

Supplemental Information

Imaging the tectonic grain of the northern Cordillera orogen using Transportable Array receiver functions

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This supplement contains figures and captions with receiver function analysis examples at several stations, a map showing basin and noise influence on total receiver amplitudes, maps showing other oriented geophysical measurements and comparisons of their orientations with those of our A1max measurements, and A1/A and A1max data tables.

Figure S1: Individual maps of A1max strikes, Rayleigh wave crustal azimuthal anisotropy, SKS splitting, global strain rate model, global CMT Kostrov summations, World Stress Map stress orientations. (page 2)

Figure S2: Comparison maps as in S1, but orientation in comparison with A1max strikes in each panel. (page 4)

Figure S3: As in S2, but angle difference map on footprints of 100 km radius. (page 5)

Figure S4: As in S2, but angle difference map on footprints of 50 km radius. (page 6)

Figure S5: Example A1 decomposition of receiver function decomposition at station. (page 7)

Figure S6: Averaged absolute receiver function amplitude map. (page 16)

Table S1: A1/A data table. (page 17)

Table S2: A1max data table. (page 25)

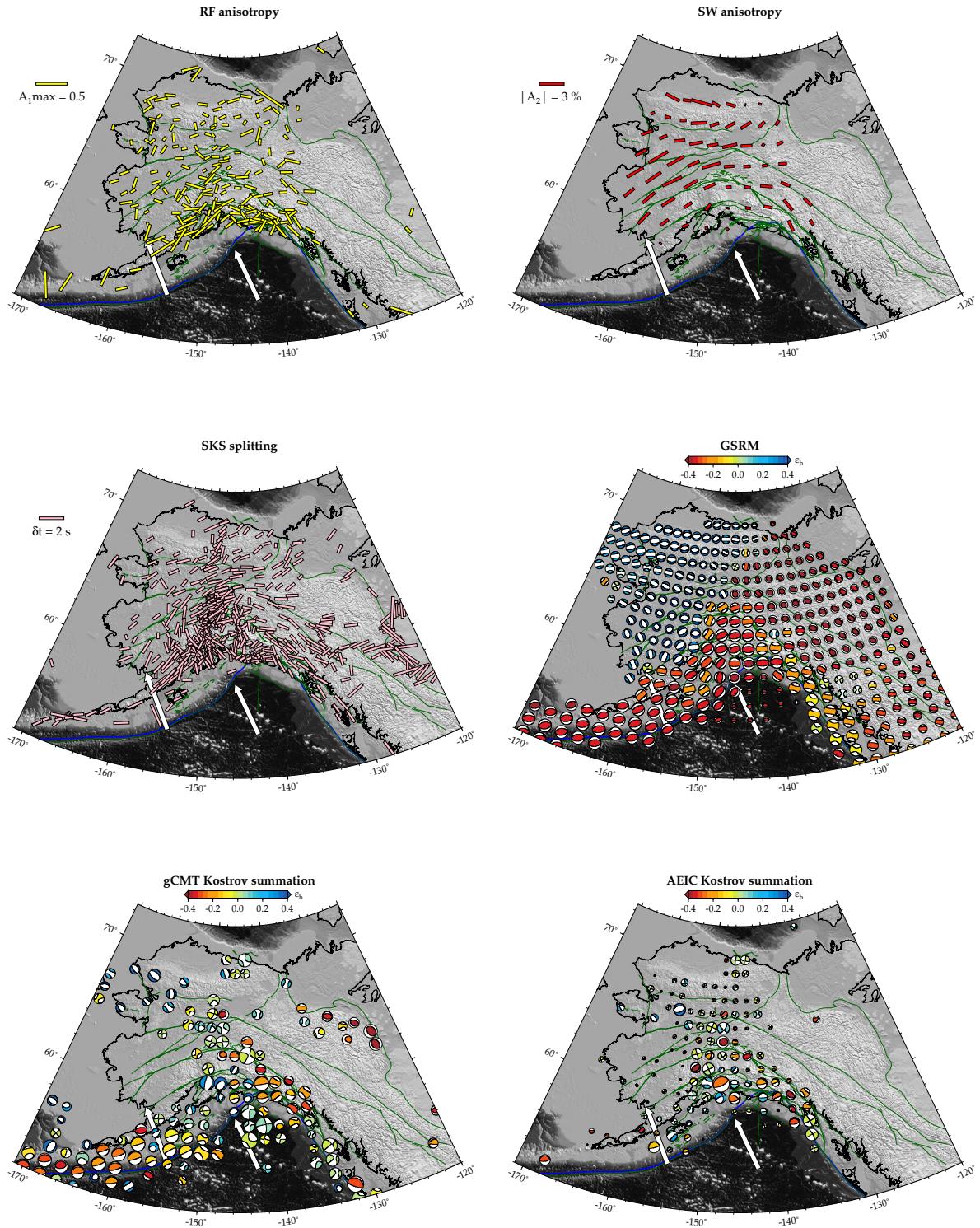


Figure S1: Comparison of crustal anisotropy with other geophysical quantities. RF anisotropy: $A_{1\text{max}}$, same as Fig. 6a in this study. SW anisotropy: Rayleigh wave fast orientation and strength of anisotropy, from Feng and Ritzwoller (2020). SKS splitting: station-averaged SKS “fast azimuth” orientation and delay time, 2020 update from the compilation by Becker et al. (2012),

includes McPherson et al. (2020) and Estève et al. (2020). GSRM, geodetic strain rates from Kreemer et al. (2014), horizontal components shown as moment tensors, colored by mean normal strain-rate (blue = extension, red = compression). GCMT moment tensors (3/2020 update of Dziewonski et al., 1981 and Ekström et al., 2012), Kostrov summed as in Becker et al. (2018), using all events shallower than 50 km on 2 by 1 degree grid; WSM, World Stress Map (Heidbach et al., 2018); bar shows orientation of maximum extensional stress and color is red for compressional, blue for extensional, green for strike-slip, and white for undefined stress state per WSM classification. Green lines are fault traces and other tectonic boundaries as in Berg et al. (2020). White arrows are plate motion vectors of Pacific plate relative to North America (MORVEL, DeMets et al., 2010).

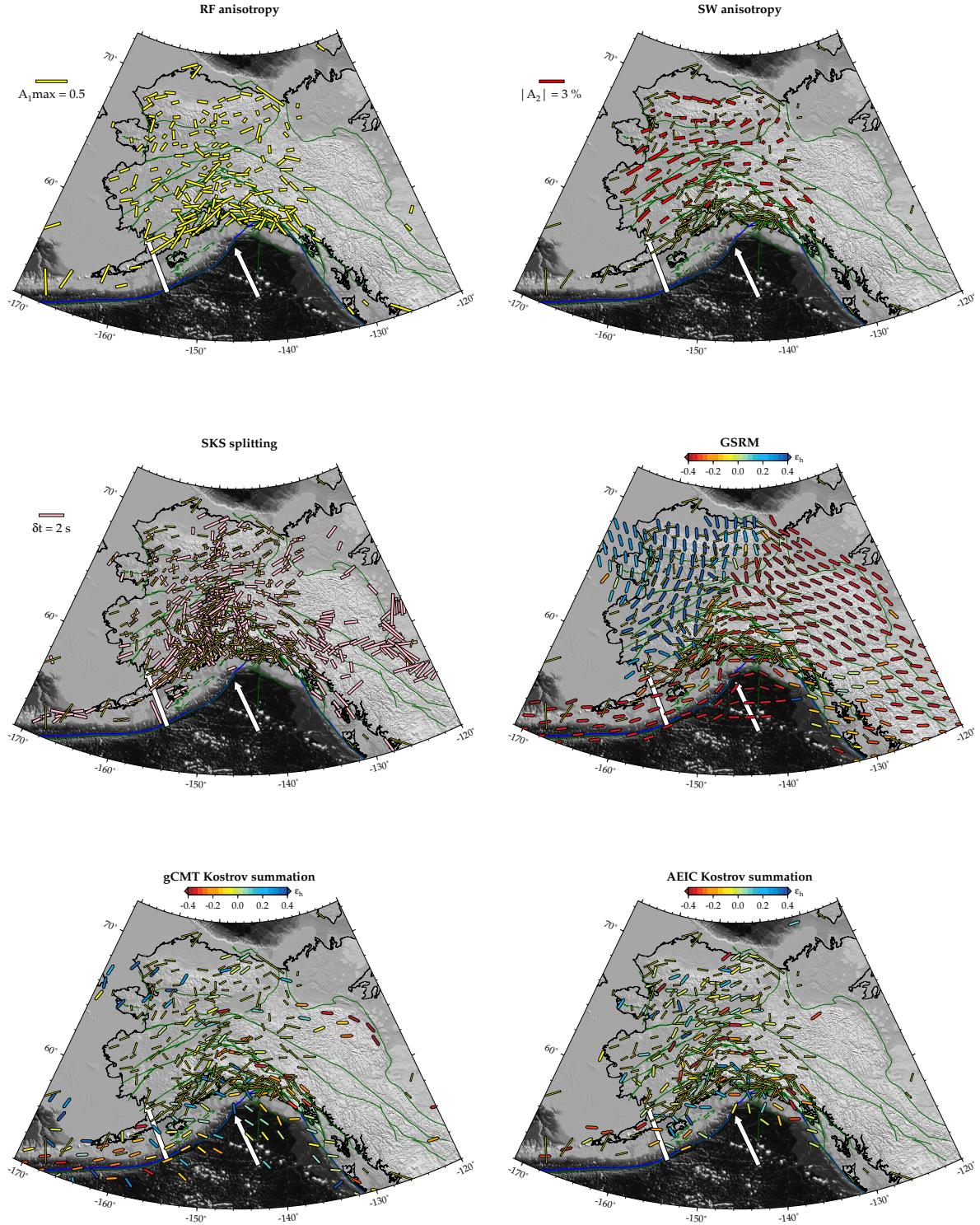


Figure S2: As in Fig. S1, but plotted with receiver function $A_{1\text{max}}$ in each case for comparison, and showing mean normal strain colored major extensional axes orientation instead of moment tensor representation for GSRM and gCMT Kostrov summation.

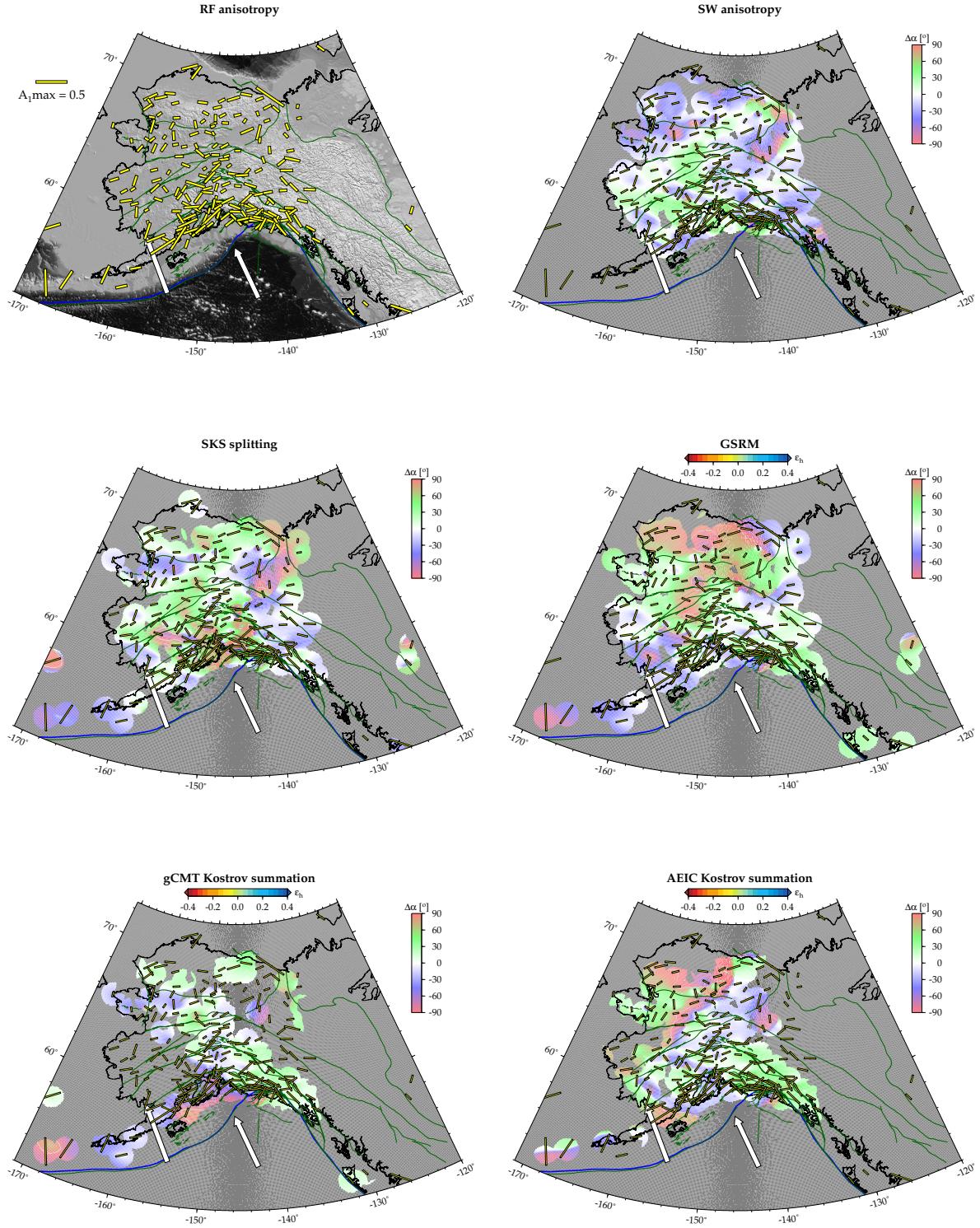


Figure S3: As in Fig. S2, but angle difference with receiver function $A_{1\text{max}}$ now shown as colored footprint with 100 km radius around each measurement pair, with white = alignment and red = maximum misalignment.

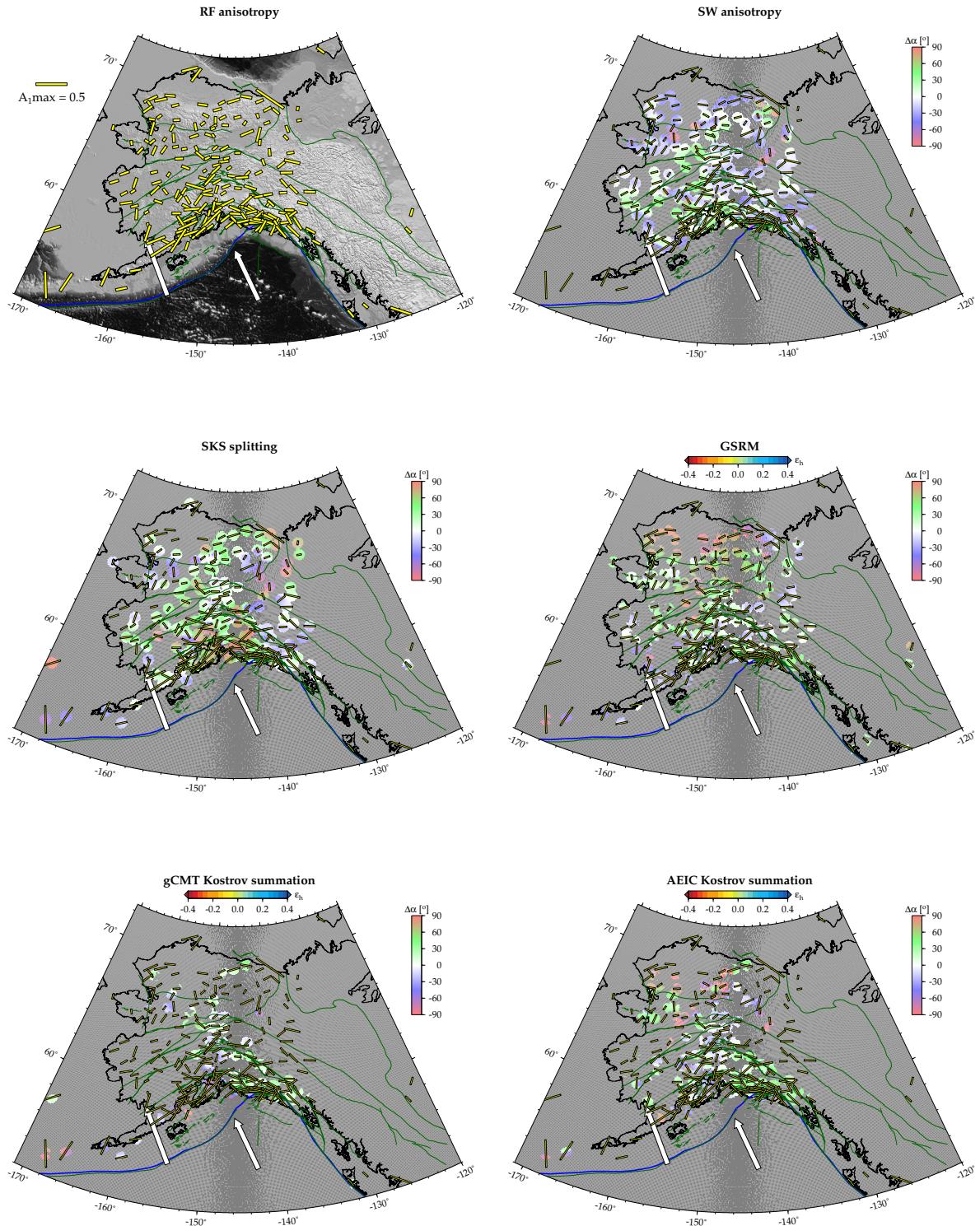


Figure S4: As in Fig. S3, but with smaller interpolation footprint of 50 km radius.

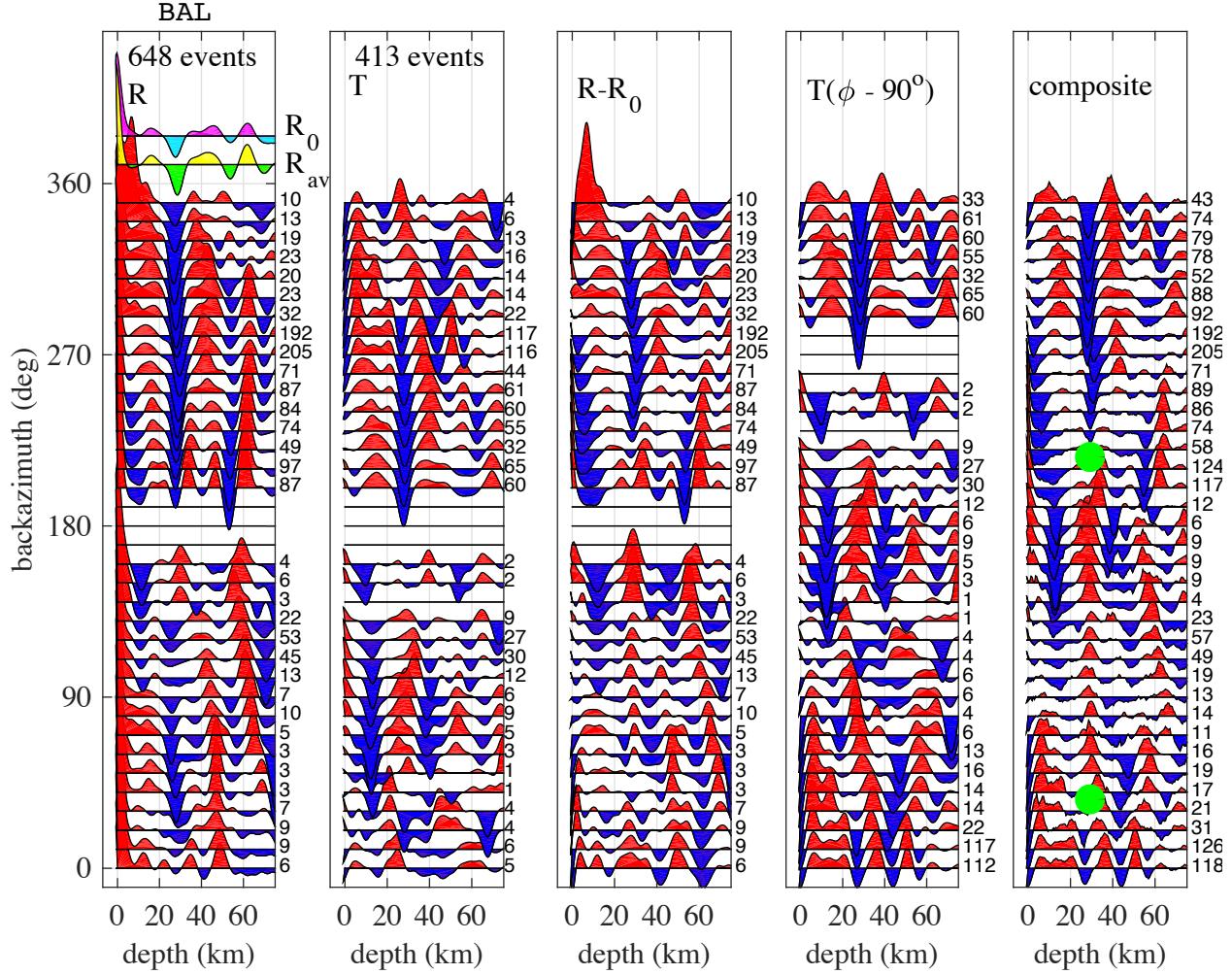


Figure S5: Example station (station name listed in capital letters on top left, see result Table S2) showing the azimuthal harmonic analysis. From left to right: (1) First panel shows radial component receiver functions, binned every 10° in backazimuth. Number on the right of each trace shows the number of events in that azimuthal bin. Traces are plotted with a binning overlap of 5° (slight azimuthal smoothing). Green/yellow trace at the top (R_{av}) is average radial receiver function (averaged over all events and therefore biased by backazimuthal sampling density). Cyan/magenta trace at top (R_0) is average over all backazimuth bins (less biased by backazimuthal sampling density). Delay time and conversion amplitude are corrected for moveout as described in Schulte-Pelkum and Mahan, (2014a, b), and delay times are adjusted to mimic vertical incidence. Delay time is then scaled to depth using the values as given in the main text. (2) Second panel shows transverse component receiver functions, else as in first panel. (3) Radial component receiver functions after subtracting R_0 from panel 1 from each trace. (4) Transverse component receiver functions after shifting traces by 90° in backazimuth. Note arrivals with polarity flips that are similar between panels 3 and 4. (5) $R - R_0$ and shifted T (panel 3 and 4) traces binned together in backazimuth. Azimuthal harmonic decomposition is performed on this set of traces in a moving time window (Schulte-Pelkum and Mahan, 2014a). Green dots show polarity nodes of the arrival with the largest A1 solution in the decomposition (strike = phase $\pm 90^\circ$), this is the strike displayed in Fig. 6 for this station.

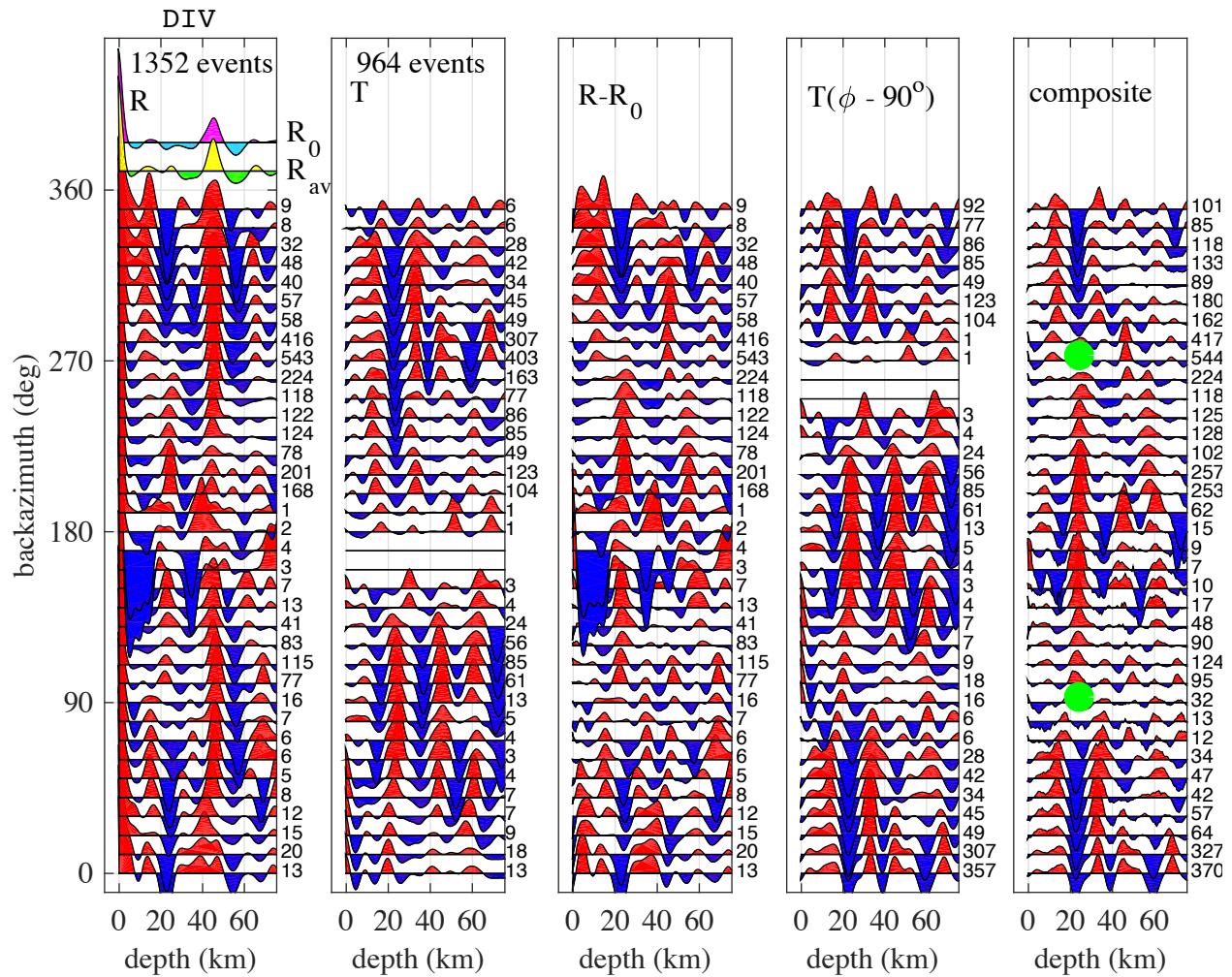


Figure S5, cont.

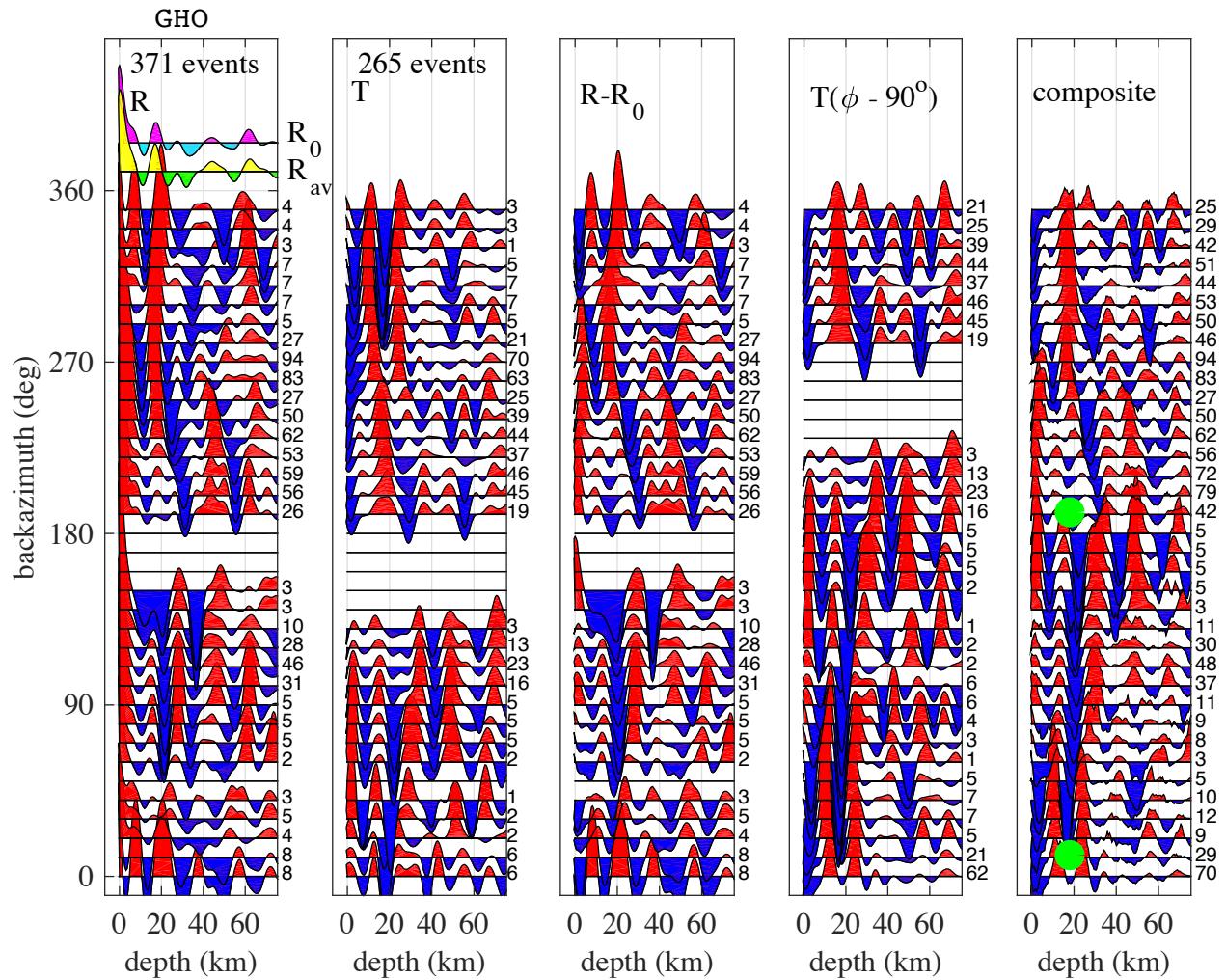


Figure S5, cont.

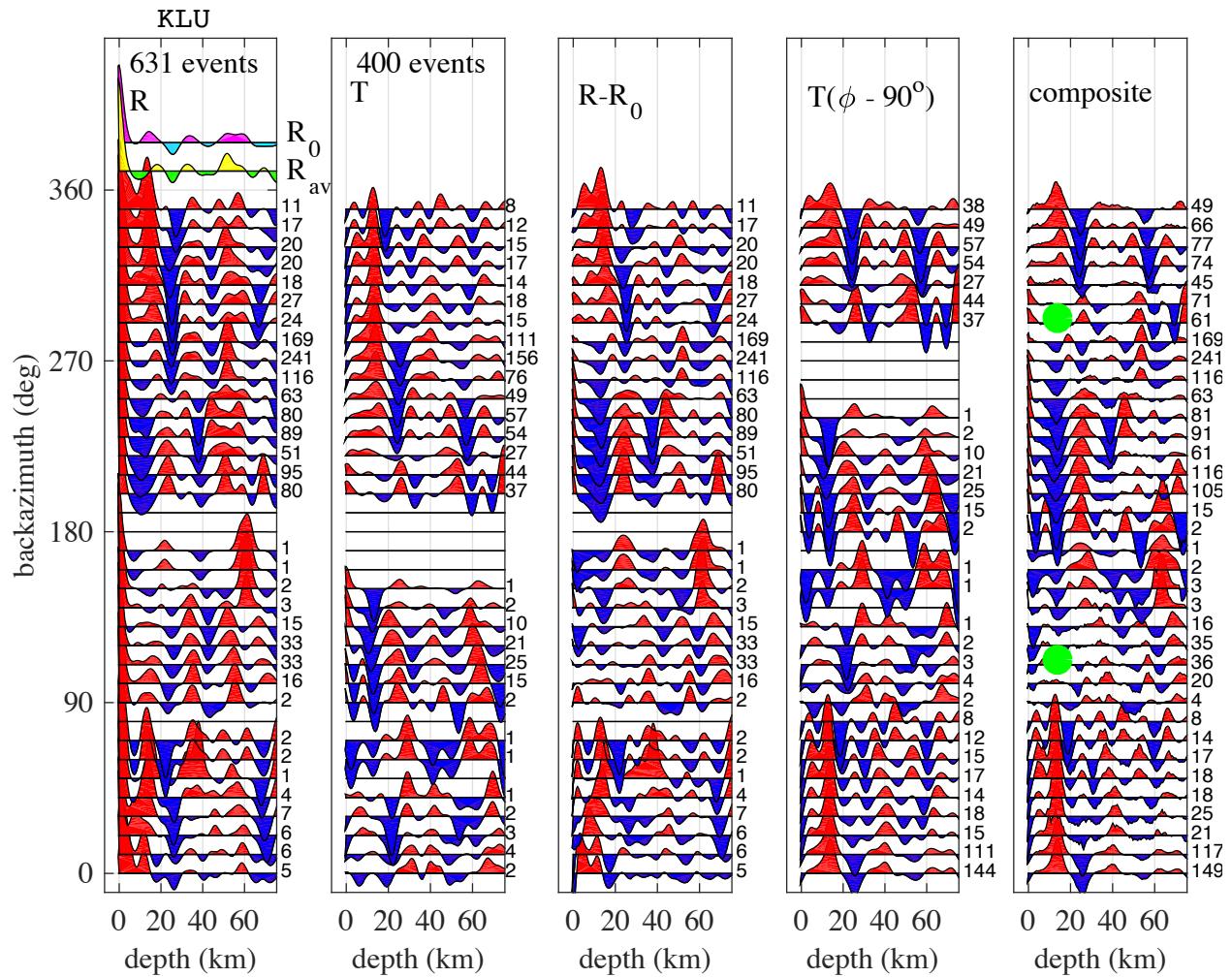


Figure S5, cont.

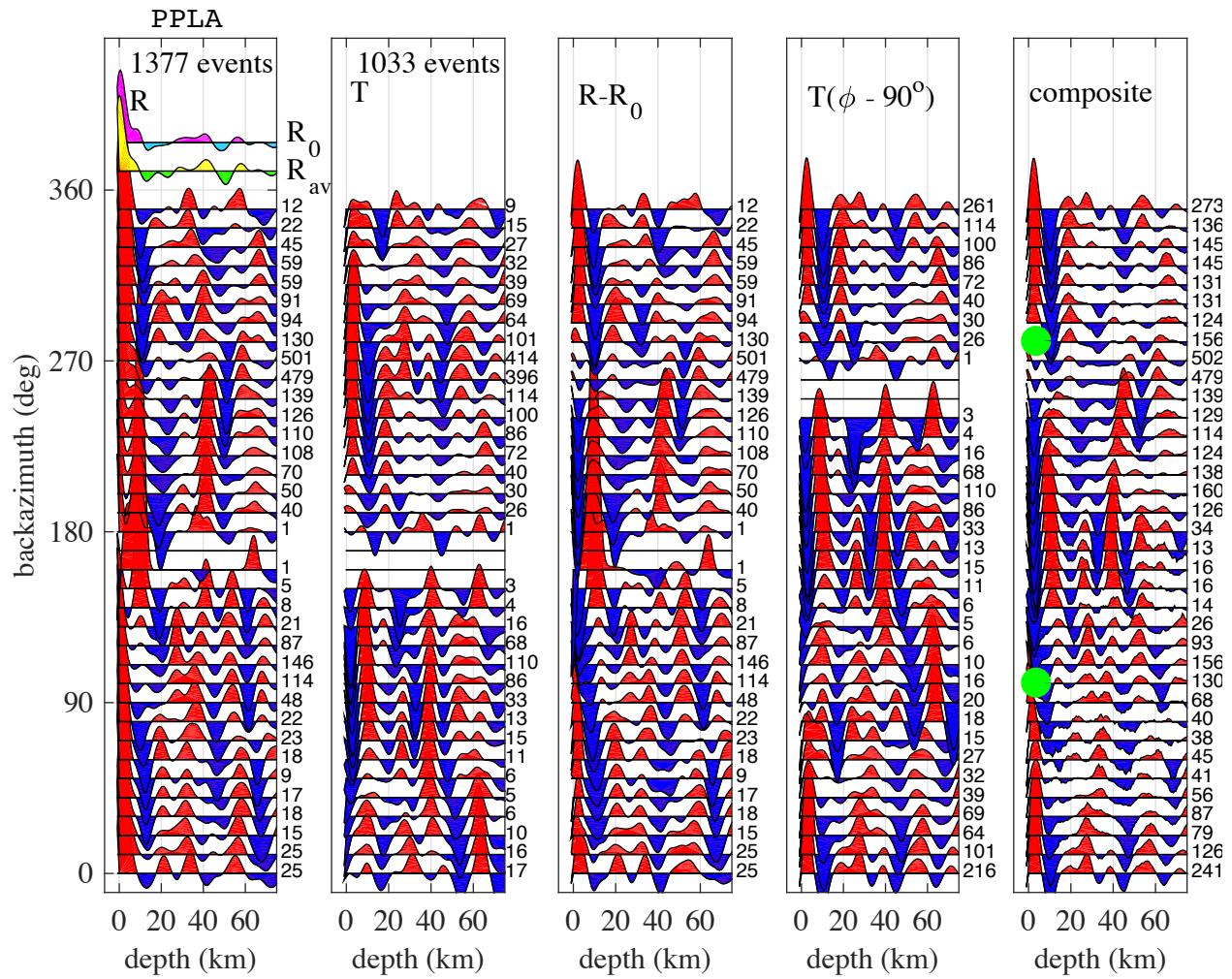


Figure S5, cont.

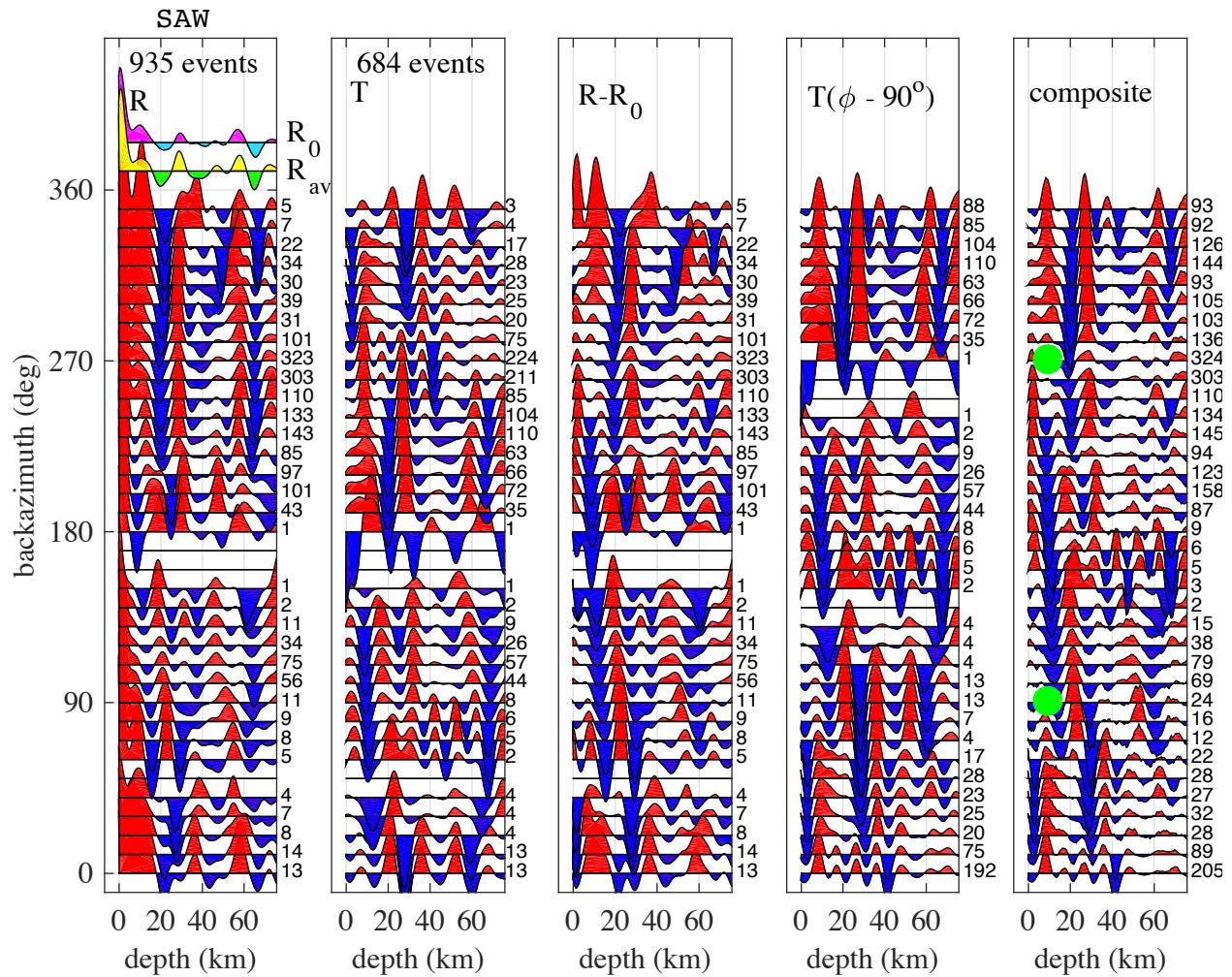


Figure S5, cont.

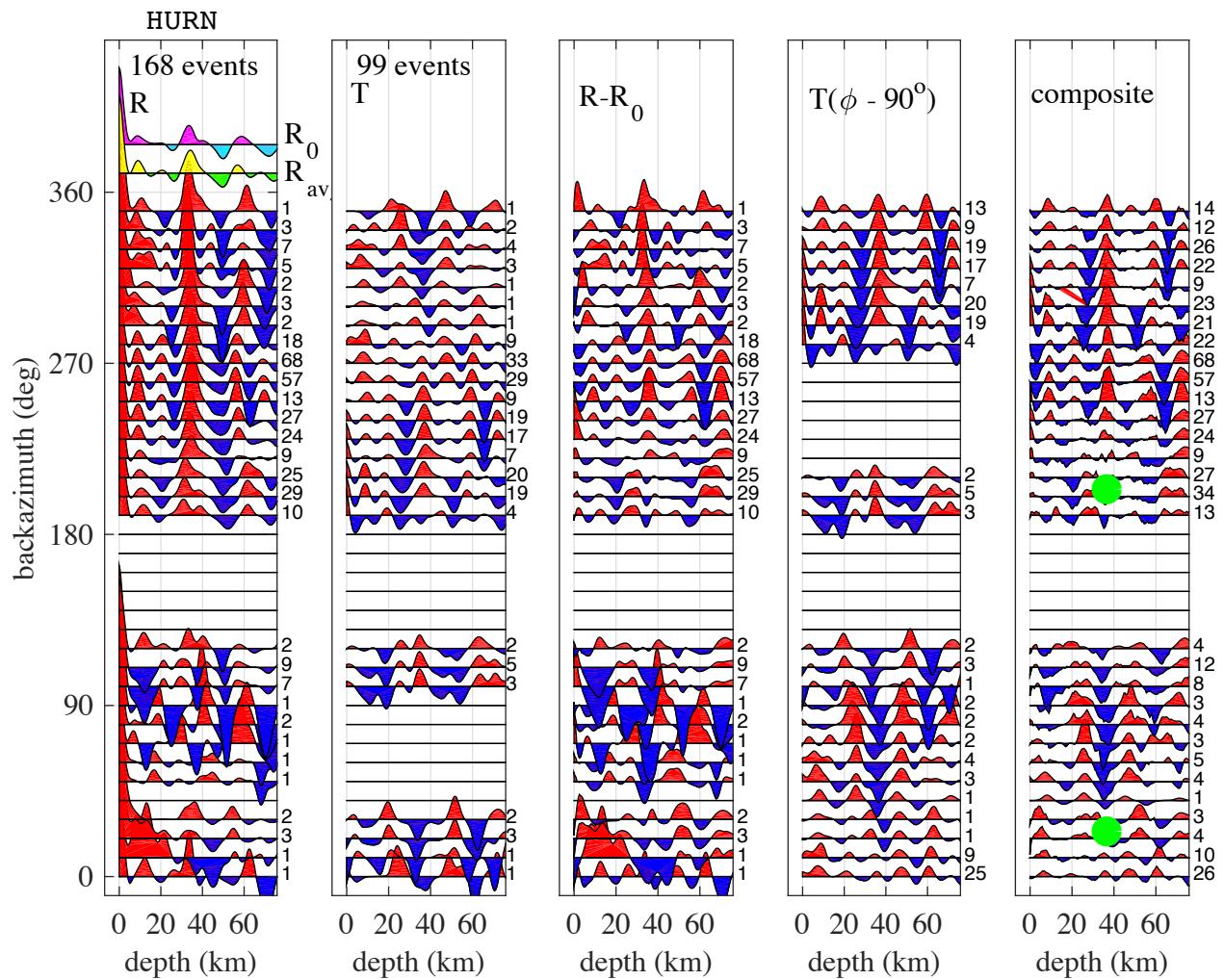


Figure S5, cont.

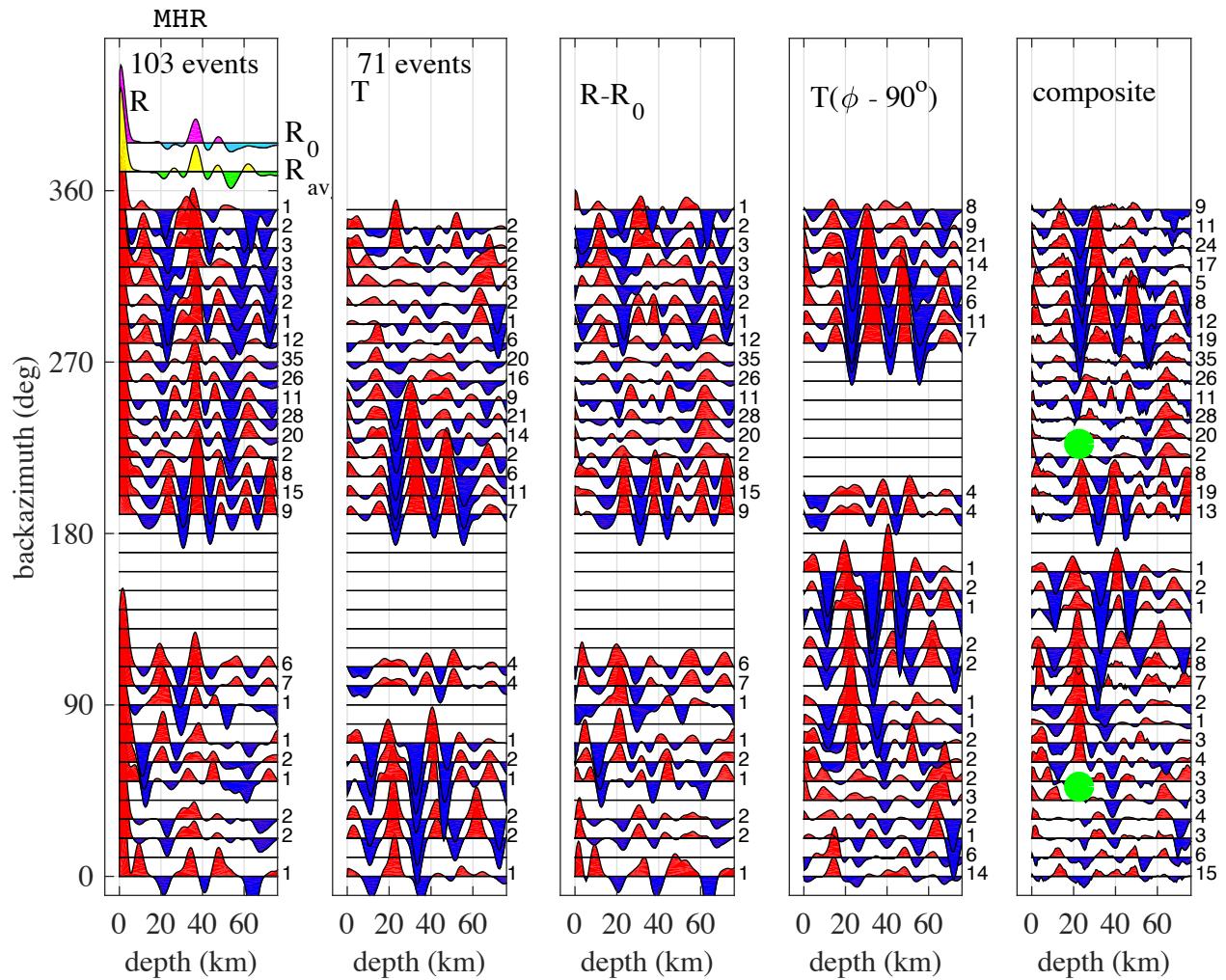


Figure S5, cont.

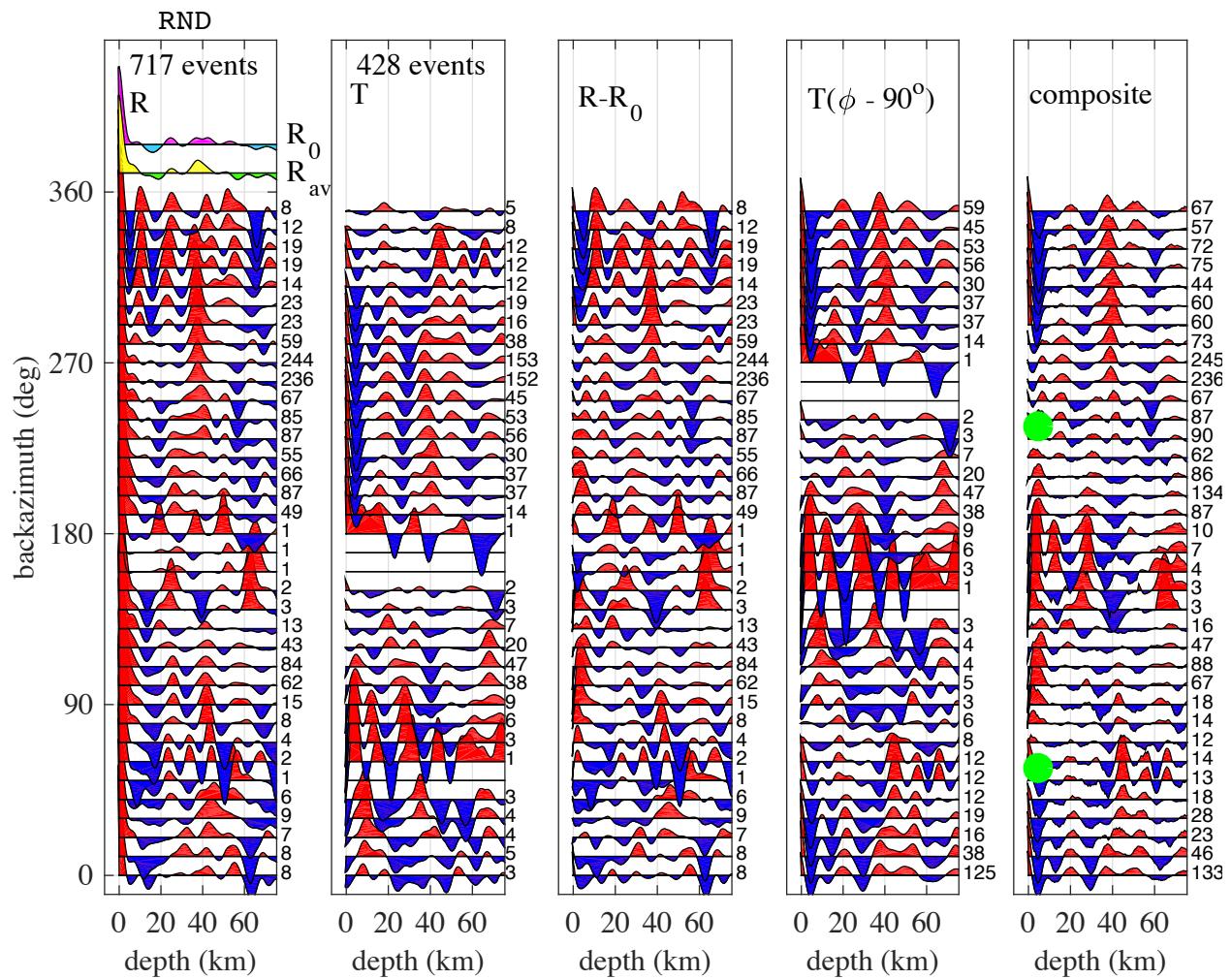


Figure S5, cont.

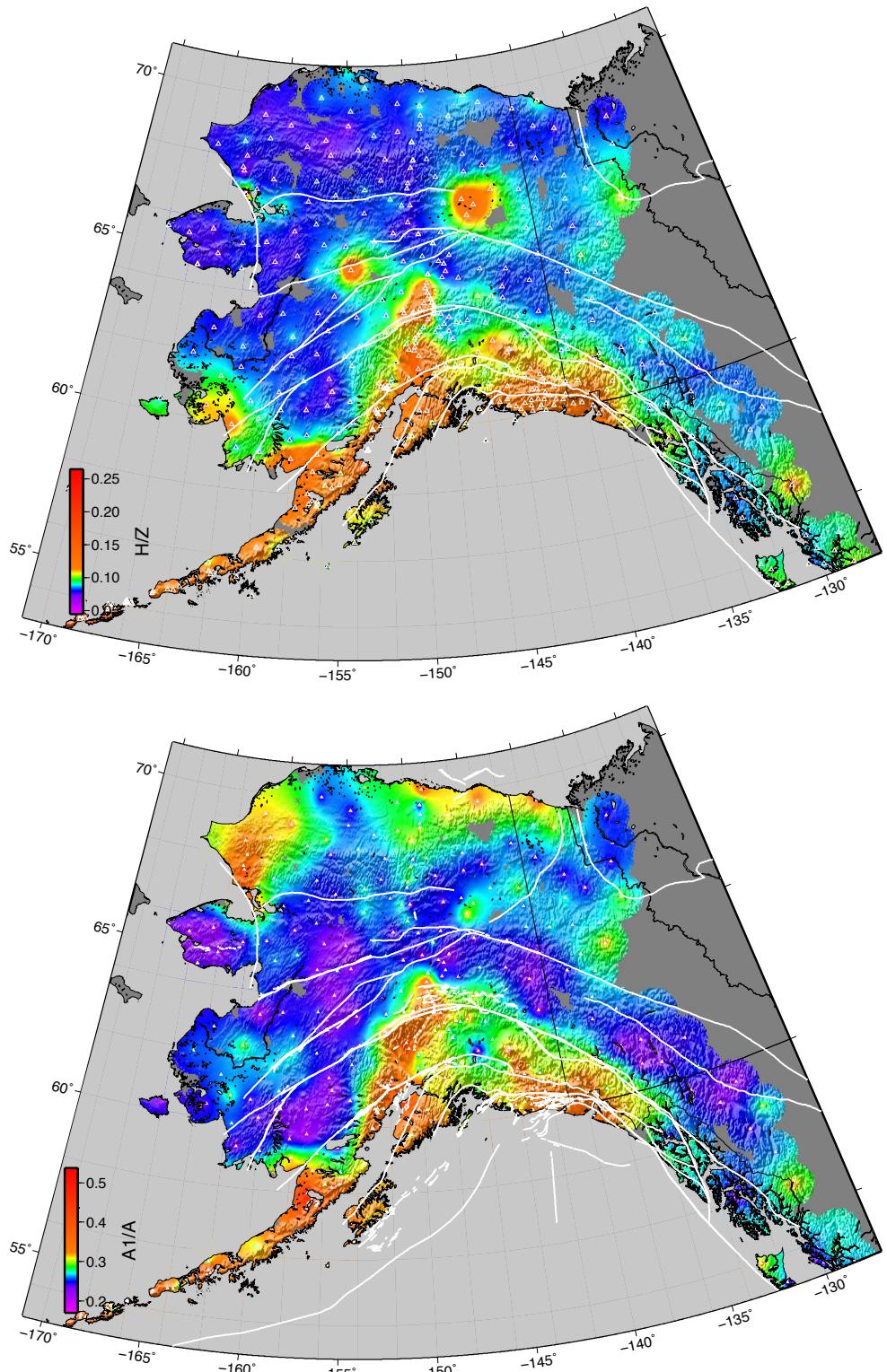


Figure S6: **(top)** Map of averaged total radial receiver function amplitude at each station (white triangle), with spline interpolation between stations and far interstation areas masked. Average is calculated as absolute value of all receiver function samples at each station, divided by number of traces and samples, averaged from 0–15 s. Values are unitless ratio of radial to vertical component

amplitude (iterative time-domain deconvolution preserves component amplitude). Receiver functions dominated by basin reverberations typically show high total amplitudes (e.g. Schulte-Pelkum and Mahan, 2014a, their Fig. 7). There is no close correspondence between basins and total amplitude. The thickest basin is north of the western Brooks Ranges (Colville Basin; basin depth of over 8 km, Berg et al., 2020), but low total amplitudes are seen in this area. Some higher amplitudes are observed in parts of the Bristol Basin, between the Seward Peninsula and Alaska Peninsula, but amplitudes are not consistently elevated through the area. The high-amplitude area in the northeast is Yukon Flats, perhaps the only easily correlated area of a basin to high total observed amplitudes. The lack of correspondence of total amplitudes to basin geography (compared to much higher correspondence in Transportable Array data from the contiguous U.S., Schulte-Pelkum and Mahan, 2014a) likely reflect the successful use of posthole sensors for many Transportable Array stations in affected areas. We limit our A1max analysis to the largest arrival at each station to further avoid interpreting reverberations. (bottom) Map of averaged A1/A (same as Fig. 5) for comparison with map above.

Table S1: Total amplitude and A1/A for each station, averaged from 0-15 s. Columns are: 1 - station name, 2 – station latitude (deg), 3 – station longitude (deg), total power in H/Z, A1/A in percent, number of traces at station.

A19K	70.2043	-161.0713	0.08312	30	140
A21K	71.3221	-156.6175	0.12738	37	966
A22K	71.0033	-154.9742	0.10484	28	398
A36M	71.9871	-125.2472	0.14101	27	1087
AKBB	54.0975	-165.9338	0.13939	41	155
AKGG	54.1979	-165.9936	0.12850	31	193
AKLV	54.1618	-165.9576	0.10250	35	130
AKMO	54.0903	-166.0126	0.09517	38	144
AKRB	54.1292	-166.0708	0.13767	33	184
AKSA	54.1095	-165.6987	0.10677	38	117
AKUT	54.1352	-165.7719	0.08091	29	160
AKV	54.1253	-165.9647	0.14732	38	45
ANCK	58.1981	-155.4961	0.14887	43	294
ANM	64.5646	-165.3732	0.07395	22	917
AU22	59.3702	-153.3573	0.14723	43	217
AUCH	59.3626	-153.4447	0.18257	31	202
AUJA	59.3395	-153.4227	0.11123	31	250
AUQ	59.3549	-153.4143	0.17073	41	22
AUSB	59.3330	-153.4284	0.08826	32	159
AUSS	59.3589	-153.4309	0.18038	35	61
AUWS	59.3585	-153.4608	0.17992	36	160
B18K	69.3641	-161.8016	0.07075	32	178
B20K	70.0079	-157.1599	0.09209	22	201
B21K	69.6211	-154.6128	0.08557	22	263
B22K	70.3400	-153.4196	0.09111	30	279
BAGL	60.4896	-142.0915	0.12140	36	486
BAL	61.0360	-142.3462	0.10935	33	659
BARK	60.4030	-142.4931	0.13878	36	219
BARN	61.0595	-141.6622	0.10657	30	637

BBB	52.1847	-128.1133	0.07781	24	356
BCP	59.9534	-139.6369	0.14083	37	421
BERG	60.3932	-143.7004	0.11631	30	280
BESE	58.5792	-134.8559	0.10260	25	414
BGLC	60.1205	-143.2841	0.19245	33	68
BMR	60.9677	-144.6051	0.11835	29	1225
BPAW	64.0997	-150.9873	0.07775	27	983
BRLK	59.7511	-150.9063	0.09646	29	617
BRSE	59.7417	-150.7414	0.11349	31	678
BWN	64.1732	-149.2991	0.15673	37	490
C16K	68.2746	-165.3436	0.07817	29	383
C17K	68.4753	-163.1776	0.09642	34	288
C18K	68.6483	-161.1943	0.08222	32	389
C19K	69.1049	-159.5874	0.07220	35	395
C21K	69.1565	-154.7833	0.06415	25	290
C23K	69.8360	-150.6126	0.07821	28	413
C24K	69.7200	-148.7009	0.10359	14	289
C26K	69.9175	-144.9122	0.09756	30	184
C27K	69.6260	-143.7114	0.08642	37	626
C36M	69.3475	-124.0703	0.07739	36	428
CAPN	60.7683	-151.1539	0.14235	59	26
CAST	63.4188	-152.0844	0.07444	23	685
CCB	64.6453	-147.8053	0.06842	26	533
CHGN	56.3014	-158.4142	0.08840	32	324
CHI	55.8218	-155.6225	0.09102	31	120
CHN	54.8310	-159.5895	0.09114	32	357
CHUM	63.8827	-152.3152	0.08965	24	813
CLCO	52.7866	-169.7229	0.15713	35	93
CLES	52.8235	-169.8951	0.14939	45	118
CNP	59.5251	-151.2373	0.11383	33	599
COLA	64.8736	-147.8616	0.08259	20	916
COLD	67.2269	-150.2038	0.07828	24	1145
CRAG	55.4689	-133.1230	0.07788	27	401
CRQ	60.7523	-143.0926	0.13433	33	483
CTG	60.9649	-141.3401	0.10107	28	876
CUT	62.4058	-150.2625	0.16763	26	923
CYK	60.0823	-142.4872	0.08909	31	236
D17K	67.6988	-163.0831	0.09035	27	433
D19K	68.4946	-158.1151	0.07345	28	475
D20K	68.7132	-156.6132	0.07056	32	376
D22K	68.8799	-152.6821	0.08675	26	460
D23K	68.9656	-150.6807	0.07222	30	616
D24K	69.1532	-148.8233	0.08756	26	467
D25K	69.3220	-146.3751	0.08728	33	944
D27M	69.2430	-140.9648	0.07938	32	531
D28M	69.3286	-138.7367	0.11509	41	174
DAWY	64.0647	-139.3937	0.07834	23	225
DHY	63.0753	-147.3759	0.09785	32	781
DIV	61.1292	-145.7749	0.09480	30	909

DOT	63.6482	-144.0697	0.07631	26	570
E17K	67.0820	-161.8262	0.06403	24	645
E18K	67.4213	-160.6027	0.07305	26	673
E19K	67.4572	-157.2316	0.08300	24	876
E20K	68.2575	-156.1885	0.07044	23	484
E21K	68.4414	-153.9721	0.07729	27	450
E22K	68.1343	-151.8132	0.07378	25	860
E23K	68.0584	-149.6163	0.08153	24	1003
E24K	68.0748	-148.4868	0.07925	29	728
E25K	68.1207	-145.5680	0.07796	26	624
E27K	68.1861	-141.5951	0.07237	23	727
E28M	68.6043	-139.5349	0.07785	26	483
E29M	68.3889	-137.8969	0.07124	32	435
EGAK	64.7774	-141.1581	0.07861	21	694
EPYK	66.3701	-136.7191	0.08827	22	892
EYAK	60.5487	-145.7500	0.11997	35	692
F14K	65.4742	-166.3288	0.07286	18	483
F15K	65.7077	-164.6483	0.06991	17	435
F17K	66.4420	-161.2502	0.09712	35	375
F18K	66.6001	-159.6514	0.10751	22	350
F19K	66.8332	-157.7728	0.07648	25	625
F20K	67.0486	-155.7251	0.08173	24	687
F21K	67.2221	-153.4830	0.09000	29	884
F22K	67.5076	-152.1790	0.07483	24	744
F24K	67.5187	-147.8871	0.08071	22	651
F25K	67.5933	-145.6430	0.06777	23	644
F26K	67.6946	-144.1455	0.06838	21	652
F28M	67.6136	-139.8717	0.07979	23	464
F30M	67.6106	-135.7863	0.08875	26	283
F31M	67.4410	-133.7420	0.08948	25	599
FALS	54.8564	-163.4176	0.11716	26	264
FID	60.7277	-146.5987	0.10012	24	201
FIRE	61.1426	-150.2164	0.11901	39	75
FYU	66.5657	-145.2342	0.18513	31	391
G15K	64.9941	-164.0386	0.07170	21	501
G16K	65.3936	-162.3547	0.07359	21	557
G17K	65.5011	-160.6514	0.07164	23	588
G18K	65.8950	-158.6540	0.06893	23	505
G19K	66.1434	-157.0870	0.08156	25	700
G21K	66.5156	-153.5058	0.07631	29	759
G22K	66.9214	-151.5073	0.09258	25	691
G23K	66.7108	-150.0239	0.07283	21	831
G24K	66.7004	-147.4754	0.08209	23	336
G25K	66.7653	-146.1013	0.16124	23	290
G26K	66.9498	-143.7848	0.12417	27	1102
G27K	66.8088	-141.6549	0.08384	32	605
G29M	66.9116	-138.0223	0.08693	22	378
G30M	66.9808	-136.2216	0.08153	28	574
G31M	66.9227	-134.2708	0.09694	22	430

GAMB	63.7758	-171.7036	0.06691	17	571
GCSA	64.7461	-156.8792	0.09551	22	699
GHO	61.7710	-148.9260	0.10990	32	627
GLB	61.4417	-143.8123	0.10050	39	946
GLI	60.8792	-147.0959	0.10395	33	893
GOAT	60.5805	-144.7292	0.12521	32	282
GRIN	60.2805	-143.3210	0.11497	34	349
GRNC	60.7315	-141.7558	0.10877	36	588
H16K	64.6379	-162.2390	0.08815	27	573
H17K	64.9370	-159.9126	0.07235	27	617
H18K	65.1527	-158.3633	0.07186	28	495
H19K	65.5276	-156.4494	0.08060	22	736
H20K	65.4924	-154.8808	0.07357	18	569
H21K	65.6571	-152.8050	0.08370	27	987
H22K	65.8937	-151.3773	0.07108	22	689
H23K	65.8251	-149.5432	0.07307	24	737
H24K	65.8371	-147.8781	0.08036	24	835
H25L	66.2670	-145.8187	0.12930	37	98
H27K	66.2305	-141.5265	0.08912	25	777
H29M	66.2191	-138.3689	0.08790	29	238
H31M	65.8052	-134.3426	0.12214	32	457
HARP	62.3987	-145.1568	0.12666	29	233
HDA	64.4091	-146.9482	0.07566	23	992
HIN	60.3960	-146.5035	0.11106	30	287
HMT	60.3351	-144.2623	0.11928	36	187
HOM	59.6572	-151.6515	0.13949	33	308
I17K	63.8864	-160.6950	0.08090	27	476
I20K	64.7962	-154.4783	0.20930	22	358
I21K	65.1800	-151.9822	0.09896	26	676
I23K	65.1479	-149.3603	0.08130	20	962
I26K	65.3064	-143.1541	0.09547	24	518
I27K	65.6035	-141.6153	0.09208	27	652
I28M	65.4483	-139.9355	0.08538	28	542
I29M	65.3609	-138.3063	0.07455	26	578
I30M	65.2225	-136.3767	0.08088	25	570
ILS	59.9570	-153.0703	0.12058	32	543
ILSW	59.9832	-153.1425	0.11030	39	434
INK	68.3065	-133.5254	0.06945	23	963
ISLE	60.6024	-142.3406	0.14415	35	472
ISLZ	54.7249	-163.7129	0.14433	29	108
J14K	62.7492	-163.5540	0.07522	25	548
J16K	63.2842	-160.6021	0.07089	18	471
J17K	63.3965	-159.0777	0.08185	24	510
J18K	63.4650	-156.7154	0.07706	26	538
J19K	63.9940	-155.6214	0.07202	20	587
J20K	64.1767	-154.1467	0.08238	27	1076
J25K	64.6130	-145.3697	0.07907	26	701
J26L	64.5012	-143.5636	0.07676	23	792
J29M	64.4530	-138.2158	0.10385	29	240

J29N	64.4525	-138.2164	0.10335	28	329
J30M	64.5753	-136.3304	0.09749	37	553
JIS	58.2758	-134.3848	0.08651	24	573
K13K	61.9331	-164.6555	0.07652	27	471
K15K	62.2938	-161.5308	0.08796	32	632
K17K	62.7161	-158.3014	0.09625	27	648
K20K	63.3569	-154.0700	0.07479	20	980
K24K	63.8036	-145.7784	0.10824	27	350
K27K	64.0292	-142.0758	0.07770	20	1114
K29M	63.8433	-137.5201	0.08446	28	653
KAI	59.9268	-144.4188	0.14159	34	43
KAKN	58.2963	-155.0632	0.10875	37	117
KHIT	60.4427	-143.2510	0.13219	33	503
KIAG	60.9231	-142.3605	0.12152	29	737
KLU	61.4924	-145.9227	0.09458	29	1041
KNK	61.4131	-148.4585	0.10866	33	1301
KOTZ	66.8951	-162.6000	0.15893	47	86
KTH	63.5527	-150.9233	0.10003	26	780
KULT	60.2474	-142.7234	0.12051	41	161
L14K	61.3416	-162.6829	0.09655	26	606
L15K	61.6780	-161.4869	0.07039	26	516
L16K	61.7105	-159.4747	0.08093	28	505
L17K	62.1344	-158.2972	0.07478	29	624
L18K	62.2195	-156.6886	0.07344	25	388
L19K	62.1816	-154.8543	0.09009	26	818
L20K	62.4787	-153.8798	0.08599	24	759
L26K	63.0254	-143.3478	0.08882	28	781
L27K	63.0618	-141.8275	0.06838	18	902
L29M	63.1090	-138.1290	0.09053	27	855
LOGN	60.8240	-141.0048	0.11087	31	611
LVA	54.1600	-166.0358	0.11369	30	61
M11K	60.3849	-166.2011	0.08037	20	229
M13K	60.4135	-163.3500	0.12294	22	124
M14K	60.7515	-161.9600	0.11449	31	471
M15K	60.6947	-160.6884	0.08030	23	551
M16K	61.0224	-158.9593	0.08151	28	517
M17K	61.4009	-157.4375	0.09335	28	554
M18K	61.4907	-155.8242	0.06885	22	462
M19K	61.9037	-154.3915	0.08747	25	847
M20K	61.8823	-153.1318	0.09328	23	893
M22K	61.7531	-150.1205	0.21170	27	560
M23K	61.7929	-147.7262	0.10000	25	661
M24K	62.1067	-146.1750	0.11148	17	198
M26K	62.4013	-142.9963	0.08592	29	898
M27K	62.3579	-141.8780	0.11958	33	896
M29M	62.4435	-138.4624	0.07746	23	576
M30M	62.5763	-136.7935	0.08066	26	606
M31M	62.2024	-134.3906	0.08541	27	543
MAPS	53.8082	-166.9407	0.11923	30	239

MCAR	61.3836	-143.0240	0.12506	29	769
MCIR	53.9505	-166.8942	0.21360	42	53
MCK	63.7318	-148.9373	0.09562	38	920
MDM	64.9602	-148.2319	0.07532	23	866
MESA	60.1785	-141.9505	0.12406	33	431
MGOD	53.7938	-166.8780	0.12657	31	173
MID	59.4278	-146.3388	0.10125	41	41
MLY	65.0304	-150.7442	0.07276	22	885
MNAT	53.8829	-166.6856	0.10730	27	173
MSW	53.9148	-166.7880	0.11362	35	130
MTBL	53.9680	-166.6813	0.23886	36	74
N14K	59.9237	-161.6852	0.15151	27	464
N15K	60.1686	-160.0921	0.09372	23	530
N16K	60.4742	-158.7690	0.07928	22	741
N17K	60.5269	-157.1867	0.06739	20	478
N18K	60.6801	-155.8897	0.07172	23	654
N19K	60.8132	-154.4838	0.08115	23	861
N20K	61.2001	-152.2089	0.09286	28	589
N25K	61.6061	-144.5982	0.09105	25	1037
N30M	61.4593	-137.0885	0.07513	19	494
N31M	61.4862	-135.7796	0.09909	22	680
N32M	61.1512	-133.0818	0.09913	24	706
NCT	60.5621	-152.9293	0.11989	31	352
NEA	64.5922	-149.0706	0.07153	27	722
NEA2	64.5928	-149.0694	0.07084	27	879
NICH	60.2361	-143.9692	0.11706	29	202
NIKH	52.9721	-168.8550	0.09078	27	307
NOTK	67.5795	-162.9714	0.02060	63	20
O14K	59.2533	-161.2638	0.07266	20	369
O15K	59.1767	-159.8246	0.07586	23	455
O16K	59.5938	-158.0932	0.07153	22	565
O17K	59.7733	-157.0946	0.06880	15	637
O18K	59.8542	-155.2080	0.07736	25	787
O19K	60.1952	-154.3201	0.07027	21	703
O20K	60.0815	-152.6240	0.12128	44	503
O22K	60.4814	-149.7241	0.21102	29	985
O28M	60.7718	-140.1906	0.10699	35	659
O29M	60.3024	-138.5755	0.10421	28	691
O30N	60.7704	-136.0906	0.07276	18	538
OHAK	57.2225	-153.2875	0.09390	29	404
OKCE	53.4260	-168.1663	0.22879	48	81
OKFG	53.4107	-167.9115	0.12002	32	149
OKNC	53.4559	-168.1257	0.29579	42	71
OKSO	53.3565	-168.1619	0.12128	34	46
P08K	56.6011	-169.5484	0.14586	30	74
P16K	59.0314	-157.9906	0.18808	34	390
P17K	59.1953	-156.4394	0.16883	30	620
P18K	59.3922	-155.2292	0.07914	20	569
P19K	59.6524	-153.2319	0.10354	39	459

P23K	59.9979	-147.4031	0.10791	27	231
P29M	59.6304	-137.7381	0.10220	32	491
P30M	60.1218	-136.9598	0.09810	33	660
P32M	59.5898	-133.7147	0.07868	22	468
P33M	60.2114	-132.8174	0.07370	27	592
PAX	62.9699	-145.4699	0.08190	26	993
PIN	60.0959	-140.2525	0.14285	36	493
PLBL	57.6991	-156.8211	0.16364	46	51
PLK1	57.8012	-156.6093	0.14381	51	30
PLK2	57.7634	-156.3264	0.09928	41	57
PLK3	57.6880	-156.2695	0.09316	38	49
PLK5	57.9970	-156.8800	0.13942	57	31
PMR	61.5922	-149.1308	0.09548	29	1108
PN7A	55.4329	-161.9973	0.13007	57	32
PNL	59.6670	-139.4014	0.13335	38	653
POKR	65.1171	-147.4335	0.07881	19	1268
PPD	65.5174	-145.5246	0.07540	21	712
PPLA	62.8962	-152.1894	0.10235	36	993
PS1A	55.4201	-161.7437	0.12950	37	45
PS4A	55.3460	-161.8567	0.12779	37	102
PTPK	61.1871	-142.4672	0.12114	27	610
PWL	60.8584	-148.3334	0.10720	29	920
Q16K	58.6774	-156.6556	0.14165	31	462
Q17K	58.2637	-155.8865	0.08902	24	413
Q18K	58.6484	-155.0086	0.09888	25	528
Q19K	58.9287	-153.6446	0.21871	30	281
Q20K	58.6097	-152.3942	0.09665	30	499
Q23K	59.4296	-146.3399	0.12276	40	46
Q32M	58.9601	-132.2691	0.09718	21	416
R16K	57.5673	-157.5742	0.12786	42	93
R17K	57.6397	-156.3872	0.08407	38	136
R17L	57.6313	-156.3599	0.10742	32	131
R18K	57.5665	-154.4524	0.10411	33	255
R31K	58.4133	-135.7398	0.12498	19	173
R32K	58.2747	-134.5181	0.08182	34	104
R33M	59.3946	-130.9673	0.08000	19	495
RAG	60.3863	-144.6773	0.11458	27	463
RC01	61.0889	-149.7390	0.09204	27	1057
RDDF	61.2244	-152.1854	0.09830	41	67
RDJH	60.5905	-152.8058	0.11567	34	346
RDOG	68.0541	-162.9080	0.07174	32	872
RDSO	60.4536	-152.7430	0.12843	35	247
RDT	60.5726	-152.4075	0.09321	28	174
RDWB	60.4875	-152.8425	0.13677	41	310
RED	60.4196	-152.7742	0.11238	37	367
RIDG	63.7399	-144.8462	0.10120	31	692
RKAV	60.2994	-141.3478	0.11021	28	259
RND	63.4056	-148.8602	0.07872	32	718
S12K	55.7030	-162.0610	0.08444	21	199

S14K	56.2848	-159.5532	0.13784	28	95
S31K	57.9616	-136.2320	0.09861	30	438
S32K	57.4688	-134.5763	0.08297	30	144
S34M	57.9128	-131.1312	0.08046	22	412
SAMH	60.1294	-140.7828	0.13354	42	285
SAW	61.8070	-148.3316	0.11140	34	1177
SCM	61.8320	-147.3290	0.11605	35	954
SCRK	63.9761	-143.9905	0.07264	28	1028
SDPT	55.3493	-160.4766	0.11617	34	103
SGA	60.5341	-145.2082	0.13432	31	154
SII	56.5593	-154.1842	0.09934	33	238
SIT	57.0569	-135.3244	0.07847	26	531
SKAG	59.4601	-135.3290	0.08681	31	818
SKN	61.9800	-151.5317	0.09272	33	679
SLK	60.5117	-150.2231	0.11314	37	1010
SPBG	61.2591	-152.3722	0.16626	34	262
SPBL	61.3764	-151.8947	0.07795	50	25
SPCG	61.2913	-152.0228	0.11272	36	223
SPCL	61.1956	-152.3399	0.10888	38	49
SPCN	61.2244	-152.1854	0.19748	37	137
SPCP	61.2655	-152.1550	0.18311	41	590
SPCR	61.2003	-152.2091	0.09382	32	405
SPIA	57.1766	-170.2477	0.12480	30	278
SPNN	61.3662	-152.7012	0.10050	31	163
SPU	61.1811	-152.0566	0.08518	32	93
SPWE	61.2735	-152.5590	0.10283	44	15
SSLS	54.7111	-164.0008	0.10460	37	126
SSN	61.4636	-150.7467	0.11736	29	705
SSP	60.1791	-142.8388	0.11626	36	350
STLK	61.4982	-151.8349	0.09369	29	152
SUCK	60.0720	-143.7790	0.10826	32	117
SVW2	61.1082	-155.6217	0.06664	19	462
SWD	60.1043	-149.4526	0.08384	37	862
T33K	56.8144	-132.9524	0.08298	25	200
T35M	56.9811	-130.2496	0.09534	25	456
TABL	60.4399	-141.1443	0.12627	32	507
TCOL	64.8735	-147.8618	0.08942	21	742
TGL	60.7541	-142.8292	0.11558	42	379
TNA	65.5598	-167.9267	0.07973	23	810
TOLK	68.6408	-149.5724	0.08244	33	833
TRF	63.4502	-150.2893	0.11531	31	841
TTA	62.9301	-156.0116	0.07887	21	393
U33K	56.1146	-133.1210	0.07425	19	308
U35K	55.9154	-130.0257	0.14550	37	121
UNV	53.8452	-166.5045	0.08414	25	413
V35K	55.3279	-131.6150	0.08290	25	321
VRDI	61.2275	-143.4545	0.09726	34	808
WACK	61.9858	-144.3305	0.15577	38	338
WAT2	62.9628	-148.5855	0.08863	32	241

WAT3	62.6812	-148.5377	0.08943	33	129
WAT4	62.8349	-147.9421	0.08180	26	235
WAT5	63.0624	-148.2286	0.08557	32	220
WAT6	62.5808	-147.7400	0.07587	26	1009
WAT7	62.8331	-148.8476	0.08008	28	942
WAX	60.4480	-142.8529	0.12803	29	418
WAZA	62.0746	-144.1544	0.11264	32	120
WEBT	54.5902	-164.7550	0.11262	44	40
WECS	54.5300	-164.7796	0.14481	37	53
WHY	60.6597	-134.8825	0.07936	23	397
WRAK	56.4191	-132.3466	0.08521	25	580
WRH	64.4716	-148.0918	0.07473	20	526
YAH	60.3583	-141.7510	0.11805	30	404
AND	64.3306	-149.1996	0.13484	40	66
BYR	62.6893	-150.2318	0.09203	36	327
CAR	63.5831	-148.8016	0.10127	34	87
CZN	63.1033	-146.6436	0.07705	35	149
DH1	63.3734	-148.3829	0.07915	34	261
DH2	63.2652	-147.8552	0.07341	32	68
DH3	63.0345	-147.1438	0.09011	25	211
EFS	63.5581	-149.7814	0.12660	37	134
FID	62.7622	-150.0691	0.13855	34	76
GNR	63.8345	-148.9780	0.08776	35	155
GOO	63.2286	-149.2705	0.19314	30	279
HURN	62.9991	-149.6064	0.07740	33	267
MCK	63.7323	-148.9368	0.12803	41	194
MHR	62.8603	-149.8648	0.09072	33	174
NNA	64.5797	-149.0786	0.07250	29	158
PVE	62.3551	-150.6640	0.12104	45	16
PVW	62.5277	-150.8039	0.08570	43	185
RCK	64.0412	-149.1660	0.13387	27	156
RND	63.4057	-148.8601	0.07954	30	503
RND5	63.4015	-148.8551	0.07319	40	103
RNDE	63.4003	-148.8150	0.07931	38	73
RNDN	63.4157	-148.8778	0.09552	45	28
RNDR	63.4014	-148.8674	0.07474	40	98
RNDS	63.3896	-148.8676	0.07838	33	84
SAN	63.7231	-149.4775	0.17887	29	173
SBL	63.4686	-150.1999	0.12329	34	177
SLM	63.5067	-148.8049	0.10646	35	75
SLT	63.9391	-149.1212	0.13388	32	47
SOB	64.1702	-149.2993	0.14486	48	116
TCE	62.3147	-150.3142	0.18614	40	57
TLKY	62.1500	-150.0609	0.16050	24	275
WOLF	62.5604	-150.2039	0.07784	39	53
WON	63.4621	-150.8543	0.16751	31	185
YAN	63.6559	-148.7749	0.09960	36	252
BAIB	52.5757	-131.7534	0.10221	32	156
BCBC	52.3720	-126.7550	0.16043	39	235

BMTB	56.0451	-122.1332	0.08664	25	105
BNAB	53.4932	-130.6368	0.06491	19	398
BNKB	53.3318	-129.9017	0.08245	24	152
BRWY	61.3704	-139.0338	0.13865	34	379
BUTB	53.0630	-128.4633	0.10916	26	370
BVCY	62.4141	-140.8606	0.09428	25	1139
DAWY	64.0647	-139.3937	0.07862	24	412
DI2B	53.2022	-132.4767	0.08366	33	80
DIB	53.2025	-132.4767	0.08274	28	619
DLBC	58.4368	-130.0304	0.07964	33	65
FNSB	58.8061	-122.7328	0.08950	17	243
FSJB	54.4588	-124.2944	0.07853	23	386
GRNB	53.8468	-129.9575	0.09072	25	238
HG1B	52.9345	-132.1307	0.10101	27	293
HG3B	52.5766	-131.4435	0.08465	29	74
HG4B	52.2931	-131.1976	0.08437	23	198
HWKB	53.5984	-129.1544	0.10373	31	175
HYT	60.8267	-137.5072	0.09115	30	2206
JEDB	52.2931	-131.1976	0.08488	26	128
KITB	54.0779	-128.6368	0.08727	27	281
MOBC	53.1437	-131.9663	0.10689	22	231
NAB1	56.7663	-121.2587	0.08966	24	126
NAHA	61.0311	-123.3902	0.26128	35	200
NBC1	59.6559	-123.8237	0.10344	21	197
NBC2	59.7735	-122.4878	0.09652	20	238
NBC5	57.5231	-122.6776	0.08764	26	508
NBC6	58.5839	-121.3339	0.12151	23	529
NBC8	56.5731	-122.4044	0.08113	21	368
NDB	53.9538	-132.9399	0.09211	35	31
PCLB	53.7155	-132.5211	0.10011	28	81
PLBC	59.4550	-136.3659	0.07922	32	1012
RUBB	54.3262	-130.2523	0.07587	26	399
UBRB	52.8918	-124.0832	0.08387	24	544
VIB	53.2522	-132.5406	0.11310	30	260
WHY	60.6597	-134.8825	0.07762	21	353
YUK1	62.1533	-140.5288	0.08663	28	401
YUK2	61.7668	-140.8426	0.07450	29	1370
YUK3	61.7755	-140.4595	0.09422	29	1501
YUK4	61.4348	-138.5463	0.08218	23	418
YUK5	61.1315	-137.8593	0.08532	24	1058
YUK6	60.9432	-138.3626	0.11768	35	1197
YUK7	60.5307	-138.1399	0.12236	33	1128
YUK8	61.2844	-139.7646	0.10637	31	573
BMQ	67.8516	-149.8236	0.07332	30	578
CBM	66.2066	-150.2635	0.06984	30	284
CHS	68.0789	-149.5817	0.07767	24	494
FRB	69.7162	-148.6985	0.09276	25	139
GBN	66.7192	-150.6710	0.09217	31	443
GTM	65.4015	-161.2778	0.08282	28	383

ICT	69.0223	-148.8360	0.07699	33	191
LMW	65.5114	-148.5113	0.08251	28	359
LVG	65.5220	-148.5514	0.08419	29	119
NOM	64.5695	-165.3383	0.07494	27	203
PRB	70.2036	-148.4457	0.08071	42	54
RBY	64.7400	-155.4660	0.07988	26	250
SAG	69.4240	-148.6940	0.08540	27	236
TFS	68.6274	-149.5900	0.08536	34	313
WSM	67.3812	-150.1100	0.07462	32	416
YRT	65.8250	-149.5429	0.07433	23	221

Table S2. A1max, maximum amplitude A1 arrival at each station. Columns are: 1- station name, 2 – station latitude (deg), 3 – station longitude (deg), 4 – A1 arrival time (s), 5 – A1 amplitude (H/Z), 6 – bootstrap uncertainty maximum A1 amplitude, 7 – bootstrap uncertainty A1 minimum amplitude, 8 – A1 phase (= strike + 90, in deg), 9 – bootstrap uncertainty maximum phase, 10 – bootstrap uncertainty minimum phase, 11 – maximum azimuthal gap (deg), 12 – number of traces, 13 – A1 depth (km).

A19K	70.2043	-161.0713	3.06	0.102	0.148	0.064	163.6	174.5	152.8	42.3	140	26.8
A21K	71.3221	-156.6175	1.94	0.273	0.292	0.258	-25.4	-23.4	-27.5	12.9	966	17.0
A22K	71.0033	-154.9742	1.06	0.260	0.292	0.236	-62.7	-58.6	-66.8	34.1	398	9.3
A36M	71.9871	-125.2472	3.06	0.154	0.168	0.134	-124.2	-122.0	-126.4	8.6	1087	26.8
AKBB	54.0975	-165.9338	0.65	0.456	0.488	0.313	175.1	179.5	170.7	27.0	155	5.7
AKGG	54.1979	-165.9936	0.65	0.392	0.487	0.363	-24.5	-21.5	-27.5	31.7	193	5.7
AKLV	54.1618	-165.9576	0.71	0.144	0.186	0.081	-128.9	-112.9	-145.0	60.3	130	6.2
AKMO	54.0903	-166.0126	2.30	0.219	0.213	0.124	36.9	43.7	30.1	35.5	144	20.1
AKRB	54.1292	-166.0708	0.71	0.352	0.393	0.289	-76.6	-70.0	-83.1	62.4	184	6.2
AKSA	54.1095	-165.6987	0.94	0.196	0.275	0.106	-147.2	-131.8	-162.7	72.4	117	8.2
AKUT	54.1352	-165.7719	0.47	0.154	0.179	0.105	145.1	152.9	137.3	76.5	160	4.1
AKV	54.1253	-165.9647	1.41	0.272	0.354	0.151	-21.7	-9.6	-33.9	75.2	45	12.3
ANCK	58.1981	-155.4961	1.59	0.482	0.524	0.443	137.4	140.1	134.7	48.2	294	13.9
ANM	64.5646	-165.3732	0.59	0.071	0.088	0.052	49.2	56.7	41.7	20.4	917	5.2
AU22	59.3702	-153.3573	3.18	0.297	0.339	0.257	113.5	118.1	109.0	48.1	217	27.8
AUCH	59.3626	-153.4447	1.18	0.247	0.310	0.191	-34.5	-28.8	-40.3	55.7	202	10.3
AUJA	59.3395	-153.4227	1.35	0.290	0.320	0.251	-5.5	-3.0	-7.9	29.1	250	11.8
AUQ	59.3549	-153.4143	1.24	0.438	0.644	0.292	-29.3	-20.0	-38.6	80.0	22	10.8
AUSB	59.3330	-153.4284	1.53	0.176	0.228	0.124	-2.6	3.2	-8.5	54.1	159	13.4
AUSS	59.3589	-153.4309	1.18	0.381	0.483	0.250	-24.6	-11.5	-37.6	79.6	61	10.3
AUWS	59.3585	-153.4608	1.35	0.295	0.314	0.205	50.2	58.1	42.4	74.3	160	11.8
B18K	69.3641	-161.8016	2.77	0.136	0.163	0.110	-157.8	-153.4	-162.1	38.3	178	24.2
B20K	70.0079	-157.1599	0.82	0.124	0.181	0.065	171.4	179.7	163.1	42.2	201	7.2
B21K	69.6211	-154.6128	2.12	0.121	0.147	0.092	6.6	12.4	0.9	32.7	263	18.5
B22K	70.3400	-153.4196	2.35	0.108	0.137	0.086	63.0	69.8	56.2	40.5	279	20.5
BAGL	60.4896	-142.0915	1.77	0.403	0.440	0.371	-160.7	-159.0	-162.3	16.3	486	15.5
BAL	61.0360	-142.3462	3.41	0.187	0.199	0.167	125.6	127.9	123.2	18.5	659	29.8
BARK	60.4030	-142.4931	1.94	0.336	0.383	0.288	16.8	20.4	13.2	34.6	219	17.0
BARN	61.0595	-141.6622	1.06	0.143	0.158	0.128	-11.0	-8.1	-13.9	23.2	637	9.3

BBB	52.1847	-128.1133	0.65	0.170	0.216	0.131	41.4	45.8	36.9	19.0	356	5.7
BCP	59.9534	-139.6369	0.88	0.312	0.325	0.253	-117.0	-112.9	-121.1	20.3	421	7.7
BERG	60.3932	-143.7004	2.24	0.281	0.319	0.242	168.7	172.1	165.3	63.8	280	19.6
BESE	58.5792	-134.8559	2.65	0.153	0.173	0.129	37.8	40.4	35.1	29.2	414	23.2
BGLC	60.1205	-143.2841	1.41	0.455	0.579	0.333	-21.2	-14.9	-27.4	53.5	68	12.3
BMR	60.9677	-144.6051	4.18	0.137	0.151	0.124	-122.7	-120.3	-125.0	14.5	1225	36.5
BPAW	64.0997	-150.9873	3.71	0.064	0.074	0.057	140.7	145.7	135.8	10.3	983	32.4
BRLK	59.7511	-150.9063	3.00	0.115	0.125	0.096	81.3	85.3	77.3	28.4	617	26.2
BRSE	59.7417	-150.7414	1.00	0.222	0.245	0.202	-46.0	-43.9	-48.2	14.2	678	8.7
BWN	64.1732	-149.2991	3.47	0.235	0.259	0.208	132.5	136.5	128.5	14.5	490	30.3
C16K	68.2746	-165.3436	2.35	0.077	0.093	0.045	35.1	40.9	29.4	23.7	383	20.5
C17K	68.4753	-163.1776	2.18	0.241	0.273	0.224	-42.2	-39.1	-45.2	18.1	288	19.1
C18K	68.6483	-161.1943	2.06	0.207	0.221	0.183	-27.6	-24.9	-30.4	39.3	389	18.0
C19K	69.1049	-159.5874	1.94	0.170	0.190	0.146	-9.3	-7.0	-11.7	24.8	395	17.0
C21K	69.1565	-154.7833	3.94	0.073	0.070	0.047	-75.9	-66.5	-85.3	19.9	290	34.4
C23K	69.8360	-150.6126	1.65	0.135	0.150	0.076	-155.2	-149.9	-160.4	63.1	413	14.4
C24K	69.7200	-148.7009	1.65	0.064	0.119	0.034	-172.4	-158.8	-186.0	46.0	289	14.4
C26K	69.9175	-144.9122	2.12	0.190	0.219	0.155	13.1	17.5	8.8	41.8	184	18.5
C27K	69.6260	-143.7114	1.53	0.184	0.203	0.161	12.1	14.5	9.7	19.2	626	13.4
C36M	69.3475	-124.0703	1.18	0.133	0.160	0.110	-61.7	-56.8	-66.7	18.5	428	10.3
CAPN	60.7683	-151.1539	1.00	0.503	0.957	0.147	174.2	196.7	151.6	90.0	26	8.7
CAST	63.4188	-152.0844	0.41	0.081	0.100	0.062	-123.3	-118.6	-128.1	26.4	685	3.6
CCB	64.6453	-147.8053	5.36	0.060	0.070	0.050	-23.2	-18.8	-27.6	12.9	533	46.9
CHGN	56.3014	-158.4142	0.47	0.189	0.214	0.169	-22.9	-18.9	-26.8	46.1	324	4.1
CHI	55.8218	-155.6225	0.41	0.142	0.223	0.083	142.9	150.9	134.9	27.8	120	3.6
CHN	54.8310	-159.5895	2.83	0.187	0.213	0.160	153.6	157.2	150.0	36.1	357	24.7
CHUM	63.8827	-152.3152	0.94	0.122	0.137	0.100	-81.8	-75.6	-87.9	13.4	813	8.2
CLCO	52.7866	-169.7229	2.00	0.384	0.439	0.263	-7.8	-3.9	-11.7	72.9	93	17.5
CLES	52.8235	-169.8951	3.18	0.268	0.310	0.218	98.3	106.6	90.0	77.9	118	27.8
CNP	59.5251	-151.2373	0.59	0.215	0.245	0.187	-49.8	-46.5	-53.2	12.9	599	5.2
COLA	64.8736	-147.8616	0.65	0.162	0.171	0.149	-10.3	-7.7	-13.0	10.3	916	5.7
COLD	67.2269	-150.2038	3.47	0.079	0.087	0.065	-29.1	-25.3	-32.9	19.6	1145	30.3
CRAG	55.4689	-133.1230	0.71	0.104	0.127	0.079	78.6	88.1	69.1	21.0	401	6.2
CRQ	60.7523	-143.0926	2.83	0.235	0.269	0.205	-171.2	-168.6	-173.7	17.3	483	24.7
CTG	60.9649	-141.3401	2.06	0.130	0.145	0.119	16.3	18.5	14.2	9.8	876	18.0
CUT	62.4058	-150.2625	0.29	0.199	0.221	0.170	-178.8	-175.5	-182.0	28.6	923	2.5
CYK	60.0823	-142.4872	4.42	0.171	0.199	0.148	-38.9	-34.5	-43.3	43.0	236	38.6
D17K	67.6988	-163.0831	1.88	0.190	0.220	0.172	-52.7	-48.2	-57.3	39.4	433	16.4
D19K	68.4946	-158.1151	2.35	0.117	0.130	0.104	-26.8	-24.1	-29.4	37.6	475	20.5
D20K	68.7132	-156.6132	5.59	0.121	0.139	0.094	-161.5	-157.0	-166.1	40.3	376	48.9
D22K	68.8799	-152.6821	1.82	0.163	0.176	0.140	0.7	3.7	-2.3	42.6	460	15.9
D23K	68.9656	-150.6807	2.71	0.107	0.129	0.092	7.9	10.3	5.4	37.6	616	23.7
D24K	69.1532	-148.8233	1.35	0.115	0.134	0.101	-30.2	-24.8	-35.5	31.8	467	11.8
D25K	69.3220	-146.3751	1.35	0.207	0.221	0.192	-17.6	-15.4	-19.7	11.9	944	11.8
D27M	69.2430	-140.9648	1.65	0.132	0.148	0.116	-18.2	-14.9	-21.6	26.7	531	14.4
D28M	69.3286	-138.7367	1.88	0.532	0.590	0.502	40.9	42.5	39.2	47.3	174	16.4
DAWY	64.0647	-139.3937	1.47	0.062	0.087	0.045	-63.4	-52.6	-74.1	38.7	225	12.9
DHY	63.0753	-147.3759	0.82	0.141	0.160	0.128	-23.2	-19.9	-26.4	11.3	781	7.2
DIV	61.1292	-145.7749	2.83	0.206	0.222	0.190	-177.7	-176.3	-179.1	13.1	909	24.7

DOT	63.6482	-144.0697	1.24	0.094	0.112	0.082	6.7	10.0	3.3	29.3	570	10.8
E17K	67.0820	-161.8262	2.65	0.107	0.116	0.096	-8.1	-5.9	-10.3	40.3	645	23.2
E18K	67.4213	-160.6027	1.65	0.093	0.104	0.084	129.3	133.2	125.4	20.4	673	14.4
E19K	67.4572	-157.2316	3.30	0.114	0.130	0.102	-14.8	-12.4	-17.2	13.4	876	28.9
E20K	68.2575	-156.1885	1.82	0.068	0.085	0.053	-28.1	-22.1	-34.1	37.2	484	15.9
E21K	68.4414	-153.9721	0.94	0.111	0.120	0.080	51.3	55.5	47.2	20.9	450	8.2
E22K	68.1343	-151.8132	5.24	0.108	0.116	0.090	-157.8	-155.1	-160.6	15.7	860	45.8
E23K	68.0584	-149.6163	3.65	0.083	0.097	0.072	36.8	39.8	33.8	17.2	1003	31.9
E24K	68.0748	-148.4868	5.95	0.116	0.127	0.106	-30.7	-27.8	-33.6	15.8	728	52.0
E25K	68.1207	-145.5680	0.53	0.117	0.132	0.104	-14.0	-10.0	-18.0	14.3	624	4.6
E27K	68.1861	-141.5951	3.77	0.078	0.090	0.068	-105.6	-101.6	-109.7	28.0	727	33.0
E28M	68.6043	-139.5349	0.53	0.140	0.162	0.122	-22.0	-17.1	-27.0	32.6	483	4.6
E29M	68.3889	-137.8969	0.65	0.148	0.161	0.120	47.9	50.8	45.1	18.7	435	5.7
EGAK	64.7774	-141.1581	0.53	0.112	0.124	0.097	-104.6	-100.9	-108.3	16.1	694	4.6
EPYK	66.3701	-136.7191	3.12	0.092	0.104	0.079	55.2	58.2	52.2	16.2	892	27.3
EYAK	60.5487	-145.7500	1.47	0.260	0.276	0.231	45.2	47.2	43.3	39.1	692	12.9
F14K	65.4742	-166.3288	5.00	0.061	0.069	0.043	61.6	68.4	54.8	29.8	483	43.7
F15K	65.7077	-164.6483	3.24	0.047	0.061	0.028	-130.4	-118.8	-142.0	25.4	435	28.3
F17K	66.4420	-161.2502	0.59	0.229	0.235	0.180	90.3	93.8	86.7	40.3	375	5.2
F18K	66.6001	-159.6514	0.94	0.093	0.126	0.058	-24.0	-13.2	-34.9	40.3	350	8.2
F19K	66.8332	-157.7728	3.89	0.124	0.135	0.109	-73.3	-70.4	-76.2	41.2	625	34.0
F20K	67.0486	-155.7251	0.82	0.087	0.098	0.071	47.2	50.8	43.6	25.1	687	7.2
F21K	67.2221	-153.4830	2.00	0.137	0.152	0.127	-109.6	-106.2	-112.9	19.3	884	17.5
F22K	67.5076	-152.1790	5.30	0.088	0.100	0.078	-44.1	-39.2	-49.1	20.3	744	46.3
F24K	67.5187	-147.8871	2.71	0.106	0.115	0.094	1.1	4.2	-2.1	26.0	651	23.7
F25K	67.5933	-145.6430	1.24	0.077	0.092	0.065	107.5	114.7	100.3	13.5	644	10.8
F26K	67.6946	-144.1455	2.24	0.081	0.093	0.070	-54.6	-48.3	-61.0	13.5	652	19.6
F28M	67.6136	-139.8717	2.00	0.099	0.115	0.087	-14.5	-9.8	-19.1	29.3	464	17.5
F30M	67.6106	-135.7863	0.53	0.175	0.188	0.130	108.4	114.9	102.0	19.7	283	4.6
F31M	67.4410	-133.7420	6.24	0.075	0.087	0.065	1.7	6.6	-3.1	24.0	599	54.6
FALS	54.8564	-163.4176	0.65	0.144	0.200	0.094	-42.4	-28.9	-56.0	28.3	264	5.7
FID	60.7277	-146.5987	1.47	0.125	0.169	0.072	-127.0	-113.2	-140.9	34.0	201	12.9
FIRE	61.1426	-150.2164	1.65	0.250	0.311	0.176	-80.5	-71.7	-89.3	76.3	75	14.4
FYU	66.5657	-145.2342	0.71	0.273	0.313	0.224	-173.2	-168.7	-177.7	20.4	391	6.2
G15K	64.9941	-164.0386	1.94	0.082	0.091	0.067	-116.8	-111.7	-122.0	26.8	501	17.0
G16K	65.3936	-162.3547	5.77	0.061	0.071	0.049	82.4	88.9	75.8	40.3	557	50.4
G17K	65.5011	-160.6514	1.47	0.115	0.128	0.097	127.1	130.9	123.2	27.0	588	12.9
G18K	65.8950	-158.6540	2.12	0.073	0.082	0.062	-66.2	-60.8	-71.5	28.5	505	18.5
G19K	66.1434	-157.0870	1.12	0.154	0.162	0.139	74.1	78.1	70.1	30.6	700	9.8
G21K	66.5156	-153.5058	0.94	0.147	0.164	0.132	-27.0	-23.4	-30.5	13.7	759	8.2
G22K	66.9214	-151.5073	3.47	0.094	0.110	0.074	-6.0	-2.2	-9.9	13.4	691	30.3
G23K	66.7108	-150.0239	5.53	0.073	0.081	0.060	54.7	57.9	51.5	17.4	831	48.3
G24K	66.7004	-147.4754	4.18	0.092	0.093	0.065	-95.3	-88.9	-101.7	22.4	336	36.5
G25K	66.7653	-146.1013	1.30	0.143	0.183	0.104	152.7	164.7	140.6	29.5	290	11.4
G26K	66.9498	-143.7848	1.77	0.224	0.238	0.203	-21.3	-18.7	-24.0	10.2	1102	15.5
G27K	66.8088	-141.6549	2.00	0.246	0.258	0.225	-72.7	-70.6	-74.8	13.5	605	17.5
G29M	66.9116	-138.0223	1.35	0.106	0.157	0.071	27.8	33.1	22.5	21.0	378	11.8
G30M	66.9808	-136.2216	0.29	0.120	0.150	0.116	78.7	82.6	74.8	18.7	574	2.5
G31M	66.9227	-134.2708	6.48	0.110	0.123	0.086	71.1	75.3	66.9	34.8	430	56.7

GAMB	63.7758	-171.7036	0.53	0.070	0.076	0.049	72.0	80.5	63.4	24.9	571	4.6
GCSA	64.7461	-156.8792	2.18	0.089	0.102	0.074	-54.4	-50.3	-58.5	29.6	699	19.1
GHO	61.7710	-148.9260	2.12	0.206	0.218	0.186	-79.5	-76.8	-82.3	10.1	627	18.5
GLB	61.4417	-143.8123	1.00	0.178	0.194	0.154	21.0	22.8	19.2	13.5	946	8.7
GLI	60.8792	-147.0959	1.18	0.259	0.276	0.245	-40.4	-38.6	-42.2	9.4	893	10.3
GOAT	60.5805	-144.7292	2.35	0.214	0.240	0.179	168.1	173.0	163.2	59.1	282	20.5
GRIN	60.2805	-143.3210	0.94	0.278	0.321	0.219	175.8	179.0	172.7	20.7	349	8.2
GRNC	60.7315	-141.7558	2.47	0.247	0.267	0.226	-174.9	-173.2	-176.6	13.1	588	21.6
H16K	64.6379	-162.2390	1.00	0.138	0.158	0.118	115.9	120.2	111.5	26.7	573	8.7
H17K	64.9370	-159.9126	0.65	0.160	0.171	0.138	99.8	103.4	96.2	27.0	617	5.7
H18K	65.1527	-158.3633	2.18	0.150	0.162	0.130	-67.8	-65.2	-70.4	24.9	495	19.1
H19K	65.5276	-156.4494	2.83	0.093	0.107	0.084	-21.3	-17.5	-25.0	20.0	736	24.7
H20K	65.4924	-154.8808	1.65	0.092	0.108	0.081	-19.7	-15.1	-24.3	20.1	569	14.4
H21K	65.6571	-152.8050	1.53	0.094	0.109	0.083	58.9	62.9	55.0	10.0	987	13.4
H22K	65.8937	-151.3773	0.94	0.064	0.076	0.049	-115.7	-109.0	-122.3	16.3	689	8.2
H23K	65.8251	-149.5432	1.30	0.103	0.111	0.092	-43.8	-40.4	-47.3	9.7	737	11.4
H24K	65.8371	-147.8781	2.59	0.152	0.163	0.139	148.6	151.0	146.2	7.6	835	22.6
H25L	66.2670	-145.8187	1.71	0.211	0.218	0.038	-118.2	-101.1	-135.4	69.3	98	14.9
H27K	66.2305	-141.5265	4.36	0.096	0.107	0.082	-80.8	-75.5	-86.0	20.5	777	38.1
H29M	66.2191	-138.3689	0.77	0.190	0.174	0.071	54.9	63.5	46.3	53.4	238	6.7
H31M	65.8052	-134.3426	1.59	0.181	0.179	0.122	96.3	101.2	91.5	39.6	457	13.9
HARP	62.3987	-145.1568	1.30	0.185	0.242	0.100	-166.5	-160.1	-172.8	59.7	233	11.4
HDA	64.4091	-146.9482	1.06	0.082	0.093	0.072	-36.9	-33.2	-40.6	10.1	992	9.3
HIN	60.3960	-146.5035	1.71	0.232	0.252	0.204	-40.0	-37.3	-42.7	32.2	287	14.9
HMT	60.3351	-144.2623	3.30	0.230	0.268	0.198	6.2	10.3	2.0	18.5	187	28.9
HOM	59.6572	-151.6515	1.06	0.375	0.407	0.341	-24.6	-22.0	-27.2	18.9	308	9.3
I17K	63.8864	-160.6950	0.65	0.124	0.140	0.102	141.4	146.0	136.7	32.2	476	5.7
I20K	64.7962	-154.4783	1.18	0.208	0.249	0.179	-47.4	-41.8	-53.1	17.4	358	10.3
I21K	65.1800	-151.9822	0.71	0.195	0.219	0.162	-145.8	-143.1	-148.5	13.0	676	6.2
I23K	65.1479	-149.3603	0.53	0.134	0.148	0.122	177.2	179.7	174.7	11.6	962	4.6
I26K	65.3064	-143.1541	0.65	0.147	0.173	0.123	-166.1	-162.4	-169.9	19.7	518	5.7
I27K	65.6035	-141.6153	0.59	0.117	0.137	0.095	-19.5	-14.6	-24.3	25.8	652	5.2
I28M	65.4483	-139.9355	1.35	0.124	0.137	0.100	-89.4	-85.4	-93.3	42.3	542	11.8
I29M	65.3609	-138.3063	0.53	0.117	0.135	0.099	-154.0	-150.2	-157.7	21.4	578	4.6
I30M	65.2225	-136.3767	0.24	0.117	0.131	0.102	-0.9	3.7	-5.6	16.9	570	2.1
ILS	59.9570	-153.0703	1.06	0.380	0.375	0.323	50.1	52.1	48.1	19.6	543	9.3
ILSW	59.9832	-153.1425	1.00	0.445	0.455	0.409	48.1	49.9	46.2	27.8	434	8.7
INK	68.3065	-133.5254	2.83	0.066	0.074	0.058	-69.1	-65.6	-72.7	10.3	963	24.7
ISLE	60.6024	-142.3406	4.83	0.320	0.353	0.288	-166.6	-164.4	-168.7	29.2	472	42.2
ISLZ	54.7249	-163.7129	0.65	0.345	0.405	0.293	-60.1	-55.8	-64.5	60.7	108	5.7
J14K	62.7492	-163.5540	1.94	0.164	0.183	0.145	141.5	146.5	136.5	34.2	548	17.0
J16K	63.2842	-160.6021	2.71	0.068	0.079	0.058	-63.7	-57.8	-69.6	49.0	471	23.7
J17K	63.3965	-159.0777	0.53	0.118	0.133	0.105	-27.2	-22.8	-31.7	27.0	510	4.6
J18K	63.4650	-156.7154	3.41	0.080	0.091	0.070	111.7	116.4	107.0	23.0	538	29.8
J19K	63.9940	-155.6214	2.06	0.077	0.092	0.064	114.0	118.7	109.4	41.7	587	18.0
J20K	64.1767	-154.1467	2.06	0.138	0.149	0.125	12.6	14.5	10.8	15.1	1076	18.0
J25K	64.6130	-145.3697	0.12	0.088	0.102	0.068	-96.5	-89.9	-103.0	14.3	701	1.0
J26L	64.5012	-143.5636	0.29	0.086	0.108	0.059	-6.6	0.3	-13.6	11.9	792	2.5
J29M	64.4530	-138.2158	0.41	0.141	0.167	0.118	-9.9	-4.9	-14.9	45.1	240	3.6

J29N	64.4525	-138.2164	2.12	0.157	0.175	0.131	148.4	153.0	143.8	42.5	329	18.5
J30M	64.5753	-136.3304	0.71	0.256	0.275	0.233	21.7	23.8	19.6	22.7	553	6.2
JIS	58.2758	-134.3848	0.71	0.122	0.147	0.099	-2.4	2.6	-7.5	11.2	573	6.2
K13K	61.9331	-164.6555	0.53	0.155	0.174	0.138	143.4	147.5	139.2	30.6	471	4.6
K15K	62.2938	-161.5308	0.71	0.179	0.183	0.143	-87.9	-83.1	-92.7	36.7	632	6.2
K17K	62.7161	-158.3014	2.47	0.158	0.173	0.146	149.6	152.0	147.2	27.0	648	21.6
K20K	63.3569	-154.0700	1.18	0.093	0.107	0.078	-140.1	-137.1	-143.1	19.0	980	10.3
K24K	63.8036	-145.7784	0.71	0.277	0.312	0.239	6.9	10.4	3.4	18.9	350	6.2
K27K	64.0292	-142.0758	1.06	0.122	0.134	0.112	-22.8	-19.4	-26.1	11.8	1114	9.3
K29M	63.8433	-137.5201	2.00	0.203	0.223	0.184	6.9	9.3	4.4	30.6	653	17.5
KAI	59.9268	-144.4188	1.00	0.246	0.431	0.119	-38.9	-20.9	-57.0	68.1	43	8.7
KAKN	58.2963	-155.0632	1.12	0.246	0.323	0.199	135.4	145.9	125.0	49.6	117	9.8
KHIT	60.4427	-143.2510	2.24	0.259	0.276	0.230	-178.9	-176.4	-181.4	15.2	503	19.6
KIAG	60.9231	-142.3605	3.30	0.177	0.188	0.163	142.7	145.1	140.3	13.9	737	28.9
KLU	61.4924	-145.9227	1.65	0.204	0.221	0.194	21.9	23.6	20.3	12.7	1041	14.4
KNK	61.4131	-148.4585	2.18	0.153	0.163	0.140	-35.1	-32.7	-37.5	14.2	1301	19.1
KOTZ	66.8951	-162.6000	2.24	0.297	0.401	0.285	177.4	181.9	172.9	65.1	86	19.6
KTH	63.5527	-150.9233	1.59	0.178	0.192	0.166	9.6	11.9	7.3	12.0	780	13.9
KULT	60.2474	-142.7234	1.47	0.252	0.297	0.213	174.4	179.2	169.6	22.7	161	12.9
L14K	61.3416	-162.6829	3.12	0.119	0.131	0.105	-45.2	-42.0	-48.5	30.7	606	27.3
L15K	61.6780	-161.4869	3.06	0.092	0.104	0.083	-49.0	-45.1	-52.9	45.1	516	26.8
L16K	61.7105	-159.4747	0.94	0.121	0.134	0.097	96.1	101.8	90.4	39.2	505	8.2
L17K	62.1344	-158.2972	2.47	0.197	0.204	0.183	-56.5	-54.4	-58.6	32.9	624	21.6
L18K	62.2195	-156.6886	1.00	0.117	0.129	0.096	-139.6	-135.5	-143.6	33.7	388	8.7
L19K	62.1816	-154.8543	0.47	0.153	0.171	0.141	103.9	106.9	101.0	14.1	818	4.1
L20K	62.4787	-153.8798	0.35	0.136	0.140	0.109	-65.0	-60.2	-69.7	20.9	759	3.1
L26K	63.0254	-143.3478	2.88	0.198	0.216	0.185	-162.8	-161.6	-164.1	13.6	781	25.2
L27K	63.0618	-141.8275	2.00	0.068	0.080	0.059	-8.0	-4.2	-11.9	33.6	902	17.5
L29M	63.1090	-138.1290	0.29	0.170	0.174	0.139	-124.0	-121.8	-126.1	25.3	855	2.5
LOGN	60.8240	-141.0048	3.36	0.191	0.214	0.177	-152.3	-149.6	-155.1	13.8	611	29.4
LVA	54.1600	-166.0358	0.65	0.251	0.283	0.187	-48.6	-39.0	-58.2	65.2	61	5.7
M11K	60.3849	-166.2011	0.59	0.077	0.103	0.043	159.7	172.3	147.2	54.2	229	5.2
M13K	60.4135	-163.3500	0.65	0.115	0.181	0.051	136.0	157.0	115.1	63.7	124	5.7
M14K	60.7515	-161.9600	4.71	0.199	0.226	0.180	155.3	158.3	152.2	29.5	471	41.2
M15K	60.6947	-160.6884	4.53	0.128	0.146	0.116	149.8	152.5	147.0	40.1	551	39.6
M16K	61.0224	-158.9593	1.41	0.094	0.123	0.076	-26.2	-21.4	-31.0	19.8	517	12.3
M17K	61.4009	-157.4375	1.30	0.144	0.162	0.123	8.1	10.7	5.5	36.0	554	11.4
M18K	61.4907	-155.8242	0.65	0.110	0.128	0.092	-19.0	-13.8	-24.2	35.9	462	5.7
M19K	61.9037	-154.3915	0.47	0.136	0.134	0.106	-60.1	-55.7	-64.5	19.0	847	4.1
M20K	61.8823	-153.1318	1.35	0.150	0.166	0.130	50.7	54.1	47.4	11.8	893	11.8
M22K	61.7531	-150.1205	7.71	0.235	0.272	0.201	-20.6	-16.8	-24.3	26.5	560	67.4
M23K	61.7929	-147.7262	0.88	0.115	0.133	0.097	-17.6	-13.8	-21.4	26.2	661	7.7
M24K	62.1067	-146.1750	1.71	0.068	0.090	0.038	-40.0	-28.2	-51.7	31.7	198	14.9
M26K	62.4013	-142.9963	2.77	0.150	0.161	0.141	14.4	16.1	12.7	17.6	898	24.2
M27K	62.3579	-141.8780	2.83	0.245	0.259	0.233	-7.6	-6.1	-9.1	15.5	896	24.7
M29M	62.4435	-138.4624	1.59	0.125	0.139	0.111	4.1	7.0	1.3	38.6	576	13.9
M30M	62.5763	-136.7935	0.71	0.185	0.206	0.165	53.8	56.4	51.3	19.2	606	6.2
M31M	62.2024	-134.3906	0.77	0.189	0.218	0.163	13.1	15.8	10.4	28.0	543	6.7
MAPS	53.8082	-166.9407	0.41	0.195	0.217	0.157	-94.4	-85.6	-103.3	53.9	239	3.6

MCAR	61.3836	-143.0240	0.53	0.262	0.283	0.241	33.1	34.7	31.6	14.6	769	4.6
MCIR	53.9505	-166.8942	0.71	0.477	0.621	0.345	-41.9	-34.3	-49.5	61.2	53	6.2
MCK	63.7318	-148.9373	0.35	0.184	0.196	0.172	129.9	132.0	127.8	9.9	920	3.1
MDM	64.9602	-148.2319	1.59	0.101	0.118	0.088	-10.9	-7.8	-14.0	10.0	866	13.9
MESA	60.1785	-141.9505	2.41	0.235	0.259	0.212	121.8	125.1	118.5	30.3	431	21.1
MGOD	53.7938	-166.8780	0.77	0.237	0.278	0.127	-151.9	-143.6	-160.3	41.0	173	6.7
MID	59.4278	-146.3388	0.77	0.223	0.401	0.145	87.7	107.9	67.6	61.4	41	6.7
MLY	65.0304	-150.7442	1.53	0.098	0.109	0.089	-31.7	-27.8	-35.5	15.8	885	13.4
MNAT	53.8829	-166.6856	1.59	0.125	0.171	0.063	-166.7	-152.5	-181.0	74.8	173	13.9
MSW	53.9148	-166.7880	1.12	0.192	0.237	0.145	-98.9	-90.6	-107.2	63.7	130	9.8
MTBL	53.9680	-166.6813	0.59	0.509	0.607	0.399	-33.4	-28.3	-38.5	64.6	74	5.2
N14K	59.9237	-161.6852	0.88	0.202	0.239	0.167	-142.0	-137.5	-146.5	50.0	464	7.7
N15K	60.1686	-160.0921	0.59	0.180	0.151	0.110	-100.8	-93.0	-108.5	37.8	530	5.2
N16K	60.4742	-158.7690	2.35	0.079	0.089	0.068	-42.8	-38.9	-46.7	19.9	741	20.5
N17K	60.5269	-157.1867	0.59	0.060	0.074	0.045	107.1	116.6	97.7	40.1	478	5.2
N18K	60.6801	-155.8897	1.24	0.075	0.096	0.063	-50.5	-44.2	-56.8	15.9	654	10.8
N19K	60.8132	-154.4838	1.77	0.149	0.161	0.131	-9.5	-7.3	-11.8	20.3	861	15.5
N20K	61.2001	-152.2089	0.82	0.107	0.133	0.098	-66.3	-60.0	-72.5	18.7	589	7.2
N25K	61.6061	-144.5982	2.12	0.104	0.118	0.092	6.3	9.3	3.3	9.8	1037	18.5
N30M	61.4593	-137.0885	1.53	0.109	0.125	0.090	2.5	6.7	-1.8	23.0	494	13.4
N31M	61.4862	-135.7796	1.71	0.165	0.182	0.135	22.7	26.2	19.2	14.2	680	14.9
N32M	61.1512	-133.0818	1.30	0.120	0.137	0.100	-4.0	-0.1	-7.9	19.2	706	11.4
NCT	60.5621	-152.9293	1.71	0.152	0.176	0.119	86.9	91.1	82.8	21.8	352	14.9
NEA	64.5922	-149.0706	0.88	0.133	0.145	0.122	-17.2	-14.8	-19.7	9.1	722	7.7
NEA2	64.5928	-149.0694	0.88	0.135	0.148	0.125	-17.1	-15.1	-19.0	9.0	879	7.7
NICH	60.2361	-143.9692	1.35	0.204	0.251	0.171	-162.6	-158.4	-166.9	26.9	202	11.8
NIKH	52.9721	-168.8550	0.59	0.161	0.225	0.113	143.0	150.6	135.3	54.0	307	5.2
NOTK	67.5795	-162.9714	1.35	0.133	0.564	0.004	-143.9	-108.4	-179.4	90.0	20	11.8
O14K	59.2533	-161.2638	0.53	0.088	0.140	0.045	15.8	24.8	6.9	21.5	369	4.6
O15K	59.1767	-159.8246	0.71	0.112	0.165	0.073	40.2	47.4	33.0	60.6	455	6.2
O16K	59.5938	-158.0932	2.47	0.094	0.103	0.081	-120.1	-116.2	-124.0	23.1	565	21.6
O17K	59.7733	-157.0946	0.24	0.072	0.088	0.050	174.3	179.8	168.7	25.8	637	2.1
O18K	59.8542	-155.2080	0.82	0.094	0.113	0.080	-60.7	-55.8	-65.6	24.3	787	7.2
O19K	60.1952	-154.3201	1.35	0.069	0.083	0.055	-30.2	-25.2	-35.2	31.8	703	11.8
O20K	60.0815	-152.6240	1.18	0.353	0.375	0.319	148.1	150.5	145.7	36.3	503	10.3
O22K	60.4814	-149.7241	0.59	0.536	0.559	0.518	-48.1	-46.6	-49.5	17.8	985	5.2
O28M	60.7718	-140.1906	1.71	0.239	0.263	0.223	34.3	36.1	32.4	15.5	659	14.9
O29M	60.3024	-138.5755	2.24	0.193	0.212	0.172	-1.3	1.0	-3.5	13.3	691	19.6
O30N	60.7704	-136.0906	1.12	0.090	0.107	0.071	10.4	17.5	3.3	21.3	538	9.8
OHAK	57.2225	-153.2875	4.30	0.111	0.132	0.094	-64.5	-57.3	-71.7	18.8	404	37.6
OKCE	53.4260	-168.1663	2.18	0.444	0.492	0.377	-114.2	-108.2	-120.1	48.1	81	19.1
OKFG	53.4107	-167.9115	1.30	0.150	0.207	0.081	145.0	151.8	138.1	41.9	149	11.4
OKNC	53.4559	-168.1257	2.12	0.598	0.821	0.362	-12.9	-7.7	-18.2	75.8	71	18.5
OKSO	53.3565	-168.1619	4.30	0.148	0.229	0.085	-45.5	-35.7	-55.3	79.1	46	37.6
P08K	56.6011	-169.5484	0.29	0.243	0.540	0.073	21.2	38.6	3.8	78.5	74	2.5
P16K	59.0314	-157.9906	2.83	0.280	0.293	0.237	-84.4	-79.5	-89.4	53.6	390	24.7
P17K	59.1953	-156.4394	0.71	0.206	0.256	0.161	-11.3	-7.9	-14.6	23.2	620	6.2
P18K	59.3922	-155.2292	0.65	0.141	0.164	0.121	-53.8	-48.2	-59.5	39.5	569	5.7
P19K	59.6524	-153.2319	1.47	0.227	0.251	0.194	153.3	156.3	150.3	33.1	459	12.9

P23K	59.9979	-147.4031	0.35	0.174	0.211	0.143	106.4	113.8	99.0	24.9	231	3.1
P29M	59.6304	-137.7381	2.88	0.270	0.299	0.244	51.5	53.5	49.6	35.5	491	25.2
P30M	60.1218	-136.9598	0.59	0.240	0.256	0.210	-113.7	-111.1	-116.2	23.1	660	5.2
P32M	59.5898	-133.7147	1.65	0.083	0.131	0.043	16.6	23.0	10.1	22.9	468	14.4
P33M	60.2114	-132.8174	1.30	0.101	0.117	0.083	10.0	14.5	5.4	16.1	592	11.4
PAX	62.9699	-145.4699	3.53	0.108	0.119	0.095	5.8	8.2	3.5	15.9	993	30.9
PIN	60.0959	-140.2525	1.94	0.317	0.326	0.268	-59.7	-57.3	-62.2	21.7	493	17.0
PLBL	57.6991	-156.8211	0.53	0.517	0.631	0.440	75.8	82.4	69.2	57.6	51	4.6
PLK1	57.8012	-156.6093	0.71	0.380	0.450	0.227	-70.1	-57.9	-82.3	71.8	30	6.2
PLK2	57.7634	-156.3264	0.59	0.190	0.309	0.071	61.2	93.8	28.6	73.3	57	5.2
PLK3	57.6880	-156.2695	2.12	0.177	0.222	0.129	-79.0	-70.6	-87.3	57.5	49	18.5
PLK5	57.9970	-156.8800	1.00	0.652	0.933	0.405	-108.3	-92.7	-123.8	87.9	31	8.7
PMR	61.5922	-149.1308	3.65	0.180	0.189	0.163	97.1	99.6	94.6	9.5	1108	31.9
PN7A	55.4329	-161.9973	0.53	0.615	0.819	0.506	8.8	13.1	4.4	64.3	32	4.6
PNL	59.6670	-139.4014	0.47	0.253	0.243	0.190	-124.4	-121.5	-127.3	28.1	653	4.1
POKR	65.1171	-147.4335	1.71	0.105	0.116	0.095	-18.9	-16.1	-21.7	6.4	1268	14.9
PPD	65.5174	-145.5246	2.12	0.099	0.110	0.088	-2.1	1.1	-5.3	18.0	712	18.5
PPLA	62.8962	-152.1894	0.47	0.325	0.339	0.315	9.9	10.9	8.8	8.1	993	4.1
PS1A	55.4201	-161.7437	5.36	0.216	0.319	0.085	0.8	8.3	-6.6	69.3	45	46.9
PS4A	55.3460	-161.8567	1.77	0.322	0.393	0.301	-81.5	-77.4	-85.6	65.2	102	15.5
PTPK	61.1871	-142.4672	2.24	0.184	0.204	0.164	26.0	28.2	23.7	11.0	610	19.6
PWL	60.8584	-148.3334	3.41	0.141	0.152	0.131	-75.0	-72.5	-77.5	15.4	920	29.8
Q16K	58.6774	-156.6556	1.65	0.323	0.356	0.294	-32.7	-30.1	-35.4	34.5	462	14.4
Q17K	58.2637	-155.8865	3.47	0.106	0.133	0.081	42.2	46.9	37.4	30.4	413	30.3
Q18K	58.6484	-155.0086	0.47	0.210	0.214	0.165	-164.7	-161.8	-167.6	21.4	528	4.1
Q19K	58.9287	-153.6446	0.71	0.452	0.467	0.360	-65.0	-60.9	-69.2	35.7	281	6.2
Q20K	58.6097	-152.3942	3.06	0.150	0.148	0.113	102.2	106.5	97.9	42.2	499	26.8
Q23K	59.4296	-146.3399	1.82	0.302	0.395	0.242	-85.7	-76.8	-94.5	56.1	46	15.9
Q32M	58.9601	-132.2691	1.00	0.127	0.166	0.085	57.9	63.7	52.1	23.3	416	8.7
R16K	57.5673	-157.5742	5.83	0.237	0.363	0.126	171.8	176.5	167.2	75.1	93	51.0
R17K	57.6397	-156.3872	0.77	0.179	0.228	0.091	19.0	27.1	10.9	42.1	136	6.7
R17L	57.6313	-156.3599	0.65	0.198	0.308	0.088	19.9	33.6	6.2	56.8	131	5.7
R18K	57.5665	-154.4524	3.18	0.153	0.176	0.117	94.4	100.2	88.6	64.7	255	27.8
R31K	58.4133	-135.7398	0.65	0.181	0.239	0.114	8.1	14.1	2.1	48.3	173	5.7
R32K	58.2747	-134.5181	2.30	0.158	0.211	0.071	57.2	65.7	48.7	64.5	104	20.1
R33M	59.3946	-130.9673	1.06	0.106	0.145	0.078	20.4	26.0	14.8	33.7	495	9.3
RAG	60.3863	-144.6773	0.88	0.279	0.328	0.229	35.2	38.5	31.9	28.3	463	7.7
RC01	61.0889	-149.7390	3.12	0.114	0.123	0.104	-79.2	-76.6	-81.7	15.4	1057	27.3
RDDF	61.2244	-152.1854	5.00	0.170	0.257	0.084	33.0	42.6	23.3	56.6	67	43.7
RDJH	60.5905	-152.8058	0.88	0.188	0.215	0.171	-50.6	-45.9	-55.3	28.2	346	7.7
RDOG	68.0541	-162.9080	0.47	0.154	0.165	0.140	-142.0	-139.8	-144.1	19.4	872	4.1
RDSO	60.4536	-152.7430	1.65	0.302	0.324	0.265	-30.9	-27.6	-34.2	36.4	247	14.4
RDT	60.5726	-152.4075	0.59	0.138	0.138	0.082	-161.3	-155.4	-167.1	34.1	174	5.2
RDWB	60.4875	-152.8425	2.59	0.334	0.363	0.290	-136.7	-134.7	-138.7	28.3	310	22.6
RED	60.4196	-152.7742	0.29	0.239	0.250	0.197	143.6	147.8	139.4	33.6	367	2.5
RIDG	63.7399	-144.8462	0.29	0.212	0.228	0.200	-3.2	-1.2	-5.1	14.5	692	2.5
RKAV	60.2994	-141.3478	0.71	0.220	0.262	0.187	-179.2	-175.5	-182.8	19.6	259	6.2
RND	63.4056	-148.8602	0.59	0.160	0.173	0.148	145.9	148.5	143.4	11.4	718	5.2
S12K	55.7030	-162.0610	3.94	0.061	0.091	0.035	-166.9	-156.3	-177.6	56.5	199	34.4

S14K	56.2848	-159.5532	0.71	0.205	0.301	0.103	-108.3	-87.0	-129.5	60.5	95	6.2
S31K	57.9616	-136.2320	1.94	0.135	0.160	0.112	-1.4	2.8	-5.5	47.6	438	17.0
S32K	57.4688	-134.5763	0.94	0.158	0.229	0.100	39.2	48.7	29.7	77.5	144	8.2
S34M	57.9128	-131.1312	1.82	0.099	0.120	0.077	10.7	17.2	4.2	37.2	412	15.9
SAMH	60.1294	-140.7828	1.30	0.217	0.250	0.180	-17.9	-11.2	-24.5	35.8	285	11.4
SAW	61.8070	-148.3316	1.12	0.224	0.237	0.211	0.2	1.6	-1.2	15.6	1177	9.8
SCM	61.8320	-147.3290	0.71	0.302	0.324	0.285	-28.6	-26.7	-30.5	23.3	954	6.2
SCRK	63.9761	-143.9905	1.59	0.136	0.144	0.123	-44.5	-41.8	-47.2	11.6	1028	13.9
SDPT	55.3493	-160.4766	0.71	0.184	0.304	0.067	30.8	41.5	20.1	34.0	103	6.2
SGA	60.5341	-145.2082	0.94	0.321	0.335	0.230	55.4	59.5	51.3	44.9	154	8.2
SII	56.5593	-154.1842	2.35	0.153	0.191	0.128	-20.2	-14.8	-25.6	29.5	238	20.5
SIT	57.0569	-135.3244	0.82	0.140	0.174	0.108	23.0	27.0	18.9	21.4	531	7.2
SKAG	59.4601	-135.3290	4.71	0.168	0.180	0.154	-141.3	-139.4	-143.1	24.3	818	41.2
SKN	61.9800	-151.5317	0.47	0.207	0.221	0.192	-60.7	-58.1	-63.3	19.6	679	4.1
SLK	60.5117	-150.2231	5.59	0.179	0.191	0.165	-71.6	-69.2	-74.1	19.7	1010	48.9
SPBG	61.2591	-152.3722	1.12	0.341	0.347	0.264	19.8	22.9	16.6	26.1	262	9.8
SPBL	61.3764	-151.8947	5.18	0.197	0.198	0.067	20.0	31.8	8.2	84.3	25	45.3
SPCG	61.2913	-152.0228	2.24	0.228	0.257	0.198	-17.2	-14.4	-20.0	35.5	223	19.6
SPCL	61.1956	-152.3399	1.00	0.192	0.282	0.129	-106.9	-99.1	-114.6	62.0	49	8.7
SPCN	61.2244	-152.1854	0.65	0.438	0.510	0.372	6.8	10.8	2.8	37.0	137	5.7
SPCP	61.2655	-152.1550	0.47	0.409	0.422	0.343	172.3	174.8	169.8	16.8	590	4.1
SPCR	61.2003	-152.2091	0.65	0.130	0.148	0.106	-129.2	-123.1	-135.2	18.3	405	5.7
SPIA	57.1766	-170.2477	0.53	0.294	0.338	0.253	138.5	142.3	134.7	52.6	278	4.6
SPNN	61.3662	-152.7012	2.83	0.192	0.227	0.165	144.2	148.4	140.0	24.7	163	24.7
SPU	61.1811	-152.0566	1.94	0.093	0.123	0.066	-38.4	-27.9	-48.8	48.1	93	17.0
SPWE	61.2735	-152.5590	1.65	0.270	0.504	0.141	23.2	32.9	13.5	88.7	15	14.4
SSLS	54.7111	-164.0008	1.00	0.305	0.360	0.238	90.0	94.3	85.6	40.8	126	8.7
SSN	61.4636	-150.7467	3.18	0.195	0.206	0.175	-53.5	-50.9	-56.1	15.6	705	27.8
SSP	60.1791	-142.8388	0.65	0.387	0.473	0.337	177.4	180.3	174.5	20.3	350	5.7
STLK	61.4982	-151.8349	1.12	0.167	0.192	0.133	31.2	37.2	25.1	33.6	152	9.8
SUCK	60.0720	-143.7790	1.24	0.238	0.286	0.168	123.3	129.1	117.5	71.4	117	10.8
SVW2	61.1082	-155.6217	1.30	0.056	0.071	0.044	0.3	7.0	-6.3	23.1	462	11.4
SWD	60.1043	-149.4526	1.47	0.132	0.143	0.122	-41.6	-39.0	-44.2	19.6	862	12.9
T33K	56.8144	-132.9524	2.18	0.139	0.205	0.104	40.6	45.4	35.8	31.0	200	19.1
T35M	56.9811	-130.2496	0.53	0.144	0.152	0.099	-72.7	-65.7	-79.7	18.9	456	4.6
TABL	60.4399	-141.1443	1.94	0.232	0.242	0.196	-155.0	-152.2	-157.9	31.6	507	17.0
TOCOL	64.8735	-147.8618	0.65	0.196	0.208	0.182	-9.4	-7.3	-11.5	16.1	742	5.7
TGL	60.7541	-142.8292	2.06	0.300	0.329	0.274	-176.0	-173.9	-178.1	18.6	379	18.0
TNA	65.5598	-167.9267	0.59	0.092	0.104	0.078	83.3	88.1	78.4	21.0	810	5.2
TOLK	68.6408	-149.5724	0.65	0.129	0.142	0.119	-15.8	-13.0	-18.6	15.6	833	5.7
TRF	63.4502	-150.2893	3.36	0.228	0.244	0.214	121.4	123.4	119.5	9.3	841	29.4
TTA	62.9301	-156.0116	2.30	0.091	0.122	0.070	10.2	17.3	3.1	35.0	393	20.1
U33K	56.1146	-133.1210	0.65	0.125	0.149	0.077	54.0	60.4	47.5	31.2	308	5.7
U35K	55.9154	-130.0257	0.59	0.390	0.475	0.303	44.8	49.4	40.2	51.6	121	5.2
UNV	53.8452	-166.5045	3.94	0.091	0.108	0.076	-49.8	-44.2	-55.5	19.4	413	34.4
V35K	55.3279	-131.6150	0.24	0.115	0.130	0.061	-121.8	-115.2	-128.4	28.5	321	2.1
VRDI	61.2275	-143.4545	1.71	0.183	0.196	0.166	-12.7	-10.3	-15.2	13.5	808	14.9
WACK	61.9858	-144.3305	2.41	0.283	0.299	0.238	139.0	142.7	135.2	47.8	338	21.1
WAT2	62.9628	-148.5855	0.29	0.186	0.202	0.125	-79.3	-74.1	-84.5	23.7	241	2.5

WAT3	62.6812	-148.5377	3.00	0.114	0.134	0.091	138.4	143.6	133.2	55.7	129	26.2
WAT4	62.8349	-147.9421	2.00	0.093	0.123	0.069	-9.9	-3.1	-16.7	16.2	235	17.5
WAT5	63.0624	-148.2286	0.24	0.128	0.139	0.088	-118.4	-112.4	-124.4	27.6	220	2.1
WAT6	62.5808	-147.7400	2.47	0.098	0.108	0.091	-33.5	-30.5	-36.5	19.7	1009	21.6
WAT7	62.8331	-148.8476	1.24	0.131	0.141	0.115	-77.9	-74.8	-80.9	9.8	942	10.8
WAX	60.4480	-142.8529	1.71	0.242	0.275	0.209	1.5	4.1	-1.2	20.0	418	14.9
WAZA	62.0746	-144.1544	0.59	0.188	0.238	0.148	-21.3	-14.9	-27.7	72.1	120	5.2
WEBT	54.5902	-164.7550	0.77	0.429	0.525	0.237	-36.4	-25.7	-47.0	64.9	40	6.7
WECS	54.5300	-164.7796	0.77	0.304	0.501	0.182	-117.1	-99.4	-134.7	62.6	53	6.7
WHY	60.6597	-134.8825	0.77	0.081	0.099	0.060	-23.1	-14.2	-32.1	22.8	397	6.7
WRAK	56.4191	-132.3466	1.82	0.128	0.147	0.103	-150.3	-147.1	-153.5	11.3	580	15.9
WRH	64.4716	-148.0918	0.82	0.075	0.088	0.058	-67.5	-62.4	-72.5	13.3	526	7.2
AND	64.3306	-149.1996	1.18	0.217	0.339	0.121	-160.2	-141.6	-178.8	79.3	66	10.3
BYR	62.6893	-150.2318	9.54	0.161	0.180	0.136	-19.3	-15.6	-23.0	40.8	327	83.4
CAR	63.5831	-148.8016	0.65	0.182	0.270	0.135	2.2	12.4	-8.0	79.7	87	5.7
CZN	63.1033	-146.6436	3.30	0.107	0.137	0.078	36.4	41.7	31.2	76.8	149	28.9
DH1	63.3734	-148.3829	3.71	0.111	0.144	0.090	-1.9	4.4	-8.2	41.0	261	32.4
DH2	63.2652	-147.8552	7.42	0.095	0.128	0.063	126.3	137.7	114.9	81.2	68	64.9
DH3	63.0345	-147.1438	0.88	0.110	0.137	0.084	38.9	43.9	33.9	32.2	211	7.7
EFS	63.5581	-149.7814	1.06	0.271	0.313	0.241	-51.0	-43.8	-58.1	26.0	134	9.3
FID	62.7622	-150.0691	3.06	0.203	0.257	0.164	-23.8	-10.5	-37.1	85.3	76	26.8
GNR	63.8345	-148.9780	0.41	0.160	0.228	0.125	-1.0	4.8	-6.9	84.3	155	3.6
GOO	63.2286	-149.2705	5.30	0.181	0.224	0.148	3.4	7.6	-0.9	57.3	279	46.3
HURN	62.9991	-149.6064	4.24	0.117	0.122	0.079	-66.9	-60.0	-73.8	75.3	267	37.1
MCK	63.7323	-148.9368	4.47	0.250	0.303	0.186	168.5	175.0	161.9	62.7	194	39.1
MHR	62.8603	-149.8648	2.65	0.149	0.190	0.139	136.4	141.8	131.0	37.5	174	23.2
NNA	64.5797	-149.0786	0.71	0.126	0.149	0.097	-18.2	-9.7	-26.7	24.7	158	6.2
PVE	62.3551	-150.6640	10.13	0.161	0.239	0.059	-63.0	-44.9	-81.2	85.0	16	88.6
PVW	62.5277	-150.8039	2.65	0.203	0.239	0.175	-16.9	-13.4	-20.5	62.9	185	23.2
RCK	64.0412	-149.1660	3.71	0.168	0.212	0.135	162.6	169.9	155.3	33.1	156	32.4
RND	63.4057	-148.8601	0.65	0.153	0.168	0.139	151.2	154.8	147.5	60.6	503	5.7
RND5	63.4015	-148.8551	0.59	0.170	0.219	0.147	148.1	155.5	140.7	75.6	103	5.2
RNDE	63.4003	-148.8150	0.65	0.158	0.200	0.125	145.1	156.8	133.4	81.8	73	5.7
RNDN	63.4157	-148.8778	6.12	0.177	0.265	0.117	-11.3	0.1	-22.6	90.0	28	53.5
RNDR	63.4014	-148.8674	0.59	0.171	0.205	0.144	148.3	156.0	140.7	71.5	98	5.2
RNDS	63.3896	-148.8676	0.53	0.123	0.158	0.093	160.0	168.9	151.2	75.2	84	4.6
SAN	63.7231	-149.4775	1.41	0.219	0.275	0.160	21.5	26.8	16.2	64.5	173	12.3
SBL	63.4686	-150.1999	2.53	0.223	0.248	0.200	-52.1	-48.0	-56.2	21.0	177	22.1
SLM	63.5067	-148.8049	2.47	0.179	0.219	0.128	163.8	174.4	153.2	71.5	75	21.6
SLT	63.9391	-149.1212	11.07	0.149	0.268	0.045	-155.5	-142.1	-169.0	77.1	47	96.8
SOB	64.1702	-149.2993	2.06	0.263	0.321	0.207	-101.7	-96.3	-107.1	65.7	116	18.0
TCE	62.3147	-150.3142	6.06	0.335	0.329	0.122	114.7	131.7	97.7	84.5	57	53.0
TLKY	62.1500	-150.0609	14.48	0.156	0.208	0.118	36.7	41.7	31.7	40.9	275	126.6
WOLF	62.5604	-150.2039	9.12	0.156	0.243	0.091	-1.4	12.0	-14.8	90.0	53	79.7
WON	63.4621	-150.8543	1.71	0.204	0.262	0.162	-24.6	-17.6	-31.7	43.0	185	14.9
BAIB	52.5757	-131.7534	0.18	0.156	0.188	0.096	-100.3	-90.6	-109.9	58.0	156	1.6
BCBC	52.3720	-126.7550	0.71	0.426	0.501	0.382	-143.1	-140.6	-145.5	32.7	235	6.2
BMTB	56.0451	-122.1332	0.41	0.173	0.209	0.078	80.3	98.9	61.7	46.1	105	3.6
BNAB	53.4932	-130.6368	2.06	0.107	0.123	0.091	56.2	59.5	52.9	19.9	398	18.0

BNKB	53.3318	-129.9017	0.94	0.083	0.129	0.047	-23.1	-7.4	-38.9	48.6	152	8.2
BRWY	61.3704	-139.0338	1.88	0.231	0.267	0.192	-0.1	4.2	-4.5	28.8	379	16.4
BUTB	53.0630	-128.4633	1.65	0.228	0.258	0.178	47.8	51.3	44.3	35.4	370	14.4
BVCY	62.4141	-140.8606	1.47	0.152	0.162	0.138	-5.5	-3.4	-7.5	13.7	1139	12.9
DAWY	64.0647	-139.3937	3.77	0.062	0.077	0.054	-39.7	-32.4	-47.0	25.0	412	33.0
DI2B	53.2022	-132.4767	1.82	0.170	0.191	0.091	71.0	85.1	56.9	55.5	80	15.9
DIB	53.2025	-132.4767	1.77	0.163	0.183	0.145	63.4	66.6	60.3	13.9	619	15.5
DLBC	58.4368	-130.0304	0.88	0.119	0.310	0.026	2.3	33.9	-29.3	47.1	65	7.7
FNSB	58.8061	-122.7328	1.65	0.069	0.096	0.045	-11.1	0.4	-22.7	31.9	243	14.4
FSJB	54.4588	-124.2944	0.59	0.125	0.149	0.089	50.0	54.5	45.5	37.5	386	5.2
GRNB	53.8468	-129.9575	1.41	0.157	0.191	0.103	32.5	37.1	27.9	24.4	238	12.3
HG1B	52.9345	-132.1307	1.35	0.137	0.178	0.084	28.4	35.3	21.5	23.4	293	11.8
HG3B	52.5766	-131.4435	1.06	0.108	0.169	0.023	35.3	52.8	17.9	32.9	74	9.3
HG4B	52.2931	-131.1976	3.00	0.081	0.118	0.059	-168.6	-161.2	-175.9	44.7	198	26.2
HWKB	53.5984	-129.1544	0.94	0.196	0.228	0.148	47.4	52.0	42.8	42.0	175	8.2
HYT	60.8267	-137.5072	0.77	0.170	0.179	0.159	-27.4	-25.2	-29.6	10.0	2206	6.7
JEDB	52.2931	-131.1976	3.83	0.112	0.156	0.079	-13.0	-4.8	-21.2	67.0	128	33.5
KITB	54.0779	-128.6368	1.30	0.123	0.142	0.078	55.8	61.9	49.7	25.1	281	11.4
MOBC	53.1437	-131.9663	1.00	0.103	0.147	0.067	3.9	15.9	-8.1	30.4	231	8.7
NAB1	56.7663	-121.2587	2.06	0.109	0.198	0.064	41.5	50.8	32.3	64.3	126	18.0
NAHA	61.0311	-123.3902	3.65	0.377	0.400	0.271	56.1	60.0	52.2	30.0	200	31.9
NBC1	59.6559	-123.8237	1.47	0.089	0.155	0.029	68.1	85.9	50.4	43.8	197	12.9
NBC2	59.7735	-122.4878	0.71	0.081	0.126	0.052	158.5	172.6	144.5	40.0	238	6.2
NBC5	57.5231	-122.6776	2.88	0.122	0.129	0.100	-113.8	-111.1	-116.5	17.6	508	25.2
NBC6	58.5839	-121.3339	2.18	0.124	0.140	0.108	-49.7	-45.1	-54.3	17.5	529	19.1
NBC8	56.5731	-122.4044	2.59	0.096	0.112	0.068	64.8	69.7	60.0	45.3	368	22.6
NDB	53.9538	-132.9399	1.24	0.203	0.274	0.120	50.1	59.1	41.1	55.8	31	10.8
PCLB	53.7155	-132.5211	2.65	0.135	0.190	0.100	-10.5	-2.2	-18.8	84.6	81	23.2
PLBC	59.4550	-136.3659	1.24	0.108	0.128	0.095	17.9	21.3	14.5	11.2	1012	10.8
RUBB	54.3262	-130.2523	1.88	0.108	0.140	0.080	27.8	33.6	21.9	25.3	399	16.4
UBRB	52.8918	-124.0832	0.53	0.119	0.141	0.098	-142.4	-137.1	-147.8	25.9	544	4.6
VIB	53.2522	-132.5406	2.83	0.150	0.176	0.118	166.3	172.8	159.8	43.2	260	24.7
WHY	60.6597	-134.8825	0.65	0.084	0.110	0.063	-24.2	-15.4	-33.1	37.7	353	5.7
YUK1	62.1533	-140.5288	1.12	0.133	0.163	0.112	-123.7	-119.7	-127.7	25.9	401	9.8
YUK2	61.7668	-140.8426	1.06	0.115	0.122	0.107	-48.7	-44.5	-52.9	10.0	1370	9.3
YUK3	61.7755	-140.4595	1.94	0.141	0.160	0.125	48.6	50.8	46.4	23.2	1501	17.0
YUK4	61.4348	-138.5463	0.71	0.096	0.129	0.066	29.8	37.2	22.5	26.8	418	6.2
YUK5	61.1315	-137.8593	1.00	0.157	0.175	0.140	8.9	11.5	6.3	17.2	1058	8.7
YUK6	60.9432	-138.3626	0.47	0.238	0.254	0.224	16.0	17.5	14.5	11.2	1197	4.1
YUK7	60.5307	-138.1399	2.83	0.199	0.209	0.185	69.0	70.9	67.2	15.4	1128	24.7
BMQ	67.8516	-149.8236	2.00	0.118	0.126	0.099	86.6	90.2	82.9	32.5	578	17.5
CBM	66.2066	-150.2635	2.12	0.124	0.146	0.097	27.2	31.6	22.8	62.3	284	18.5
CHS	68.0789	-149.5817	2.77	0.068	0.078	0.054	67.6	73.3	62.0	31.0	494	24.2
FRB	69.7162	-148.6985	0.77	0.134	0.228	0.057	-108.2	-88.5	-127.9	29.7	139	6.7
GBN	66.7192	-150.6710	2.47	0.159	0.178	0.140	11.9	14.6	9.3	43.5	443	21.6
GTM	65.4015	-161.2778	1.59	0.138	0.158	0.117	18.2	21.6	14.7	60.3	383	13.9
ICT	69.0223	-148.8360	0.59	0.145	0.170	0.121	-26.0	-22.6	-29.5	45.9	191	5.2
LMW	65.5114	-148.5113	0.53	0.168	0.180	0.129	-142.0	-138.1	-145.9	39.5	359	4.6
LVG	65.5220	-148.5514	0.77	0.141	0.242	0.060	-146.4	-134.3	-158.5	52.5	119	6.7

NOM	64.5695	-165.3383	5.71	0.072	0.093	0.046	-154.1	-145.6	-162.7	63.1	203	49.9
PRB	70.2036	-148.4457	1.47	0.218	0.379	0.122	93.4	103.9	82.8	62.3	54	12.9
RBY	64.7400	-155.4660	1.53	0.140	0.157	0.116	167.7	173.4	162.0	48.9	250	13.4
SAG	69.4240	-148.6940	0.29	0.089	0.120	0.065	-31.3	-17.6	-44.9	25.5	236	2.5
TFS	68.6274	-149.5900	0.71	0.152	0.172	0.134	-20.7	-16.4	-25.0	25.4	313	6.2
WSM	67.3812	-150.1100	2.00	0.112	0.126	0.096	-34.3	-29.7	-39.0	18.4	416	17.5
MENT	62.9380	-143.7194	1.94	0.212	0.229	0.191	22.7	24.9	20.5	23.5	733	17.0

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