS 238.027 37.180 -22.312 26.290 1.100 1.100
Z137_GPS 238.026 37.480 -19.843 23.090 0.600 0.700
SNJO_GPS 238.023 37.206 -21.606 26.391 0.500 0.500
TRAL_GPS 238.006 37.059 -26.242 33.497 0.500 0.500
CAML_GPS 238.005 38.417 -8.135 9.097 0.600 0.600
WED2_GPS 238.005 37.738 -14.988 16.397 0.600 0.600
BRIG_BVU 238.004 37.185 -22.214 27.597 0.400 0.400
AWIS_GPS 237.998 37.593 -16.122 16.099 1.200 1.100
GARS_GPS 237.989 37.645 -17.511 17.202 0.600 0.600
ELSE_GPS 237.977 37.217 -22.210 27.705 0.500 0.500
BEND_GPS 237.965 37.426 -21.564 23.309 1.000 1.000
CLIF_GPS 237.948 36.950 -29.576 33.914 0.500 0.500
CRO3_GPS 237.948 36.993 -26.366 33.914 1.200 1.200
SCAZ_GPS 237.944 36.978 -29.770 33.115 1.200 1.200
LOMP_GPS 237.941 37.099 -23.643 33.716 1.100 1.200
ROC2_GPS 237.939 37.815 -15.581 15.317 0.500 0.500
CAS2_GPS 237.931 37.732 -16.301 16.620 0.600 0.600
RDHL_GPS 237.905 37.551 -21.046 22.627 0.500 0.600
COYS_GPS 237.903 37.563 -21.043 22.627 0.500 0.600
VAC3_GPS 237.897 38.398 -11.357 8.329 0.500 0.500
GORR_GPS 237.885 38.331 -11.974 9.233 0.700 0.700
FTHL_GPS 237.877 37.363 -22.193 26.236 0.800 0.900
HILL_GPS 237.872 37.937 -14.064 15.837 0.600 0.600
BM1R_GPS 237.847 37.290 -23.714 29.444 0.700 0.700
PAWT_GPS 237.833 37.324 -23.908 29.148 0.600 0.600
GAME_GPS 237.825 38.351 -12.679 10.951 0.500 0.500
SLBB_GPS 237.816 37.691 -18.928 22.753 0.700 0.700
EAUN_GPS 237.805 37.147 -28.153 33.856 0.500 0.500
MADI_GPS 237.797 38.313 -13.791 13.959 0.500 0.500
TRUE_GPS 237.784 37.312 -24.918 30.963 0.600 0.700
BAPK_GPS 237.778 37.884 -16.190 18.065 0.500 0.600
CROC_GPS 237.771 38.043 -15.755 16.167 1.100 1.100
04GG_GPS 237.753 37.879 -16.595 17.272 0.800 0.800
STAD_GPS 237.749 37.870 -18.198 22.873 0.900 0.900
STAC_GPS 237.748 37.871 -17.898 22.273 0.900 0.900
0410_GPS 237.745 38.030 -16.563 17.574 1.000 1.200

HAGG_GPS 237.741 38.324 -13.097 15.075 0.500 0.500
UCBK_GPS 237.735 37.872 -19.300 22.777 0.500 0.600
FLES_GPS 237.726 37.900 -18.394 18.980 1.900 1.300
HAUL_GPS 237.716 37.274 -24.937 33.883 0.900 1.000
MA_A_GPS 237.695 37.937 -19.691 22.989 1.000 0.800
DEAL_GPS 237.662 38.258 -14.325 16.699 0.700 0.800
RMD1_GPS 237.660 37.934 -19.398 23.100 1.400 1.700
SPA1_GPS 237.644 37.990 -15.887 18.804 0.900 0.900
HALM_GPS 237.641 37.228 -29.659 34.405 0.600 0.700
HENN_GPS 237.638 38.283 -14.022 18.606 1.700 1.900
NAVY_GPS 237.634 37.810 -20.629 25.007 0.500 0.600
PEEE_GPS 237.618 37.592 -21.880 28.812 0.700 0.700
PIGE_GPS 237.605 37.183 -28.575 35.616 0.600 0.600
HIL4_GPS 237.598 37.942 -20.405 24.417 1.100 1.100
SNPR_GPS 237.584 37.959 -20.103 23.022 0.800 0.900
PRSD_GPS 237.545 37.805 -22.544 26.333 0.800 0.800
AIRR_GPS 237.544 38.223 -16.351 18.833 0.500 0.500
PALO_GPS 237.544 37.527 -26.207 31.833 0.600 0.600
SWEE_GPS 237.542 37.609 -24.888 30.834 0.600 0.600
WHAL_GPS 237.496 37.509 -26.518 33.248 0.700 0.700
ADOO_GPS 237.473 38.236 -17.059 21.855 0.500 0.500
COR__GPS 237.405 38.186 -19.181 23.675 0.500 0.500
T3R2_GPS 237.401 37.923 -22.740 26.376 0.600 0.600
NICC_GPS 237.263 38.093 -21.224 28.116 0.500 0.500
1395_GPS 237.187 38.087 -23.837 29.339 0.600 0.600
PRH2_GPS 237.131 38.080 -24.647 32.256 0.500 0.500
PRNC_GPS 237.063 38.104 -28.053 33.576 1.600 1.500
THTI_GPS 210.394 -17.577 -66.958 47.557 0.700 0.600