

GAGE GPS Data Analysis Plan for Transitioning to ITRF2014/IGS14

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On January 29, 2017 (GPS week 1934 day 0), the IGS switched its operational products to use the IGS14 system, replacing the current Igb08 system. There are two major changes associated with this switch: (1) A new set of coordinates, velocities and, for some stations, post-seismic deformation models are being adopted for the core set of IGS sites that define the IGS realization of the ITRF2014 system; and (2) the antenna phase center models are being changed for the GPS satellites and for some GPS ground antennas. These new values are contained in the `igs14_www.atx` ANTEX file where `www` is the GPS week of the release. The current file is `igs14_1930.atx`. The details of the expected effects on the IGS results are discussed in IGSMAIL-7399 (see link below). The change in the reference frame realization should be small but the change in the antenna model will change the coordinates of some stations by up to 19 mm in height and 5 mm in horizontal coordinates.

The immediate effect on the GAGE/PBO should be small because the GAGE/PBO analysis centers will not adopt the new IGS14 ANTEX file until a later date when GAGE has reprocessed the data prior to week 1934 with the new IGS14 ANTEX file. The IGS combined orbits based on the IGS14 system have already been generated and the GAGE network processing AC (NMT) can use these files now. The PPP AC (CWU) will start reprocessing when JPL orbits and clocks become available in the IGS14 system. The current plan is to complete the reprocessing and then release the full set of time series in the NAM14 (IGS14 rotated to the North America Plate) and IGS14 reference frames when all reprocessing is complete. The operational processing will also switch at the time of the release so that there will be no artificial offsets in the time series. The reprocessing is expected to take several months and an announcement will be made when the time series products are to be updated. The frame-resolved and loose SINEX files will be updated during the reprocessing. The reprocessing should start shortly and is expected to be completed before the end of 2017.

During the transition period before historical results are available in the IGS14 frame, the GAGE processing will use mixed models for the PPP processing. For PPP processing, it is critical that the clock and orbit products are kept consistent. Until the IGS14 model is fully adopted at JPL, different models are used between the rapid and final orbits processing. For rapid orbit processing (latency ~1 day), JPL is using the IGS14 reference frame but for final orbit processing (latency 2-3 weeks) the Igb08 reference frame continues to be used. The use of Igb08 for final orbit processing will continue until all historical data have been reprocessed in the IGS14 frame. In addition to this difference between rapid and final orbit processing, there are other differences that are documented in the GAGE analysis plan. The most important of these differences is that the 2nd and higher order ionospheric delay corrections are not applied in the rapid processing by both ACs. Analysis of position estimate differences between rapid orbit and final orbit processing since GPS week 1934 shows that the higher order ionospheric corrections have a larger contribution to differences than the difference in reference system and antenna

calibration model. For comparisons around week 1934, the mean differences between solutions in horizontal components are all less than 1 mm. For the height component, mean differences in the rapid processing by antenna types are all less than 10 mm. The largest antenna type mean difference is for the TRM57971.00 with no radome where we estimate the mean change due applying the IGS14 phase center model in the PPP rapid processing is ~5 mm in height and <1 mm in horizontal components. There is no impact on final PPP products because the models using in this processing have not changed. No systematic differences can be seen the NMT network processing can be seen with the use of IGS14 orbits.

Reprocessed IGS orbits aligned to the IGS14 system are available and described in IGSMail-7411 <https://igscb.jpl.nasa.gov/pipermail/igsmail/2017/008601.html>

Full details of the update to IGS14 can be found in [IGSMail-7399] <https://igscb.jpl.nasa.gov/pipermail/igsmail/2016/008589.html>

The following files related to IGS14 can be downloaded from either <ftp://igs-rf.ign.fr/pub/IGS14> or <ftp://igs-rf.ensg.eu/pub/IGS14>.

The files contained at the FTP site are given below. For quick reference, we also include the files `igs08_to_igs14_offsets.txt`, which gives the expected position offsets for different antenna types and locations, and `lat_models.txt` which can be used to predict the expected changes at different latitudes for different antenna types.

File	Description
IGS14.snx	IGS14 SINEX file
IGS14.ssc	IGS14 SINEX file without covariance matrix
IGS14.png	Map of the full IGS14 network
psd_IGS14.snx	Post-seismic deformation models to be used with IGS14
soln_IGS14.snx	Discontinuity list to be used with IGS14
IGS14_core.txt	List of IGS14 core stations
IGS14_core.png	Map of the IGS14 core network
igs14_<www>.atx	Latest version of igs14.atx (use latest version) currently igs14_1930.atx
ITRF2014_to_IGS14.txt	Position offsets applied to the ITRF2014 coordinates of IGS14 stations affected by ground antenna calibration updates
igs08_to_igs14_offsets.txt	Position offsets estimated for all IGS stations affected by ground antenna calibration updates
lat_models.txt	Latitude-dependent models of position offsets expected from ground antenna calibration updates

Offsets in positions due to new antenna calibrations models. These are values contained in ftp://igs-rf.ign.fr/pub/IGS14/igs08_to_igs14_offsets.txt

ESTIMATED POSITION OFFSETS DUE TO THE GROUND ANTENNA CALIBRATION CHANGES FROM igs08.atx TO igs14.atx
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For each affected IGS antenna, up to 1000 daily PPP sessions were run using both igs08.atx and igs14.atx. A mean position offset was then obtained by weighted averaging the time series of daily position offsets. Daily position offsets with normalized residuals larger than 3 in either East, North or Up were iteratively rejected before computing the final weighted mean.

The data lines below are given in the following format

ANTENNA_TYPE CODE START END NPTS dE dN dH wE wN wH
where
- NPTS is the length of the cleaned time series of daily position offsets,
- dE, dN, dH are the weighted averaged position offsets in East, North and Up [mm],
- wE, wN, wH are the WRMS of the time series of daily position offsets in East, North and Up [mm].

1) Additional robot calibrations

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AERAT2775_43	SPKE	ABMF	08	197	09	288	17	-5.3	3.7	-4.0	0.2	0.1	0.2
AERAT2775_43	SPKE	LMMF	08	197	09	286	12	-5.3	3.6	-3.9	0.0	0.0	0.1
AOAD/M_T	DUTD	KIRO	93	213	95	072	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DUTD	MAR6	93	213	95	038	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DUTD	VISO	93	213	95	165	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DUTD	WSRT	97	152	16	001	974	0.2	2.7	18.6	0.2	0.1	0.5
ASH700936D_M	SCIS	AMMN	99	166	16	001	720	1.8	1.6	4.5	0.1	0.1	0.2
ASH700936D_M	SCIS	LBCH	01	034	16	001	989	1.5	1.7	4.0	0.1	0.0	0.2
ASH700936D_M	SCIS	PALM	97	113	16	001	987	2.4	1.5	4.7	0.1	0.1	0.2
ASH700936D_M	SCIS	PALV	97	113	16	001	736	2.4	1.5	4.8	0.1	0.1	0.2
ASH700936D_M	SCIS	SCIP	01	157	14	281	710	1.5	1.6	5.5	0.1	0.0	0.1
ASH700936D_M	SCIS	TIXI	02	287	10	293	982	1.9	2.2	6.8	0.1	0.1	0.3
ASH700936E	SCIS	KSMV	00	284	16	001	974	-0.2	-1.4	12.9	0.1	0.1	0.6
ASH701073.1	NONE	METZ	98	285	16	001	882	0.8	-0.6	-3.5	0.1	0.1	0.1
ASH701073.1	NONE	REYK	07	263	08	073	146	0.8	-0.7	-3.7	0.0	0.0	0.1
ASH701073.1	NONE	STR1	99	019	99	174	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701073.1	DOME	STR1	98	268	99	019	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701073.1	DOME	THU2	98	299	00	322	444	0.7	-0.5	-3.5	0.1	0.2	0.3
ASH701073.1	DOME	YARR	98	229	07	277	921	1.0	-0.2	-3.6	0.1	0.0	0.2
ASH701073.1	SCIS	THU2	00	322	16	001	928	0.5	-0.7	-4.1	0.1	0.1	0.2
ASH701073.1	SCIS	THU3	00	322	16	001	957	0.5	-0.7	-4.0	0.1	0.1	0.2
ASH701073.1	SCIS	TRO1	00	171	04	195	985	0.8	-0.7	-1.2	0.1	0.1	0.2
ASH701073.1	SNOW	MTKA	98	286	16	001	979	1.1	-0.2	6.9	0.2	0.1	0.5
ASH701073.1	SNOW	NYA1	99	153	16	001	804	0.3	-1.0	-3.0	0.1	0.1	0.3
ASH701073.1	SNOW	REYZ	98	254	07	262	951	0.2	-0.5	3.2	0.1	0.1	0.2
ASH701073.1	SNOW	TRO1	98	356	00	171	499	0.3	-0.7	2.1	0.2	0.2	0.6
ASH701073.1	SNOW	WTZZ	98	291	03	161	974	0.7	-0.2	6.1	0.2	0.1	0.3
ASH701073.1	SNOW	ZIMZ	98	246	05	229	964	0.8	-0.2	6.7	0.2	0.1	0.6
ASH701945C_M	SCIS	ARUC	13	312	16	001	637	-0.6	1.6	-3.3	0.1	0.0	0.1
ASH701945C_M	SCIS	CKIS	01	250	11	277	991	-0.1	1.9	-2.5	0.1	0.1	0.1
ASH701945C_M	SCIS	CRAO	09	063	16	001	977	-0.7	1.8	-3.3	0.1	0.0	0.1
ASH701945C_M	SCIS	DHLG	10	283	12	173	525	-0.8	1.6	-2.4	0.1	0.0	0.1
ASH701945C_M	SCIS	INVK	03	233	16	001	873	-0.9	2.1	-2.3	0.1	0.1	0.1
ASH701945C_M	SCIS	KGNI	01	022	16	001	907	-0.5	1.4	-5.4	0.1	0.1	0.3
ASH701945C_M	SCIS	KIRI	02	215	11	324	994	-0.0	1.8	-3.4	0.2	0.1	1.1
ASH701945C_M	SCIS	LAUT	01	327	12	116	988	-0.2	1.9	-2.6	0.1	0.0	0.2
ASH701945C_M	SCIS	MOBN	00	353	16	001	989	-0.9	1.9	-3.7	0.1	0.1	0.3
ASH701945C_M	SCIS	NAUR	03	182	10	196	986	0.2	2.1	-1.8	0.2	0.0	0.2
ASH701945C_M	SCIS	PIN1	01	059	04	227	974	-0.6	1.6	-2.7	0.1	0.0	0.2
ASH701945C_M	SCIS	PNMG	02	126	12	251	984	-0.0	1.9	-2.2	0.1	0.0	0.2
ASH701945C_M	SCIS	POHN	03	121	11	341	978	0.3	2.1	-3.8	0.2	0.1	0.3
ASH701945C_M	SCIS	SAMO	01	181	12	122	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701945C_M	SCIS	SOLO	08	181	12	151	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701945C_M	SCIS	TONG	02	352	11	250	992	-0.1	1.8	-3.4	0.1	0.0	0.4
ASH701945C_M	SCIS	TUVA	02	132	12	031	978	-0.3	2.0	-2.3	0.1	0.0	0.2
ASH701945C_M	SCIS	TWTF	01	213	16	001	985	-0.2	1.7	-2.8	0.1	0.0	0.2

ASH701945D_M	NONE	ALRT	02	197	16	001	944	1.6	0.4	2.8	0.1	0.1	0.2
ASH701945D_M	NONE	HOLM	02	221	16	001	965	1.6	-0.0	2.3	0.1	0.1	0.2
ASH701945D_M	NONE	NAIN	02	352	16	001	962	1.5	0.3	4.3	0.1	0.1	0.1
ASH701945D_M	NONE	SHE2	10	177	12	278	752	2.0	0.7	3.3	0.0	0.0	0.1
ASH701945E_M	SCIS	EPRT	14	179	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701945E_M	SCIS	MAJU	07	142	12	085	777	2.9	-1.2	9.0	0.1	0.1	0.2
ASH701945E_M	SCIS	MARS	04	210	09	077	954	2.5	-1.2	8.7	0.1	0.0	0.2
ASH701945E_M	SCIS	QAQ1	03	365	16	001	985	2.7	-0.4	7.1	0.1	0.0	0.1
ASH701945E_M	SCIS	SASK	03	129	13	242	979	2.7	-0.6	8.2	0.1	0.0	0.1
ASH701945E_M	SCIS	SOLA	04	140	16	001	985	2.5	-1.3	7.6	0.1	0.0	0.1
ASH701945G_M	NONE	BOGT	05	193	07	214	735	0.7	0.8	2.1	0.3	0.0	0.1
ASH701945G_M	NONE	CORD	05	062	10	285	349	1.0	0.8	3.4	0.1	0.0	0.1
ASH701945G_M	NONE	CRO1	11	091	11	175	66	0.8	0.9	2.5	0.0	0.0	0.1
ASH701945G_M	NONE	FAIR	12	119	12	216	59	-0.3	-0.1	3.0	0.0	0.0	0.1
ASH701945G_M	NONE	JAB1	07	053	07	332	2	-0.1	0.4	2.2	0.2	0.2	0.2
ASH701945G_M	NONE	KOKB	04	139	16	001	985	0.6	1.0	2.8	0.1	0.0	0.1
ASH701945G_M	NONE	KOKV	08	268	16	001	981	0.6	0.9	2.8	0.1	0.0	0.1
ASH701945G_M	NONE	SUTH	04	153	16	001	982	1.0	0.8	3.9	0.1	0.0	0.1
ASH701945G_M	NONE	SUTV	04	153	16	001	990	1.0	0.8	3.9	0.1	0.0	0.1
ASH701945G_M	AUST	DAV1	07	213	11	052	979	1.1	1.3	4.5	0.1	0.1	0.1
ASH701945G_M	AUST	DAVR	07	213	16	001	191	1.3	1.3	4.7	0.1	0.1	0.1
ASH701945G_M	JPLA	CRO1	11	175	15	267	986	0.7	0.9	2.6	0.1	0.0	0.1
ASH701945G_M	JPLA	FAIR	12	217	16	001	964	-0.2	-0.1	3.3	0.1	0.1	0.1
ASH701946.3	NONE	KOUR	08	015	12	311	882	2.0	-0.4	7.5	0.1	0.0	0.1
ASH701946.3	NONE	MAL2	08	192	08	255	49	1.9	-0.3	7.6	0.1	0.0	0.2
TRM29659.00	UNAV	BARH	98	275	07	086	957	4.0	4.9	-6.6	0.1	0.1	0.3
TRM29659.00	UNAV	BRMU	03	071	11	271	964	4.2	5.2	-7.7	0.1	0.1	0.3
TRM29659.00	UNAV	EPRT	98	275	04	192	861	4.0	4.9	-6.7	0.1	0.1	0.2
TRM29659.00	UNAV	ESTI	00	132	16	001	928	5.2	5.6	-8.5	0.4	0.1	0.6
TRM29659.00	UNAV	GUAT	00	210	11	332	968	4.7	5.7	-8.0	0.2	0.1	0.4
TRM29659.00	UNAV	MANA	00	134	16	001	967	4.5	5.6	-8.6	0.2	0.0	0.3
TRM29659.00	UNAV	SSIA	00	272	16	001	979	4.6	5.7	-7.9	0.2	0.0	0.2
TRM29659.00	UNAV	TUBI	99	007	16	001	955	4.1	4.9	-8.3	0.1	0.0	0.4
TRM57971.00	TZGD	KOUC	09	321	16	001	930	-0.2	0.1	8.4	0.1	0.0	0.1
TRM57971.00	TZGD	NRMD	09	275	16	001	904	-0.2	0.1	8.5	0.1	0.0	0.2

2) Additional copied calibrations

ASH700936F_C	SNOW	LAMA	00	280	07	321	973	1.6	0.9	12.3	0.1	0.0	0.2
ASH700936F_C	SNOW	WAB2	04	210	16	001	978	1.7	1.0	13.1	0.1	0.0	0.2
ASH701945B_M	SCIS	AZU1	04	218	16	001	986	2.4	-1.5	7.6	0.1	0.0	0.2
ASH701945B_M	SCIS	DHLG	00	097	10	283	960	2.7	-1.4	7.8	0.1	0.1	0.2
ASH701945B_M	SCIS	MBAR	01	079	16	001	897	2.8	-0.9	9.4	0.1	0.0	0.2
ASH701945B_M	SCIS	MONP	00	082	16	001	989	2.6	-1.4	7.9	0.1	0.0	0.1
ASH701945B_M	SCIS	MQZG	01	246	05	059	968	2.7	-0.9	8.1	0.1	0.0	0.1
ASH701945B_M	SCIS	PN11	04	227	16	001	985	2.5	-1.4	7.9	0.1	0.0	0.1
ASH701945B_M	SCIS	SIO3	00	103	16	001	979	2.8	-1.4	8.0	0.1	0.0	0.1
ASH701945B_M	SCIS	SN11	00	354	16	001	926	2.6	-1.4	7.8	0.1	0.0	0.1

3) Updated robot calibrations

AOAD/M_T	NONE	ALGO	94	047	16	001	970	0.1	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	ALIC	03	166	11	201	939	0.3	-0.6	-0.1	0.0	0.0	0.1
AOAD/M_T	NONE	AMC2	98	083	16	001	997	0.2	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	AMCT	98	083	16	001	198	0.2	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	ANKR	95	172	08	127	715	0.2	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	AOA1	94	160	16	001	991	0.4	-0.4	0.0	0.0	0.0	0.1
AOAD/M_T	NONE	AOML	97	324	04	096	982	0.4	-0.4	-0.2	0.0	0.0	0.1
AOAD/M_T	NONE	AREQ	11	231	12	033	149	0.1	-0.6	-0.3	0.0	0.0	0.0
AOAD/M_T	NONE	AREV	11	231	12	033	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	ASC1	96	111	10	285	947	0.3	-0.5	-0.5	0.1	0.0	0.1
AOAD/M_T	NONE	AUCK	95	261	01	300	972	0.4	-0.5	0.2	0.1	0.0	0.0
AOAD/M_T	NONE	BAIE	01	308	16	001	976	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	BAKE	01	334	07	214	951	0.0	-0.7	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	BAN2	00	073	16	001	979	0.4	-0.4	-0.2	0.0	0.0	0.1
AOAD/M_T	NONE	BOGT	94	308	05	187	973	0.4	-0.5	-0.3	0.0	0.0	0.1
AOAD/M_T	NONE	BOR1	94	010	16	001	976	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	BRAN	94	334	95	096	63	0.3	-0.4	0.1	0.0	0.0	0.1
AOAD/M_T	NONE	BRAZ	95	062	07	071	952	0.2	-0.6	-0.2	0.1	0.0	0.0
AOAD/M_T	NONE	BRMU	93	071	03	043	965	0.4	-0.4	-0.0	0.1	0.0	0.1

AOAD/M_T	NONE	BRUS	93	293	00	118	892	0.1	-0.6	0.4	0.0	0.0	0.0
AOAD/M_T	NONE	CAGL	95	097	01	192	963	0.3	-0.4	0.2	0.0	0.0	0.1
AOAD/M_T	NONE	CAT1	95	176	08	107	988	0.2	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	CHAT	95	277	01	332	984	0.5	-0.4	0.4	0.0	0.0	0.0
AOAD/M_T	NONE	CHPI	01	107	03	128	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	CHTP	94	064	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	CHUM	97	191	16	001	979	0.1	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	CHUR	94	103	08	088	979	0.0	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	CIC1	99	040	16	001	940	0.4	-0.4	-0.1	0.0	0.0	0.1
AOAD/M_T	NONE	CICE	95	087	99	040	969	0.3	-0.4	-0.0	0.0	0.0	0.1
AOAD/M_T	NONE	CIT1	94	244	12	312	928	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	COCO	04	176	16	001	963	0.1	-0.6	-0.4	0.0	0.0	0.0
AOAD/M_T	NONE	CORD	99	208	05	062	795	0.3	-0.5	0.1	0.0	0.0	0.1
AOAD/M_T	NONE	DAKA	02	080	04	335	618	0.4	-0.4	-0.3	0.0	0.0	0.1
AOAD/M_T	NONE	DARR	96	183	03	094	168	0.2	-0.6	-0.3	0.0	0.0	0.0
AOAD/M_T	NONE	DARW	96	183	03	094	763	0.2	-0.6	-0.4	0.0	0.0	0.1
AOAD/M_T	NONE	DGAR	96	071	04	139	860	0.2	-0.6	-0.5	0.1	0.0	0.1
AOAD/M_T	NONE	DRAO	94	041	13	070	958	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	DUBO	09	239	16	001	994	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	EURK	02	165	05	262	761	0.2	-0.6	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	FLIN	96	157	97	007	207	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	FRDN	03	182	09	354	950	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	GODE	12	189	12	348	118	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	GODZ	12	189	12	348	121	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	GOL2	95	304	16	001	988	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	GOLD	95	304	16	001	995	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	GRAS	95	053	03	112	881	0.2	-0.5	0.2	0.0	0.0	0.1
AOAD/M_T	NONE	GRAZ	96	177	01	127	908	0.2	-0.5	0.3	0.0	0.0	0.1
AOAD/M_T	NONE	HARB	97	146	99	147	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	HARK	97	146	99	147	430	0.2	-0.5	-0.1	0.0	0.0	0.0
AOAD/M_T	NONE	HART	95	026	97	150	418	0.2	-0.6	-0.0	0.0	0.0	0.0
AOAD/M_T	NONE	HLFX	01	353	13	189	979	0.1	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	HNPT	95	347	99	024	945	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	HOB1	93	051	94	220	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	HOB2	94	192	16	001	963	0.5	-0.4	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	HOLM	01	240	02	221	295	0.1	-0.7	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	HRAO	96	249	04	324	983	0.2	-0.6	-0.1	0.0	0.0	0.1
AOAD/M_T	NONE	HYDE	95	269	01	194	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	IISC	95	274	08	008	958	0.4	-0.4	-0.3	0.0	0.0	0.0
AOAD/M_T	NONE	IRKM	95	259	16	001	958	0.0	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	IRKT	95	259	16	001	900	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	JPLM	94	165	16	001	978	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	KERG	94	320	99	090	856	0.6	-0.3	0.5	0.0	0.0	0.1
AOAD/M_T	NONE	KIRO	95	072	96	304	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	KIRU	93	189	00	262	941	-0.0	-0.8	0.4	0.0	0.0	0.1
AOAD/M_T	NONE	KIT3	94	274	12	290	963	0.2	-0.4	0.3	0.0	0.0	0.1
AOAD/M_T	NONE	KOUR	97	279	02	030	877	0.4	-0.4	-0.4	0.1	0.0	0.1
AOAD/M_T	NONE	KROG	95	072	96	304	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	KSTU	96	296	04	275	863	0.0	-0.6	0.3	0.0	0.0	0.1
AOAD/M_T	NONE	KUNM	98	167	16	001	971	0.4	-0.4	-0.2	0.0	0.0	0.0
AOAD/M_T	NONE	KUUJ	02	198	10	209	918	0.0	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	KWJ1	96	065	16	001	955	0.5	-0.4	-0.4	0.1	0.0	0.1
AOAD/M_T	NONE	LAMA	94	335	00	280	882	0.1	-0.6	0.4	0.0	0.0	0.0
AOAD/M_T	NONE	LBCH	94	201	01	034	982	0.3	-0.4	0.0	0.0	0.0	0.1
AOAD/M_T	NONE	LHAS	95	122	16	001	909	0.4	-0.4	-0.3	0.0	0.0	0.0
AOAD/M_T	NONE	LPGS	95	140	12	075	974	0.4	-0.5	0.2	0.0	0.0	0.1
AOAD/M_T	NONE	MAD2	96	269	16	001	967	0.2	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	MADR	96	269	16	001	958	0.2	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	MALI	97	296	08	255	967	0.3	-0.6	-0.5	0.1	0.0	0.1
AOAD/M_T	NONE	MAR6	15	156	15	336	159	-0.0	-0.7	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	MAS1	94	101	08	189	966	0.3	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	MATE	96	191	99	169	937	0.3	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	MDO1	13	053	13	221	166	0.3	-0.4	0.0	0.0	0.0	0.0
AOAD/M_T	NONE	MEDI	95	209	01	092	957	0.2	-0.5	0.3	0.0	0.0	0.1
AOAD/M_T	NONE	METS	10	231	13	179	746	0.0	-0.7	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	MTZU	00	165	05	194	920	0.2	-0.5	0.2	0.0	0.0	0.1
AOAD/M_T	NONE	MKEA	96	221	15	023	981	0.3	-0.4	-0.1	0.0	0.0	0.0
AOAD/M_T	NONE	MOIN	96	055	16	001	296	0.5	-0.4	-0.3	0.1	0.0	0.1
AOAD/M_T	NONE	MORP	96	305	16	001	875	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	MR6G	95	348	96	010	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	NICO	97	134	08	162	935	0.3	-0.4	0.1	0.0	0.0	0.1
AOAD/M_T	NONE	NPLD	00	228	16	001	970	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	NRC1	94	152	16	001	986	0.1	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	NRC2	99	206	03	079	984	0.1	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	NTUS	97	177	07	136	959	0.4	-0.5	-0.5	0.0	0.0	0.0
AOAD/M_T	NONE	NYA1	97	152	99	152	388	0.2	-0.6	0.1	0.0	0.0	0.1
AOAD/M_T	NONE	NYA2	00	073	11	206	15	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	OAT2	95	028	16	001	975	0.2	-0.4	0.0	0.0	0.0	0.1

AOAD/M_T	NONE	OATT	94	199	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	OBE2	01	209	08	043	808	0.1	-0.6	0.2	0.1	0.0	0.1
AOAD/M_T	NONE	OBER	96	285	16	001	977	0.2	-0.6	0.3	0.0	0.0	0.1
AOAD/M_T	NONE	OHI2	02	045	02	050	5	0.7	-0.3	0.4	0.0	0.0	0.0
AOAD/M_T	NONE	ORID	02	347	08	309	969	0.2	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	OUS2	00	073	06	169	886	0.5	-0.4	0.4	0.0	0.0	0.0
AOAD/M_T	NONE	PAMA	95	354	16	001	411	0.2	-0.5	-0.2	0.1	0.0	0.1
AOAD/M_T	NONE	PERT	93	230	03	155	922	0.3	-0.5	0.1	0.0	0.0	0.1
AOAD/M_T	NONE	PICL	01	345	16	001	930	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	PIE1	99	152	07	023	921	0.3	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	PIMO	98	182	01	249	597	0.5	-0.4	-0.5	0.1	0.0	0.1
AOAD/M_T	NONE	POL2	95	145	01	317	872	0.2	-0.5	0.2	0.0	0.0	0.1
AOAD/M_T	NONE	POTS	94	301	11	046	944	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	PRDS	97	007	16	001	984	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	PTBB	00	089	02	078	697	0.1	-0.6	0.3	0.0	0.0	0.1
AOAD/M_T	NONE	RBAY	00	131	12	337	914	0.2	-0.5	0.1	0.1	0.0	0.1
AOAD/M_T	NONE	RCM6	96	306	16	001	604	0.3	-0.4	-0.1	0.0	0.0	0.0
AOAD/M_T	NONE	REYK	95	306	07	262	939	0.0	-0.7	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	RIGA	05	013	06	140	442	0.0	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	RIOP	96	099	02	224	920	0.3	-0.5	-0.5	0.2	0.0	0.2
AOAD/M_T	NONE	SCH2	97	180	08	280	970	0.0	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	SIMO	01	208	16	001	939	0.3	-0.5	0.2	0.0	0.0	0.1
AOAD/M_T	NONE	SNI1	95	325	98	230	361	0.3	-0.4	0.0	0.1	0.0	0.1
AOAD/M_T	NONE	SOFI	97	139	10	119	946	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	SOL1	93	343	07	213	965	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	SPK1	95	079	11	210	966	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	STJO	94	073	16	001	958	0.1	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	STR1	99	174	03	018	977	0.4	-0.5	0.3	0.0	0.0	0.1
AOAD/M_T	NONE	SUTH	97	339	02	058	959	0.3	-0.5	0.2	0.0	0.0	0.1
AOAD/M_T	NONE	SUTM	00	073	13	127	959	0.4	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	TAHI	97	097	16	001	241	0.1	-0.6	-0.3	0.1	0.0	0.1
AOAD/M_T	NONE	TASH	01	277	10	256	922	0.2	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	TLSE	01	004	03	335	888	0.2	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	TMNL	02	206	16	001	949	0.3	-0.4	-0.2	0.0	0.0	0.0
AOAD/M_T	NONE	TOUT	97	020	16	001	941	0.2	-0.5	0.3	0.0	0.0	0.1
AOAD/M_T	NONE	TRO1	04	195	07	235	984	0.1	-0.7	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	TROM	97	196	98	005	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	TSKB	93	349	95	094	70	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	UCLP	94	334	12	265	973	0.2	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	ULAB	00	316	11	263	978	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	UNSA	01	192	08	205	953	0.3	-0.5	0.0	0.0	0.0	0.0
AOAD/M_T	NONE	URUM	98	091	08	260	962	0.2	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	USN3	04	180	16	001	985	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	USNA	95	013	16	001	947	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	USNO	97	114	16	001	927	0.2	-0.5	0.2	0.1	0.0	0.2
AOAD/M_T	NONE	VALD	01	338	09	180	959	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	VEVE	95	082	01	032	988	0.2	-0.5	0.4	0.1	0.0	0.1
AOAD/M_T	NONE	VILL	94	316	12	362	953	0.3	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	VIS0	96	177	96	313	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	VS0G	96	177	96	313	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	WES2	93	039	01	180	915	0.2	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	WHC1	95	073	12	072	975	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	WHI1	95	073	16	001	580	0.3	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	WHIT	95	160	16	001	982	-0.0	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	WILL	93	279	94	172	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	NONE	WLSN	94	196	11	119	975	0.3	-0.4	-0.1	0.0	0.0	0.0
AOAD/M_T	NONE	WTZR	95	040	09	019	988	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	WUH2	02	122	11	159	98	0.3	-0.4	-0.3	0.0	0.0	0.0
AOAD/M_T	NONE	WUHN	94	274	00	159	958	0.3	-0.4	-0.0	0.0	0.0	0.1
AOAD/M_T	NONE	YAR1	97	232	16	001	944	0.2	-0.5	0.0	0.0	0.0	0.1
AOAD/M_T	NONE	YAR2	13	171	16	001	815	0.3	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	NONE	YELL	94	075	16	001	983	0.0	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	NONE	YKRO	99	199	04	267	215	0.5	-0.4	-0.4	0.1	0.0	0.1
AOAD/M_T	NONE	ZAMB	02	087	16	001	958	0.2	-0.6	-0.2	0.0	0.0	0.0
AOAD/M_T	NONE	ZECK	97	192	05	291	907	0.2	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	ZWE2	04	299	07	164	881	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	NONE	ZWEN	95	067	16	001	926	0.0	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	ACRY	YAKA	97	316	16	001	444	-0.1	-0.7	0.3	0.0	0.0	0.0
AOAD/M_T	AUST	ALIC	94	135	03	166	980	0.3	-0.6	-0.0	0.0	0.0	0.0
AOAD/M_T	AUST	CAS1	94	001	13	344	945	0.5	-0.3	0.3	0.0	0.0	0.0
AOAD/M_T	AUST	CEDU	94	135	16	001	948	0.4	-0.5	0.2	0.0	0.0	0.1
AOAD/M_T	AUST	COCO	94	246	04	176	948	0.2	-0.6	-0.3	0.0	0.0	0.0
AOAD/M_T	AUST	DARR	94	083	96	183	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	AUST	DARW	94	083	96	183	184	0.1	-0.6	-0.4	0.0	0.0	0.1
AOAD/M_T	AUST	DAV1	94	011	07	213	812	0.6	-0.3	0.4	0.0	0.0	0.0
AOAD/M_T	AUST	DAVR	99	306	07	213	861	0.6	-0.3	0.4	0.0	0.0	0.0
AOAD/M_T	AUST	KARR	94	195	10	139	961	0.2	-0.6	-0.1	0.0	0.0	0.0
AOAD/M_T	AUST	MAC1	96	009	16	001	957	0.6	-0.3	0.4	0.0	0.0	0.0

AOAD/M_T	AUST	MAW1	94	001	16	001	942	0.6	-0.3	0.4	0.0	0.0	0.0
AOAD/M_T	AUST	TOW2	95	017	11	266	989	0.3	-0.6	-0.2	0.0	0.0	0.0
AOAD/M_T	DOME	BRAN	95	199	16	001	948	0.2	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	DOME	CASA	94	166	16	001	853	0.3	-0.4	0.1	0.0	0.0	0.1
AOAD/M_T	DOME	FORT	93	133	00	080	896	0.3	-0.6	-0.5	0.1	0.0	0.1
AOAD/M_T	DOME	GALA	96	030	16	001	883	0.3	-0.5	-0.4	0.1	0.0	0.0
AOAD/M_T	DOME	IAVH	98	051	16	001	170	0.3	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	DOME	KELY	95	204	01	257	802	-0.1	-0.7	0.3	0.1	0.0	0.1
AOAD/M_T	DOME	KIRO	95	191	96	212	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DOME	KROG	95	191	96	212	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DOME	MAR6	95	038	95	348	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DOME	MR6G	95	038	95	348	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DOME	OHI2	02	050	09	030	964	0.6	-0.3	0.4	0.0	0.0	0.0
AOAD/M_T	DOME	OHIG	95	040	16	001	1541	0.7	-0.3	0.5	0.0	0.0	0.1
AOAD/M_T	DOME	PETP	98	283	16	001	775	0.1	-0.6	0.4	0.0	0.0	0.0
AOAD/M_T	DOME	QUIN	92	250	93	258	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DOME	SEY1	95	135	03	037	744	0.1	-0.5	-0.4	0.1	0.0	0.2
AOAD/M_T	DOME	STR1	98	166	98	268	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DOME	SUWN	95	074	00	045	650	0.3	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	DOME	SYOG	95	074	13	357	957	0.6	-0.3	0.4	0.0	0.0	0.0
AOAD/M_T	DOME	THU1	95	122	16	001	761	0.1	-0.6	0.1	0.1	0.1	0.1
AOAD/M_T	DOME	TNML	01	158	02	206	31	0.4	-0.4	-0.1	0.0	0.0	0.0
AOAD/M_T	DOME	TSKB	95	094	16	001	971	0.2	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	DOME	VIS0	95	165	96	177	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DOME	VSOG	95	165	96	177	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	DOME	YAKZ	97	316	16	001	972	-0.0	-0.7	0.2	0.0	0.0	0.0
AOAD/M_T	EMRA	ALBH	94	104	03	248	987	0.1	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	EMRA	DUBO	97	008	99	230	882	0.1	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	EMRA	FLIN	97	007	99	264	761	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	EMRA	HOLB	94	123	02	023	964	0.1	-0.6	0.3	0.0	0.0	0.1
AOAD/M_T	EMRA	NANO	95	133	03	009	917	0.2	-0.5	0.3	0.1	0.0	0.0
AOAD/M_T	EMRA	UCLU	94	125	00	132	759	0.1	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	EMRA	WILL	94	172	13	295	936	0.0	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	EMRA	WSLR	96	256	00	089	748	0.1	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	JPLA	AREQ	12	034	16	001	935	0.2	-0.6	-0.3	0.0	0.0	0.0
AOAD/M_T	JPLA	AREV	12	034	16	001	646	0.2	-0.6	-0.3	0.0	0.0	0.0
AOAD/M_T	JPLA	AZU1	96	199	04	218	938	0.3	-0.4	0.1	0.1	0.0	0.0
AOAD/M_T	JPLA	CARR	92	296	03	113	995	0.3	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	JPLA	CRO1	94	016	05	019	980	0.5	-0.4	-0.1	0.0	0.0	0.1
AOAD/M_T	JPLA	CSN1	96	118	16	001	988	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	JPLA	EISL	04	045	16	001	155	0.3	-0.5	-0.1	0.0	0.0	0.0
AOAD/M_T	JPLA	FAIR	96	107	04	357	870	0.0	-0.7	0.2	0.0	0.0	0.0
AOAD/M_T	JPLA	GODE	13	030	16	001	975	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	JPLA	GODZ	13	030	16	001	977	0.2	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	JPLA	GUAM	95	020	06	137	969	0.4	-0.4	-0.2	0.0	0.0	0.0
AOAD/M_T	JPLA	HARV	92	169	16	001	948	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_T	JPLA	KOKB	96	010	02	267	938	0.4	-0.4	-0.1	0.1	0.0	0.1
AOAD/M_T	JPLA	MCM4	95	025	16	001	969	0.5	-0.4	0.3	0.0	0.0	0.1
AOAD/M_T	JPLA	MDO1	93	064	16	001	983	0.2	-0.4	0.0	0.0	0.0	0.0
AOAD/M_T	JPLA	NLIB	93	064	09	320	968	0.2	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	JPLA	PETR	97	316	16	001	203	0.1	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	JPLA	PIE1	92	364	99	152	979	0.3	-0.4	0.1	0.0	0.0	0.1
AOAD/M_T	JPLA	QUIN	93	258	08	357	954	0.2	-0.5	0.2	0.0	0.0	0.1
AOAD/M_T	JPLA	SANT	96	199	16	001	882	0.3	-0.5	0.1	0.0	0.0	0.0
AOAD/M_T	JPLA	SHAO	95	020	16	001	975	0.3	-0.4	-0.0	0.0	0.0	0.0
AOAD/M_T	JPLA	TID1	96	178	16	084	934	0.5	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	JPLA	TID2	96	178	16	001	976	0.4	-0.5	0.2	0.1	0.0	0.0
AOAD/M_T	JPLA	TIDB	96	178	16	083	987	0.5	-0.5	0.2	0.0	0.0	0.0
AOAD/M_T	JPLA	USC1	94	307	16	001	850	0.3	-0.4	-0.0	0.0	0.0	0.0
AOAD/M_T	JPLA	USUD	93	201	16	001	967	0.3	-0.4	-0.1	0.0	0.0	0.1
AOAD/M_T	JPLA	XIAN	96	141	06	063	871	0.2	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	JPLA	YAR2	97	232	12	144	989	0.3	-0.5	0.0	0.0	0.0	0.0
AOAD/M_T	OLGA	HFLK	98	171	99	301	432	0.2	-0.5	0.4	0.0	0.0	0.0
AOAD/M_T	OSOD	KIRO	96	304	16	001	970	0.0	-0.7	0.2	0.0	0.0	0.0
AOAD/M_T	OSOD	KROG	96	304	16	001	979	-0.0	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	OSOD	MAR6	96	128	15	156	976	0.0	-0.7	0.3	0.0	0.0	0.0
AOAD/M_T	OSOD	MR6G	96	128	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	OSOD	SPT0	95	335	16	001	962	0.1	-0.7	0.3	0.0	0.0	0.0
AOAD/M_T	OSOD	VIS0	96	313	16	001	984	0.0	-0.7	0.3	0.0	0.0	0.0
AOAD/M_T	OSOD	VSOG	96	313	16	001	321	0.0	-0.6	0.2	0.0	0.0	0.0
AOAD/M_T	SCIS	ALBH	03	248	15	258	969	0.1	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	SCIS	CHWK	99	217	08	025	987	0.1	-0.5	0.5	0.0	0.0	0.1
AOAD/M_T	SCIS	CRAO	00	118	08	147	975	0.3	-0.5	0.2	0.1	0.0	0.1
AOAD/M_T	SCIS	DUBO	99	277	09	238	981	0.1	-0.5	0.4	0.0	0.0	0.0
AOAD/M_T	SCIS	FLIN	99	264	10	355	903	0.0	-0.6	0.3	0.0	0.0	0.0
AOAD/M_T	SCIS	UCLU	00	153	01	339	525	0.2	-0.5	0.3	0.1	0.0	0.0
AOAD/M_T	SCIS	WSLR	00	089	16	001	951	0.1	-0.5	0.4	0.0	0.0	0.0
AOAD/M_T	SNOW	MAR6	96	010	96	128	0	n/a	n/a	n/a	n/a	n/a	n/a

AOAD/M_T	SNOW	MR6G	96	010	96	128	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	SNOW	TORP	97	059	11	007	952	0.2	-0.4	0.1	0.0	0.0	0.0
AOAD/M_T	UNAV	CHWK	98	321	99	217	242	0.1	-0.5	0.3	0.0	0.0	0.0
AOAD/M_T	UNAV	DYR2	00	126	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
AOAD/M_T	UNAV	NSSP	97	283	03	038	548	0.2	-0.4	0.1	0.1	0.0	0.1
AOAD/M_T	UNAV	SELE	97	128	08	189	937	0.2	-0.4	0.2	0.0	0.0	0.1
AOAD/M_T	UNKN	NOTO	95	033	98	210	923	0.3	-0.4	0.2	0.0	0.0	0.1
ASH700936C_M	SNOW	FALE	96	318	03	162	964	-0.3	0.1	1.8	0.0	0.0	0.1
ASH700936C_M	SNOW	RIO2	07	118	12	283	974	-0.7	0.1	2.2	0.0	0.0	0.0
ASH700936C_M	SNOW	RIOG	96	317	16	001	934	-0.7	0.1	2.1	0.0	0.0	0.0
ASH700936C_M	SNOW	SCUB	98	091	14	352	929	-0.4	0.1	2.1	0.0	0.0	0.0
ASH700936C_M	SNOW	UNSA	98	337	01	141	342	-0.4	0.0	1.8	0.0	0.0	0.0
ASH700936C_M	SNOW	WIND	03	175	11	059	985	-0.4	0.1	1.8	0.0	0.0	0.1
ASH700936C_M	SNOW	WTZA	97	329	16	001	978	-0.4	0.0	2.5	0.0	0.0	0.0
ASH700936E	NONE	DARR	01	292	01	348	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH700936E	NONE	HERS	98	049	10	231	969	1.0	-0.4	1.0	0.0	0.0	0.0
ASH700936E	NONE	JAB1	97	219	01	003	634	1.0	-0.3	0.5	0.0	0.0	0.1
ASH700936E	NONE	KSMV	00	249	00	263	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH700936E	ENCL	WUHN	02	026	11	082	979	1.0	-0.4	1.2	0.0	0.0	0.0
ASH701945C_M	NONE	BRUX	08	079	11	066	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701945C_M	NONE	CHPI	03	128	13	211	919	-0.6	1.3	-0.5	0.1	0.0	0.2
ASH701945C_M	NONE	DARW	01	292	01	348	33	-0.3	1.5	0.5	0.1	0.0	0.3
ASH701945C_M	NONE	ESCU	04	344	13	295	937	-0.4	1.5	0.2	0.1	0.0	0.1
ASH701945C_M	NONE	GRAZ	01	127	05	081	946	-0.5	1.6	-0.2	0.1	0.1	0.3
ASH701945C_M	NONE	HRAO	04	324	07	345	929	-0.2	1.4	-0.1	0.2	0.0	0.3
ASH701945C_M	NONE	IENG	01	277	16	001	988	-0.3	1.4	-0.1	0.1	0.0	0.1
ASH701945C_M	NONE	INVK	01	203	03	233	734	-0.4	1.6	-1.2	0.1	0.1	0.3
ASH701945C_M	NONE	JAB1	03	063	07	052	938	-0.6	1.5	-0.2	0.1	0.0	0.2
ASH701945C_M	NONE	KELY	01	257	16	001	984	-0.4	1.7	-0.6	0.1	0.1	0.2
ASH701945C_M	NONE	KIRU	00	273	03	071	848	-0.3	1.6	-0.7	0.2	0.1	0.4
ASH701945C_M	NONE	KOKB	02	267	04	139	572	-1.0	1.2	-0.1	0.1	0.0	0.2
ASH701945C_M	NONE	KOUR	02	030	08	006	963	-1.3	1.2	0.5	0.1	0.0	0.3
ASH701945C_M	NONE	MAL2	08	255	13	094	975	-0.9	1.5	-0.0	0.1	0.0	0.1
ASH701945C_M	NONE	MOBS	02	294	16	001	988	-0.8	1.3	-0.6	0.1	0.0	0.1
ASH701945C_M	NONE	NNOR	02	168	12	276	961	-0.3	1.5	0.2	0.1	0.0	0.3
ASH701945C_M	NONE	NRL1	05	001	16	001	959	-0.3	1.4	-0.3	0.1	0.0	0.1
ASH701945C_M	NONE	PARK	05	199	16	001	931	-0.8	1.3	-0.5	0.1	0.1	0.2
ASH701945C_M	NONE	PERT	03	156	12	297	997	-0.6	1.4	-0.4	0.1	0.0	0.3
ASH701945C_M	NONE	PIMO	01	249	16	001	983	-1.5	0.9	2.4	0.1	0.1	0.4
ASH701945C_M	NONE	POL2	02	064	09	296	927	-0.4	1.4	-0.4	0.1	0.0	0.1
ASH701945C_M	NONE	REDU	03	106	13	253	996	-0.2	1.4	0.5	0.1	0.1	0.3
ASH701945C_M	NONE	SACH	02	276	05	290	967	-0.6	1.7	-1.5	0.1	0.1	0.2
ASH701945C_M	NONE	STR1	03	311	16	001	964	-0.8	1.4	-0.5	0.1	0.0	0.1
ASH701945C_M	NONE	SUTH	02	058	04	153	736	-0.7	1.3	-0.8	0.1	0.0	0.1
ASH701945C_M	NONE	SYDN	04	126	16	001	978	-0.8	1.3	-0.4	0.1	0.0	0.1
ASH701945C_M	NONE	XIAN	06	063	16	001	988	-0.5	1.5	-0.3	0.1	0.0	0.1
ASH701945C_M	NONE	YBL	03	192	16	001	786	-0.9	1.2	-0.5	0.1	0.1	0.1
ASH701945C_M	NONE	YKRO	08	274	16	001	974	-1.9	1.1	0.8	0.1	0.0	0.2
ASH701945C_M	DOME	SEY1	03	037	06	324	774	-0.9	1.6	0.9	0.2	0.0	0.2
ASH701945C_M	JPLA	EISL	03	038	04	045	258	0.0	1.3	2.3	0.1	0.1	0.5
ASH701945C_M	UNAV	NSSP	03	038	10	191	972	-0.5	1.5	-0.5	0.1	0.1	0.2
JAVRINGANT_DM	NONE	BOGT	15	231	16	001	121	-2.5	1.2	-3.5	0.2	0.1	0.1
JAVRINGANT_DM	NONE	BRMU	11	271	16	001	957	-1.8	1.1	-3.5	0.1	0.0	0.1
JAVRINGANT_DM	NONE	BRUX	11	066	16	001	984	-1.1	0.9	-4.1	0.1	0.0	0.1
JAVRINGANT_DM	NONE	CUSV	15	166	16	001	103	-2.5	1.2	-3.2	0.1	0.0	0.1
JAVRINGANT_DM	NONE	MAJU	15	161	16	001	173	-2.6	0.9	-3.6	0.2	0.0	0.1
JAVRINGANT_DM	NONE	MKEA	15	023	16	001	262	-2.9	1.3	-4.7	0.2	0.0	0.3
JAVRINGANT_DM	NONE	SOLO	15	069	16	001	65	-1.6	0.8	-3.6	0.1	0.0	0.1
JAVRINGANT_DM	NONE	TSK2	12	030	12	149	101	-1.8	1.0	-3.4	0.1	0.0	0.1
JAVRINGANT_DM	NONE	WES2	14	175	16	001	334	-1.2	0.9	-3.4	0.1	0.0	0.1
JAVRINGANT_DM	NONE	ZIMJ	11	154	16	001	961	-1.3	0.9	-4.1	0.1	0.0	0.1
LEIAR10	NONE	BRAZ	15	105	16	001	253	-2.0	0.1	1.1	0.1	0.0	0.2
LEIAR10	NONE	POLV	13	044	16	001	991	-2.6	-0.5	0.5	0.1	0.1	0.1
LEIAR10	NONE	SCRZ	12	322	16	001	944	-2.1	-0.1	1.1	0.1	0.0	0.2
LEIAR20	LEIM	CZTG	14	073	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25	LEIT	GOUG	13	258	16	001	81	1.8	0.3	-12.6	0.1	0.1	0.2
LEIAR25	LEIT	PGEN	10	021	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25	LEIT	PPPC	10	177	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25	LEIT	ROTH	09	348	16	001	920	2.1	-0.7	-10.5	0.2	0.1	0.1
LEIAR25	LEIT	WTZJ	09	351	10	300	307	1.2	1.3	-11.2	0.2	0.1	0.2
LEIAR25	LEIT	WTZR	09	019	10	181	513	1.0	1.3	-10.9	0.1	0.1	0.2

LEIAR25.R3	NONE	ALIC	11	201	16	001	972	-0.7	-1.8	0.9	0.0	0.0	0.1
LEIAR25.R3	NONE	HERS	10	231	16	001	971	-0.5	-1.9	2.3	0.0	0.0	0.1
LEIAR25.R3	NONE	NAUR	10	345	11	010	19	-0.7	-1.8	0.4	0.0	0.0	0.0
LEIAR25.R3	NONE	TOW2	11	266	16	001	990	-0.7	-1.8	0.5	0.0	0.0	0.1
LEIAR25.R3	NONE	WTZ3	10	056	10	181	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R3	NONE	WTZS	10	056	10	181	123	-0.6	-1.9	2.2	0.0	0.0	0.1
LEIAR25.R3	LEIT	CAS1	13	345	16	001	653	-0.8	-0.3	-2.5	0.0	0.0	0.1
LEIAR25.R3	LEIT	CONZ	11	200	15	096	989	-0.4	-0.6	-4.2	0.0	0.0	0.1
LEIAR25.R3	LEIT	DAV1	11	052	16	001	899	-0.8	-0.4	-2.6	0.0	0.0	0.1
LEIAR25.R3	LEIT	DLF1	11	105	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R3	LEIT	GRAZ	10	138	16	001	955	-0.2	-0.7	-4.2	0.0	0.0	0.1
LEIAR25.R3	LEIT	GUAT	11	332	16	001	927	-0.4	-0.5	-3.7	0.1	0.0	0.1
LEIAR25.R3	LEIT	HRAG	10	110	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R3	LEIT	KAT1	10	072	16	001	964	-0.3	-0.8	-3.6	0.1	0.0	0.1
LEIAR25.R3	LEIT	KIR8	11	224	16	001	22	0.1	-1.0	-3.7	0.0	0.0	0.0
LEIAR25.R3	LEIT	KOUG	11	056	16	001	990	-0.4	-0.6	-3.7	0.1	0.0	0.1
LEIAR25.R3	LEIT	LCK2	11	268	14	301	977	-0.3	-0.5	-4.0	0.1	0.0	0.1
LEIAR25.R3	LEIT	LCK3	14	232	16	001	348	-0.2	-0.5	-4.0	0.0	0.0	0.1
LEIAR25.R3	LEIT	LCK4	14	232	16	001	391	-0.2	-0.5	-4.0	0.0	0.0	0.1
LEIAR25.R3	LEIT	LCKI	11	268	14	199	970	-0.2	-0.5	-4.0	0.0	0.0	0.1
LEIAR25.R3	LEIT	LEIJ	10	182	16	001	982	-0.0	-0.8	-4.3	0.0	0.0	0.1
LEIAR25.R3	LEIT	MAR7	11	117	16	001	23	0.1	-1.0	-4.1	0.0	0.0	0.1
LEIAR25.R3	LEIT	NAUR	10	196	16	001	982	-0.4	-0.7	-3.9	0.1	0.0	0.1
LEIAR25.R3	LEIT	OHI3	10	022	13	271	972	-0.9	-0.3	-2.7	0.0	0.0	0.0
LEIAR25.R3	LEIT	ONS1	12	028	16	001	22	0.1	-0.9	-4.2	0.0	0.0	0.0
LEIAR25.R3	LEIT	PBR2	10	214	16	001	968	-0.5	-0.6	-3.9	0.1	0.0	0.1
LEIAR25.R3	LEIT	PBRI	10	214	16	001	935	-0.4	-0.6	-3.8	0.1	0.0	0.1
LEIAR25.R3	LEIT	SIN1	10	252	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R3	LEIT	SOFI	10	119	16	001	978	-0.3	-0.6	-4.2	0.0	0.0	0.1
LEIAR25.R3	LEIT	THTG	11	013	16	001	965	-0.2	-0.7	-3.9	0.0	0.0	0.1
LEIAR25.R3	LEIT	UNX2	10	122	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R3	LEIT	UNX3	10	122	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R3	LEIT	WARN	10	258	16	001	978	0.0	-0.8	-4.4	0.0	0.0	0.1
LEIAR25.R3	LEIT	WTZ3	10	181	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R3	LEIT	WTZR	10	181	16	001	988	-0.1	-0.7	-4.2	0.0	0.0	0.1
LEIAR25.R3	LEIT	WTZS	10	181	16	001	970	-0.1	-0.7	-4.2	0.0	0.0	0.1
LEIAR25.R3	LEIT	WTZZ	11	035	16	001	982	-0.1	-0.7	-4.2	0.0	0.0	0.1
LEIAR25.R4	NONE	FAA1	12	340	16	001	487	0.2	0.4	5.3	0.0	0.0	0.1
LEIAR25.R4	NONE	MAL2	13	094	16	001	953	0.2	0.4	5.4	0.1	0.0	0.1
LEIAR25.R4	NONE	MAS1	12	170	16	001	988	0.3	0.2	4.7	0.0	0.0	0.1
LEIAR25.R4	NONE	MGUE	12	173	16	001	975	0.3	0.2	4.3	0.0	0.0	0.0
LEIAR25.R4	NONE	PADO	13	256	16	001	780	0.2	0.3	4.1	0.0	0.0	0.0
LEIAR25.R4	NONE	ROAP	11	298	16	001	992	0.2	0.2	4.1	0.0	0.0	0.1
LEIAR25.R4	NONE	STJ3	13	193	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R4	NONE	YEL2	13	200	16	001	690	0.3	0.6	4.7	0.0	0.0	0.1
LEIAR25.R4	LEIT	BZRG	12	047	16	001	963	1.1	-0.4	0.7	0.0	0.0	0.1
LEIAR25.R4	LEIT	FFMJ	11	039	16	001	972	1.1	-0.4	0.5	0.0	0.0	0.1
LEIAR25.R4	LEIT	GOP6	11	355	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R4	LEIT	GOP7	12	101	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R4	LEIT	HKSL	11	250	16	001	340	0.7	-0.3	1.9	0.1	0.0	0.1
LEIAR25.R4	LEIT	HKWS	11	250	16	001	536	0.7	-0.3	1.9	0.1	0.0	0.1
LEIAR25.R4	LEIT	HOFN	13	125	16	001	931	0.9	-0.4	1.7	0.0	0.0	0.1
LEIAR25.R4	LEIT	HUEG	13	191	16	001	872	1.0	-0.4	0.6	0.0	0.0	0.1
LEIAR25.R4	LEIT	KRGG	12	087	16	001	980	0.6	-0.3	0.3	0.0	0.0	0.1
LEIAR25.R4	LEIT	MOSE	12	104	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R4	LEIT	MELI	11	348	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R4	LEIT	NICO	13	197	16	001	873	1.1	-0.3	1.4	0.0	0.0	0.1
LEIAR25.R4	LEIT	OHI2	14	061	16	001	639	0.5	-0.4	1.5	0.0	0.0	0.1
LEIAR25.R4	LEIT	OHI3	13	271	16	001	793	0.5	-0.4	1.4	0.0	0.0	0.1
LEIAR25.R4	LEIT	PEN2	12	318	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
LEIAR25.R4	LEIT	REYK	13	122	16	001	917	1.0	-0.4	1.7	0.0	0.0	0.1
LEIAR25.R4	LEIT	RIGA	13	345	16	001	705	1.1	-0.5	0.7	0.0	0.0	0.1
LEIAR25.R4	LEIT	TIT2	14	345	16	001	312	1.1	-0.4	0.6	0.0	0.0	0.1
LEIAR25.R4	LEIT	TITZ	11	068	15	161	973	1.1	-0.4	0.5	0.0	0.0	0.1
LEIAR25.R4	LEIT	WROC	12	296	16	001	974	1.1	-0.4	0.6	0.0	0.0	0.1
NOV702GG	NONE	BJNM	10	233	16	001	980	-0.6	-1.5	-0.9	0.0	0.0	0.1
NOV702GG	NONE	GLSV	07	317	16	001	987	-0.7	-1.7	-0.4	0.0	0.0	0.1
NOV702GG	NONE	KHAR	08	317	16	001	956	-0.7	-1.7	-0.4	0.0	0.0	0.1
NOV702GG	NONE	UZHL	10	354	16	001	973	-0.7	-1.7	-0.6	0.0	0.0	0.1
TPSCR.G5	TPSH	BHR3	15	103	16	001	26	0.6	-0.2	-0.9	0.0	0.0	0.0
TPSCR.G5	TPSH	BHR4	15	103	16	001	23	0.6	-0.2	-0.9	0.0	0.0	0.1
TPSCR.G5	TPSH	EIL3	15	147	16	001	24	0.7	-0.7	-0.8	0.0	0.0	0.0

TPSCR.G5	TPSH	EIL4	15	147	16	001	26	0.7	-0.7	-0.8	0.0	0.0	0.0
TPSCR.G5	TPSH	MRL1	15	181	16	001	28	0.6	-0.2	-0.5	0.0	0.0	0.0
TPSCR.G5	TPSH	MRL2	15	181	16	001	27	0.6	-0.2	-0.5	0.0	0.0	0.0
TPSCR.G5	TPSH	MTV1	15	261	16	001	28	0.6	-0.4	-0.4	0.0	0.0	0.0
TPSCR.G5	TPSH	MTV2	15	261	16	001	26	0.6	-0.4	-0.4	0.0	0.0	0.0
TPSCR.G5	TPSH	OAK1	15	098	16	001	28	0.7	-0.6	-0.9	0.0	0.0	0.0
TPSCR.G5	TPSH	OAK2	15	098	16	001	27	0.7	-0.6	-0.9	0.0	0.0	0.0
TPSCR.G5	TPSH	OSN3	14	227	16	001	27	0.8	-0.3	-0.7	0.0	0.0	0.1
TPSCR.G5	TPSH	OSN4	14	227	16	001	26	0.8	-0.3	-0.7	0.0	0.0	0.1
TPSCR.G5	TPSH	PRE3	15	051	16	001	28	0.6	-0.4	-0.8	0.0	0.0	0.0
TPSCR.G5	TPSH	PRE4	15	051	16	001	27	0.6	-0.4	-0.8	0.0	0.0	0.0
TPSCR.G5	TPSH	QUI3	15	173	16	001	28	0.7	-0.5	-2.0	0.0	0.0	0.0
TPSCR.G5	TPSH	QUI4	15	173	16	001	27	0.7	-0.5	-2.0	0.0	0.0	0.0
TPSCR.G5	TPSH	SULP	13	089	16	001	790	0.7	-0.5	-0.9	0.1	0.0	0.1
TPSCR.G5	TPSH	USN7	14	316	16	001	338	0.7	-0.4	-0.7	0.0	0.0	0.1
TPSCR.G5	TPSH	USN8	14	316	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TPSCR.G5	TPSH	USN9	14	316	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TPSCR.G5	TPSH	WDC5	15	240	16	001	25	0.8	-0.4	-0.7	0.0	0.0	0.0
TPSCR.G5	TPSH	WDC6	15	240	16	001	25	0.8	-0.4	-0.7	0.0	0.0	0.0
TRM29659.00	NONE	ADIS	07	180	16	001	927	-0.2	-0.4	0.4	0.0	0.0	0.0
TRM29659.00	NONE	BAKO	02	081	02	114	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM29659.00	NONE	BRST	98	304	06	206	955	-0.0	-0.5	0.1	0.0	0.0	0.1
TRM29659.00	NONE	CAGL	01	192	16	001	881	-0.1	-0.4	0.0	0.0	0.0	0.0
TRM29659.00	NONE	EBRE	97	105	14	343	986	-0.1	-0.5	-0.0	0.0	0.0	0.0
TRM29659.00	NONE	ESCU	13	296	16	001	758	0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	NONE	FUNC	06	202	08	093	134	-0.2	-0.4	-0.3	0.0	0.0	0.0
TRM29659.00	NONE	GANP	03	182	06	236	486	0.0	-0.5	0.2	0.0	0.0	0.0
TRM29659.00	NONE	GENO	98	204	16	001	990	-0.1	-0.5	0.0	0.0	0.0	0.1
TRM29659.00	NONE	GLSV	97	350	07	316	909	0.0	-0.5	0.2	0.0	0.0	0.0
TRM29659.00	NONE	GMAS	08	043	16	001	952	-0.2	-0.4	0.2	0.0	0.0	0.0
TRM29659.00	NONE	GODE	12	206	12	215	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM29659.00	NONE	GODZ	12	206	12	215	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM29659.00	NONE	GRAS	03	113	04	294	449	-0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	NONE	GRAZ	05	081	10	138	974	0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	NONE	HARB	99	152	11	334	976	-0.1	-0.5	0.2	0.0	0.0	0.0
TRM29659.00	NONE	HARK	99	152	16	001	395	-0.1	-0.5	0.0	0.0	0.0	0.0
TRM29659.00	NONE	HOFN	01	264	07	265	986	0.0	-0.5	0.6	0.0	0.0	0.0
TRM29659.00	NONE	INEG	00	037	16	001	975	-0.1	-0.4	0.3	0.0	0.0	0.1
TRM29659.00	NONE	KERG	99	091	08	249	927	-0.4	-0.4	0.2	0.0	0.0	0.0
TRM29659.00	NONE	KHAR	02	329	08	317	795	-0.0	-0.5	0.2	0.0	0.0	0.0
TRM29659.00	NONE	LEIJ	00	139	10	182	972	0.0	-0.5	0.2	0.0	0.0	0.0
TRM29659.00	NONE	LIND	98	207	16	001	992	-0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	NONE	MARS	98	197	03	072	973	-0.1	-0.4	0.0	0.0	0.0	0.0
TRM29659.00	NONE	MAT1	09	154	16	001	950	-0.1	-0.4	0.0	0.0	0.0	0.0
TRM29659.00	NONE	MATE	99	169	08	329	841	-0.1	-0.4	0.0	0.0	0.0	0.0
TRM29659.00	NONE	MEDI	01	093	16	001	976	-0.1	-0.5	0.0	0.0	0.0	0.0
TRM29659.00	NONE	NKLG	00	041	10	123	856	-0.2	-0.4	-0.2	0.1	0.0	0.1
TRM29659.00	NONE	NOT1	00	259	16	001	931	-0.1	-0.4	-0.0	0.0	0.0	0.1
TRM29659.00	NONE	NOUM	97	342	01	327	950	-0.1	-0.5	0.3	0.1	0.0	0.1
TRM29659.00	NONE	PADO	01	325	13	256	976	-0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	NONE	POLV	01	116	13	044	911	0.0	-0.5	0.2	0.0	0.0	0.0
TRM29659.00	NONE	POVE	05	287	15	202	980	-0.1	-0.5	0.4	0.0	0.0	0.0
TRM29659.00	NONE	RECF	99	187	07	127	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM29659.00	NONE	RIOP	07	121	09	181	393	-0.2	-0.5	0.0	0.0	0.0	0.2
TRM29659.00	NONE	SFER	97	365	14	030	934	-0.1	-0.4	0.0	0.0	0.0	0.0
TRM29659.00	NONE	SHE2	12	278	16	001	967	0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	NONE	TABL	95	276	95	292	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM29659.00	NONE	TEHN	99	335	04	016	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM29659.00	NONE	THTI	98	326	04	012	973	-0.0	-0.5	0.3	0.0	0.0	0.1
TRM29659.00	NONE	TLSE	03	335	10	055	853	-0.1	-0.4	-0.1	0.0	0.0	0.0
TRM29659.00	NONE	TSK2	11	182	11	242	57	-0.1	-0.4	0.2	0.0	0.0	0.0
TRM29659.00	NONE	UPAD	97	357	16	001	987	-0.1	-0.5	0.3	0.0	0.0	0.1
TRM29659.00	NONE	UZHL	99	035	10	354	903	-0.0	-0.5	-0.1	0.0	0.0	0.1
TRM29659.00	NONE	VENE	01	032	05	228	942	0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	NONE	WTZJ	05	214	09	350	981	0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	NONE	WTZT	00	019	05	135	970	0.0	-0.5	0.2	0.0	0.0	0.0
TRM29659.00	NONE	YEBE	99	322	16	001	990	-0.1	-0.5	-0.0	0.0	0.0	0.0
TRM29659.00	NONE	ZIMM	98	310	16	001	938	-0.0	-0.5	0.1	0.0	0.0	0.0
TRM29659.00	DOME	AIRA	03	050	12	214	986	-0.1	-0.4	-0.1	0.0	0.0	0.1
TRM29659.00	DOME	CCJ2	06	078	09	052	294	-0.1	-0.4	0.3	0.0	0.0	0.0
TRM29659.00	DOME	CCJM	01	056	11	067	990	-0.1	-0.4	0.3	0.0	0.0	0.0
TRM29659.00	DOME	DAEJ	99	078	10	257	986	-0.1	-0.4	0.1	0.0	0.0	0.0
TRM29659.00	DOME	MCIL	02	342	13	017	943	-0.1	-0.4	0.3	0.0	0.0	0.0
TRM29659.00	DOME	STK2	03	143	11	341	994	-0.0	-0.5	0.2	0.0	0.0	0.0
TRM29659.00	DOME	SUWN	00	045	13	206	967	-0.2	-0.4	-0.2	0.0	0.0	0.1
TRM29659.00	DOME	TSK2	03	127	11	182	988	-0.1	-0.4	0.2	0.0	0.0	0.0
TRM29659.00	LEIS	EPRT	04	192	14	177	939	-0.0	-0.5	0.1	0.0	0.0	0.0

TRM29659.00	LEIS	MQZG	99	270	01	246	214	-0.2	-0.4	0.3	0.1	0.0	0.1
TRM29659.00	UNKN	NOTO	98	211	00	253	612	-0.1	-0.4	-0.3	0.0	0.0	0.0
TRM29659.00	SCIS	BAMF	05	242	16	001	994	1.3	0.6	-1.0	0.0	0.0	0.0
TRM29659.00	SCIS	CCJ2	09	060	12	053	978	1.1	0.8	-1.4	0.0	0.0	0.0
TRM29659.00	SCIS	CHWK	08	025	16	001	996	1.2	0.6	-0.9	0.0	0.0	0.0
TRM29659.00	SCIS	RABT	00	138	16	001	967	1.1	0.7	-1.3	0.0	0.0	0.0
TRM29659.00	SCIS	SLOR	00	263	16	001	549	1.3	0.7	-1.2	0.0	0.0	0.1
TRM29659.00	SCIS	UCLU	07	124	16	001	996	1.2	0.6	-0.9	0.0	0.0	0.0
TRM57971.00	NONE	ABMF	12	024	16	001	935	-0.8	-0.1	6.2	0.1	0.0	0.1
TRM57971.00	NONE	AJAC	12	340	16	001	985	-0.4	-0.0	6.3	0.1	0.0	0.1
TRM57971.00	NONE	AUCK	11	059	16	001	969	-0.7	-0.1	6.7	0.1	0.0	0.1
TRM57971.00	NONE	BRST	11	299	16	001	972	-0.1	0.1	6.4	0.0	0.0	0.1
TRM57971.00	NONE	CHOF	09	229	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM57971.00	NONE	CIT1	13	330	16	001	728	-0.4	-0.3	6.0	0.1	0.0	0.2
TRM57971.00	NONE	CRFP	13	346	16	001	711	-0.5	-0.3	5.9	0.1	0.0	0.1
TRM57971.00	NONE	CUUT	15	013	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM57971.00	NONE	DUND	10	328	16	001	987	-0.8	-0.2	6.8	0.0	0.0	0.1
TRM57971.00	NONE	EBRE	14	343	16	001	369	-0.3	-0.1	6.3	0.0	0.0	0.0
TRM57971.00	NONE	GRAC	13	211	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM57971.00	NONE	ISBA	11	278	16	001	932	-0.4	-0.2	5.6	0.1	0.0	0.1
TRM57971.00	NONE	LLAG	10	147	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM57971.00	NONE	LMMF	13	175	16	001	897	-0.8	-0.1	6.2	0.1	0.0	0.1
TRM57971.00	NONE	MARS	12	270	16	001	989	-0.3	-0.0	6.4	0.1	0.0	0.1
TRM57971.00	NONE	MQZG	11	040	16	001	988	-0.8	-0.2	6.7	0.0	0.0	0.1
TRM57971.00	NONE	PARC	09	305	16	001	978	-1.0	-0.2	6.8	0.0	0.0	0.0
TRM57971.00	NONE	RDSO	12	137	13	066	253	-0.7	-0.1	6.1	0.1	0.0	0.1
TRM57971.00	NONE	SPTU	14	206	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM57971.00	NONE	SFUF	09	343	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM57971.00	NONE	TABL	13	325	16	001	747	-0.4	-0.3	6.1	0.1	0.0	0.1
TRM57971.00	NONE	UCAL	13	233	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM57971.00	NONE	UNB3	12	153	16	001	292	-0.1	0.1	6.6	0.0	0.0	0.1
TRM57971.00	NONE	UNBJ	12	153	16	001	995	-0.1	0.1	6.6	0.0	0.0	0.1
TRM57971.00	NONE	UNBN	12	153	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM57971.00	NONE	WGTM	10	318	16	001	985	-0.7	-0.1	6.7	0.0	0.0	0.1
TRM57971.00	NONE	WIDC	13	323	16	001	751	-0.5	-0.3	6.0	0.0	0.0	0.1
TRM59800.00	NONE	AREG	13	011	16	001	914	1.9	-1.4	-7.2	0.1	0.0	0.1
TRM59800.00	NONE	ASCG	15	205	16	001	84	1.4	-1.5	-7.2	0.1	0.0	0.1
TRM59800.00	NONE	BJCO	09	085	16	001	944	1.0	-1.4	-7.1	0.1	0.0	0.1
TRM59800.00	NONE	BRAZ	12	262	15	105	420	1.7	-1.4	-7.0	0.1	0.0	0.1
TRM59800.00	NONE	CAGS	12	235	16	001	974	1.9	-1.5	-7.3	0.0	0.0	0.1
TRM59800.00	NONE	CGGN	10	279	12	149	164	1.0	-1.4	-7.3	0.1	0.0	0.1
TRM59800.00	NONE	CHPG	13	086	16	001	941	1.6	-1.4	-7.2	0.1	0.0	0.1
TRM59800.00	NONE	CKIS	11	277	16	001	839	1.6	-1.4	-7.4	0.0	0.0	0.1
TRM59800.00	NONE	CPVG	13	295	16	001	618	1.3	-1.4	-7.2	0.1	0.0	0.1
TRM59800.00	NONE	DAEJ	10	327	11	012	49	1.6	-1.3	-7.5	0.0	0.0	0.1
TRM59800.00	NONE	DJIG	13	345	16	001	539	1.3	-1.3	-7.0	0.1	0.0	0.1
TRM59800.00	NONE	DYNG	11	132	16	001	975	1.6	-1.3	-7.6	0.0	0.0	0.1
TRM59800.00	NONE	FTNA	12	141	16	001	974	1.7	-1.5	-7.3	0.1	0.0	0.1
TRM59800.00	NONE	HARB	11	334	16	001	922	1.5	-1.5	-7.5	0.0	0.0	0.1
TRM59800.00	NONE	JFNG	12	284	16	001	990	1.6	-1.3	-7.6	0.0	0.0	0.1
TRM59800.00	NONE	KARR	10	139	16	001	986	1.7	-1.4	-7.4	0.1	0.0	0.1
TRM59800.00	NONE	KIRI	11	324	16	001	938	1.3	-1.4	-8.0	0.2	0.1	0.7
TRM59800.00	NONE	LAUT	12	116	16	001	981	1.7	-1.5	-7.4	0.1	0.0	0.1
TRM59800.00	NONE	MAJU	12	085	13	286	444	1.0	-1.4	-7.5	0.1	0.0	0.1
TRM59800.00	NONE	MAYG	13	325	16	001	704	1.8	-1.4	-7.0	0.1	0.0	0.1
TRM59800.00	NONE	MCHL	14	099	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	NONE	MRO1	13	296	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	NONE	NIUM	14	072	16	001	597	1.6	-1.5	-7.4	0.0	0.0	0.1
TRM59800.00	NONE	OWNG	14	326	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	NONE	PERT	12	297	16	001	967	1.5	-1.5	-7.5	0.1	0.0	0.1
TRM59800.00	NONE	PNGM	12	252	16	001	976	1.3	-1.4	-7.3	0.1	0.0	0.1
TRM59800.00	NONE	POHN	11	341	16	001	889	1.1	-1.4	-7.4	0.1	0.0	0.1
TRM59800.00	NONE	POVE	15	202	16	001	161	1.6	-1.4	-7.0	0.1	0.0	0.1
TRM59800.00	NONE	PTGG	14	339	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	NONE	PTVL	12	288	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	NONE	RECF	12	241	16	001	988	1.5	-1.4	-7.2	0.1	0.0	0.1
TRM59800.00	NONE	SALU	13	162	16	001	912	1.6	-1.3	-7.3	0.1	0.0	0.1
TRM59800.00	NONE	SAMO	12	122	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	NONE	SEYG	12	172	16	001	986	1.6	-1.3	-7.3	0.1	0.0	0.2
TRM59800.00	NONE	SOLO	12	151	15	069	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	NONE	STR2	11	342	16	001	986	1.3	-1.6	-7.1	0.0	0.0	0.1
TRM59800.00	NONE	SYOG	13	357	14	033	38	0.8	-1.2	-7.3	0.0	0.0	0.0
TRM59800.00	NONE	TLSE	10	055	16	001	941	1.8	-1.5	-7.7	0.0	0.0	0.1
TRM59800.00	NONE	TLSG	14	043	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	NONE	TSK2	12	157	16	001	989	1.6	-1.3	-7.5	0.0	0.0	0.1

TRM59800.00	NONE	TUVA	12	031	16	001	970	1.6	-1.5	-7.1	0.1	0.0	0.1
TRM59800.00	NONE	XMIS	14	177	16	001	483	1.9	-1.4	-7.0	0.1	0.0	0.1
TRM59800.00	NONE	ZIM2	09	132	16	001	982	1.8	-1.5	-7.5	0.0	0.0	0.1
TRM59800.00	NONE	ZIM3	09	132	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	DOME	DAEJ	10	258	10	326	57	1.6	-1.3	-7.5	0.0	0.0	0.0
TRM59800.00	DOME	STK2	11	341	12	045	68	1.8	-1.4	-7.4	0.0	0.0	0.1
TRM59800.00	ENCL	WUHN	11	082	13	322	685	1.6	-1.3	-8.0	0.0	0.0	0.1
TRM59800.00	SCIS	AIRA	12	214	16	001	941	1.5	-1.0	-6.6	0.1	0.0	0.2
TRM59800.00	SCIS	ALBH	15	258	16	001	103	2.3	-1.1	-5.5	0.1	0.0	0.1
TRM59800.00	SCIS	BJCO	08	325	09	085	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	SCIS	BJFS	10	142	15	330	981	1.9	-1.0	-5.3	0.1	0.0	0.1
TRM59800.00	SCIS	BSHM	09	201	16	001	824	1.7	-0.9	-5.9	0.1	0.0	0.1
TRM59800.00	SCIS	CCJ2	12	053	16	001	982	1.4	-0.9	-6.0	0.1	0.0	0.1
TRM59800.00	SCIS	CUT0	10	124	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	SCIS	DAE2	14	112	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	SCIS	DAEJ	11	012	16	001	907	1.8	-1.0	-5.8	0.0	0.0	0.2
TRM59800.00	SCIS	DRAO	13	070	16	001	984	2.3	-1.1	-5.6	0.1	0.0	0.1
TRM59800.00	SCIS	GMSD	11	208	16	001	971	1.5	-0.9	-5.8	0.1	0.0	0.1
TRM59800.00	SCIS	HOLB	12	123	16	001	981	2.3	-1.1	-5.6	0.1	0.0	0.1
TRM59800.00	SCIS	JPRE	15	338	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	SCIS	KZN2	12	055	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	SCIS	METG	12	185	16	001	984	2.4	-0.9	-4.8	0.1	0.0	0.1
TRM59800.00	SCIS	NKLG	10	125	16	001	976	1.3	-0.9	-4.7	0.2	0.0	0.1
TRM59800.00	SCIS	RBAY	12	337	16	001	429	1.5	-1.0	-6.0	0.1	0.0	0.1
TRM59800.00	SCIS	RDSO	13	066	16	001	965	1.3	-0.9	-5.1	0.1	0.0	0.1
TRM59800.00	SCIS	RGDG	13	171	16	001	862	0.8	-1.0	-6.1	0.0	0.0	0.1
TRM59800.00	SCIS	SEJN	12	046	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
TRM59800.00	SCIS	STK2	12	045	16	001	987	2.1	-1.1	-5.5	0.1	0.0	0.1
TRM59800.00	SCIS	SYOG	14	033	16	001	668	0.7	-0.7	-5.8	0.1	0.0	0.1
TRM59800.00	SCIS	TONG	11	250	16	001	953	1.9	-1.1	-6.4	0.1	0.0	0.2
TRM59800.00	SCIS	TRO1	10	207	16	001	843	2.2	-0.8	-3.9	0.1	0.0	0.1
TRM59800.00	SCIS	VNDP	15	208	16	001	157	1.8	-1.0	-5.6	0.1	0.0	0.1
TRM59800.00	SCIS	WILL	13	295	16	001	789	2.3	-1.1	-5.5	0.1	0.0	0.1
TRM59800.00	SCIS	YONS	10	305	16	001	985	1.8	-1.0	-5.6	0.1	0.0	0.1

4) Updated copied calibrations

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AOAD/M_TA_NGS	NONE	FORT	06	058	06	098	36	0.1	-0.5	-0.5	0.1	0.0	0.1
AOAD/M_TA_NGS	NONE	HNPT	99	026	00	131	404	0.2	-0.4	0.2	0.0	0.0	0.0
AOAD/M_TA_NGS	NONE	PIN1	95	214	01	059	973	0.2	-0.4	0.1	0.0	0.0	0.1
AOAD/M_TA_NGS	NONE	STO3	95	207	00	103	978	0.2	-0.4	0.0	0.0	0.0	0.1
AOAD/M_TA_NGS	NONE	WES2	01	208	14	175	938	0.2	-0.5	0.0	0.0	0.0	0.0
AOAD/M_TA_NGS	DOME	FORT	00	080	06	058	933	0.2	-0.5	-0.4	0.1	0.0	0.1
AOAD/M_TA_NGS	SNOW	JAMA	99	266	16	001	871	0.4	-0.4	-0.2	0.0	0.0	0.0
ASH700936A_M	NONE	AJAC	00	022	08	331	888	1.9	1.5	6.8	0.1	0.0	0.1
ASH700936A_M	NONE	BRAN	95	139	95	199	55	1.6	1.5	6.6	0.0	0.0	0.2
ASH700936A_M	NONE	CAGS	00	032	11	192	993	2.2	1.5	7.5	0.1	0.0	0.3
ASH700936A_M	NONE	CMP9	95	173	95	216	41	1.5	1.5	6.9	0.1	0.1	0.2
ASH700936A_M	NONE	DAM1	95	215	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH700936A_M	NONE	DAM2	95	235	16	001	985	1.5	1.5	7.2	0.1	0.0	0.2
ASH700936A_M	NONE	HOLC	95	146	99	342	852	1.7	1.5	6.5	0.1	0.0	0.1
ASH700936A_M	NONE	LAE1	97	209	16	001	978	1.9	1.4	4.5	0.2	0.0	0.2
ASH700936A_M	NONE	LONG	95	139	97	002	545	1.5	1.5	6.9	0.1	0.0	0.3
ASH700936A_M	NONE	RESO	01	255	16	001	954	2.0	1.1	4.2	0.1	0.0	0.1
ASH700936A_M	SCIS	CMP9	08	270	11	092	653	1.7	1.5	6.7	0.1	0.0	0.2
ASH700936A_M	SCPL	CHIL	95	150	12	129	987	1.7	1.4	6.4	0.1	0.0	0.2
ASH700936A_M	SCPL	CLAR	95	139	12	047	986	1.7	1.4	6.4	0.1	0.0	0.2
ASH700936A_M	SCPL	CMP9	95	216	08	267	985	1.6	1.5	7.0	0.1	0.0	0.1
ASH700936A_M	SCPL	LEEP	95	139	16	001	955	1.8	1.4	6.3	0.1	0.0	0.1
ASH700936A_M	SCPL	LONG	97	002	16	001	958	2.0	1.7	7.3	0.1	0.1	0.4
ASH700936E_C	NONE	BILL	97	322	99	161	510	1.0	1.4	7.6	0.1	0.0	0.1
ASH700936E_C	NONE	HOLC	99	342	01	052	383	1.1	1.3	8.0	0.1	0.0	0.2
ASH700936E_C	NONE	PVEP	98	003	16	001	801	1.0	1.4	7.6	0.1	0.0	0.1
ASH700936E_C	NONE	SNI1	98	230	00	354	756	1.0	1.4	7.6	0.1	0.0	0.2
ASH700936F_C	NONE	GRAC	02	276	10	222	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701073.3	NONE	GRAC	00	092	02	275	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701073.3	NONE	REUN	98	349	08	338	945	0.9	-0.4	-4.8	0.1	0.1	0.4
ASH701073.3	SNOW	GOPE	99	308	00	206	214	1.1	0.0	-3.0	0.1	0.0	0.2
ASH701073.3	SNOW	WROC	00	136	01	024	222	0.9	-0.1	-2.6	0.1	0.1	0.3
ASH701945B_M	NONE	AUCK	01	301	05	307	986	2.9	2.4	7.5	0.0	0.0	0.1
ASH701945B_M	NONE	BILL	99	161	06	179	936	2.7	2.4	8.0	0.1	0.0	0.1

ASH701945B_M	NONE	BRUS	00	118	12	045	986	2.6	2.1	8.7	0.1	0.0	0.2
ASH701945B_M	NONE	CEBR	05	241	12	356	963	2.8	2.4	8.6	0.0	0.0	0.1
ASH701945B_M	NONE	CGGN	12	155	16	001	578	2.8	2.3	7.2	0.1	0.0	0.1
ASH701945B_M	NONE	CHAT	01	332	12	066	989	3.1	2.4	7.9	0.1	0.0	0.1
ASH701945B_M	NONE	FAA1	05	049	12	339	992	2.7	2.3	6.7	0.1	0.0	0.1
ASH701945B_M	NONE	GLPS	12	318	12	341	22	2.6	2.3	7.3	0.1	0.0	0.0
ASH701945B_M	NONE	GUAO	01	322	16	001	976	2.6	2.3	8.2	0.0	0.0	0.1
ASH701945B_M	NONE	HOLC	01	052	07	226	973	2.7	2.4	8.1	0.1	0.0	0.1
ASH701945B_M	NONE	LROC	01	327	16	001	940	2.7	2.2	8.7	0.0	0.0	0.1
ASH701945B_M	NONE	MSKU	01	059	16	001	983	2.9	2.3	7.1	0.1	0.0	0.2
ASH701945B_M	DOME	SEY1	07	180	11	214	982	2.8	2.4	8.1	0.1	0.0	0.2
ASH701945B_M	ENCL	BLYT	00	090	16	001	990	2.6	2.4	8.0	0.1	0.0	0.1
ASH701945B_M	ENCL	TRAK	09	091	11	145	759	2.7	2.3	8.4	0.1	0.0	0.1
ASH701945B_M	JPLA	GUAM	06	142	16	001	968	2.8	2.3	8.0	0.1	0.0	0.2
ASH701946.2	NONE	HERP	01	162	16	001	0	n/a	n/a	n/a	n/a	n/a	n/a
ASH701946.2	NONE	HERT	03	071	07	338	976	1.7	-0.3	8.8	0.1	0.0	0.1
TRM59800.80	DOME	MCIL	13	017	15	057	744	1.4	-1.3	-7.6	0.1	0.0	0.1
TRM59800.80	DOME	SUWN	13	206	16	001	744	1.6	-1.3	-7.7	0.0	0.0	0.1
TRM59800.80	SCIS	MCIL	15	057	16	001	301	1.3	-0.9	-5.6	0.1	0.0	0.1
TRM59800.80	SCIS	VNDP	12	033	15	208	894	1.8	-1.0	-5.8	0.1	0.0	0.1

Latitude dependent model of antenna phase center model changes. These values are from ftp://igs-rf.ign.fr/pub/IGS14/lat_models.txt

```
# LATITUDE-DEPENDENT MODELS OF STATION COORDINATE CHANGES EXPECTED
# FROM THE igs08.atx->igs14.atx GROUND ANTENNA CALIBRATION UPDATES
# =====
#
# Method For each antenna type whose calibration was updated, two sets of station
# coordinates were estimated using the Napeos software, a static PPP strategy
# and 24h of data one set using the igs08.atx calibration of the antenna, the
# other using its igs14.atx calibration. The same set of 384 stations was used
# for all antenna types. It was assumed in each case that all 384 stations were
# equipped with the antenna of interest, which was of course not true. Both sets
# of coordinates were then differentiated. Latitude-dependent functions were
# finally fitted to the sets of East, North and Up position differences.
#
# Model The generic latitude-dependent function used as model is the following
# 
$$dx = a + c1*\cos(\phi) + s1*\sin(\phi) + c2*\cos(2*\phi) + s2*\sin(2*\phi) + c4*\cos(4*\phi) + s4*\sin(4*\phi)$$

# with phi the latitude in radians and dx denoting either an East, North or Up
# "igs14.atx-igs08.atx" position shift in mm. In general, not all terms of the
# model were retained, but only the most significant ones. Coefficients of the
# fitted models as well as WRMS of the fits are given in the table below.
#
# Warning For several reasons, the actual coordinate changes due to the
# igs08.atx->igs14.atx calibration updates may significantly differ from those
# predicted by the models below
# - The models were obtained using data from stations not actually equipped with
# the antennas of interest and only 24h of data.
# - The models do not always accurately fit to the position difference sets.
# - The impact of antenna calibration changes on station coordinates does not
# only depend on latitude but also on other parameters such as station
# environment (masks), elevation cut-off angle...
#
# Also remember that the total coordinate changes expected from the switch from
# IGS08/igs08.atx to IGS14/igs14.atx are the sum of the antenna calibration
# update effects and of the global ITRF2008 to ITRF2014 datum change.
#
# Other Plots of the coordinate difference sets obtained for each antenna type can be
# found at ftp //igs-rf.ign.fr/pub/IGS14/lat_models and
# ftp //igs-rf.ensg.eu/pub/IGS14/lat_models.
```

Antenna type	axis	a	c1	s1	c2	s2	c4	s4	WRMS
AERAT2775_43	SPKE East	-4.48	0.00	0.00	0.19	1.60	-0.17	-1.49	0.39
AERAT2775_43	SPKE North	2.93	0.00	0.00	0.07	-0.55	-0.04	1.00	0.19
AERAT2775_43	SPKE Up	-1.24	0.00	0.00	-2.44	-0.01	-1.43	-0.15	0.60
AOAD/M_T	DUTD East	5.47	-7.01	-0.92	2.80	0.31	0.00	0.00	0.53
AOAD/M_T	DUTD North	2.50	0.00	0.00	0.30	0.15	-0.07	-0.49	0.31
AOAD/M_T	DUTD Up	-51.34	98.85	-0.76	-35.11	1.30	0.00	0.00	2.30
AOAD/M_T	NONE East	0.31	0.00	0.00	-0.01	-0.18	-0.01	0.16	0.05
AOAD/M_T	NONE North	-0.48	0.00	0.00	0.01	-0.07	-0.03	0.14	0.02
AOAD/M_T	NONE Up	0.54	-0.71	-0.09	0.00	0.00	-0.27	0.01	0.06
AOAD/M_TA_NGS	NONE East	0.31	0.00	0.00	-0.01	-0.18	-0.01	0.16	0.05
AOAD/M_TA_NGS	NONE North	-0.48	0.00	0.00	0.01	-0.07	-0.03	0.14	0.02
AOAD/M_TA_NGS	NONE Up	0.54	-0.71	-0.09	0.00	0.00	-0.27	0.01	0.06
ASH700936A_M	NONE East	1.48	0.00	0.00	0.07	0.45	-0.11	-0.49	0.13
ASH700936A_M	NONE North	1.20	0.34	-0.10	0.00	0.00	-0.04	0.07	0.10
ASH700936A_M	NONE Up	5.56	0.00	0.00	-0.10	0.09	-1.21	0.25	0.37
ASH700936C_M	SNOW East	-0.46	0.00	0.00	0.01	0.11	0.03	-0.11	0.05
ASH700936C_M	SNOW North	0.08	0.00	0.00	0.02	-0.03	0.01	0.05	0.02
ASH700936C_M	SNOW Up	-1.51	5.30	-0.14	-2.02	0.23	0.00	0.00	0.14
ASH700936D_M	SCIS East	2.07	-0.30	-0.27	0.00	0.00	0.00	0.00	0.19
ASH700936D_M	SCIS North	1.93	0.00	0.00	-0.15	0.09	0.04	-0.27	0.12
ASH700936D_M	SCIS Up	31.59	-40.09	-1.48	15.31	1.03	0.00	0.00	0.65
ASH700936E	NONE East	0.94	0.05	0.05	0.00	0.00	0.00	0.00	0.04
ASH700936E	NONE North	-0.27	-0.08	-0.01	0.00	0.00	0.04	-0.02	0.02
ASH700936E	NONE Up	-2.95	5.36	0.14	-1.86	0.09	0.00	0.00	0.14
ASH700936E	SCIS East	0.61	-0.14	0.53	0.00	0.00	0.00	0.00	0.22
ASH700936E	SCIS North	-2.88	2.24	-0.32	-0.75	-0.01	0.00	0.00	0.12
ASH700936E	SCIS Up	-27.99	49.16	-1.74	-18.04	1.34	0.00	0.00	0.77
ASH700936E_C	NONE East	1.11	0.00	0.00	0.02	-0.17	-0.09	0.06	0.11

ASH700936E_C	NONE	North	1.27	0.00	0.00	0.08	-0.23	-0.08	0.35	0.07
ASH700936E_C	NONE	Up	7.29	0.00	0.00	-0.85	0.00	-1.17	0.27	0.23
ASH700936F_C	NONE	East	1.11	0.00	0.00	0.02	-0.17	-0.09	0.06	0.11
ASH700936F_C	NONE	North	1.27	0.00	0.00	0.08	-0.23	-0.08	0.35	0.07
ASH700936F_C	NONE	Up	7.29	0.00	0.00	-0.85	0.00	-1.17	0.27	0.23
ASH700936F_C	SNOW	East	1.43	0.00	0.00	0.06	0.18	0.00	0.00	0.23
ASH700936F_C	SNOW	North	0.97	0.35	-0.19	0.00	0.00	-0.06	0.10	0.15
ASH700936F_C	SNOW	Up	-21.41	48.56	-1.34	-18.22	1.11	0.00	0.00	1.03
ASH701073.1	NONE	East	0.83	0.10	-0.09	0.00	0.00	-0.19	0.07	0.13
ASH701073.1	NONE	North	-0.18	0.10	-0.24	0.00	0.00	-0.17	0.32	0.09
ASH701073.1	NONE	Up	-2.20	-2.17	-0.58	0.00	0.00	-1.13	0.12	0.31
ASH701073.1	SCIS	East	0.67	0.00	0.00	0.07	0.11	-0.18	-0.02	0.22
ASH701073.1	SCIS	North	-0.21	0.39	-0.33	0.00	0.00	-0.28	0.09	0.17
ASH701073.1	SCIS	Up	-47.37	77.60	-2.95	-29.41	1.82	0.00	0.00	0.92
ASH701073.1	SNOW	East	0.83	0.00	0.00	0.13	-0.25	-0.29	0.33	0.28
ASH701073.1	SNOW	North	-0.40	0.21	-0.17	0.00	0.00	-0.21	0.11	0.13
ASH701073.1	SNOW	Up	-34.37	58.34	-1.87	-22.17	1.00	0.00	0.00	1.08
ASH701073.3	NONE	East	0.83	0.10	-0.09	0.00	0.00	-0.19	0.07	0.13
ASH701073.3	NONE	North	-0.18	0.10	-0.24	0.00	0.00	-0.17	0.32	0.09
ASH701073.3	NONE	Up	-2.20	-2.17	-0.58	0.00	0.00	-1.13	0.12	0.31
ASH701945B_M	NONE	East	2.77	-0.01	-0.42	0.00	0.00	-0.07	0.11	0.13
ASH701945B_M	NONE	North	2.14	0.23	-0.13	0.00	0.00	-0.03	0.12	0.06
ASH701945B_M	NONE	Up	-0.23	11.89	-1.05	-4.86	0.96	0.00	0.00	0.29
ASH701945B_M	SCIS	East	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.17
ASH701945B_M	SCIS	North	-0.91	0.00	0.00	-0.21	0.08	0.13	-0.44	0.12
ASH701945B_M	SCIS	Up	5.45	3.31	0.11	0.00	0.00	-0.18	-0.18	0.41
ASH701945C_M	NONE	East	-0.85	0.00	0.00	0.11	0.26	-0.22	-0.37	0.20
ASH701945C_M	NONE	North	1.38	0.00	0.00	-0.10	0.11	0.05	-0.19	0.09
ASH701945C_M	NONE	Up	-0.92	0.84	0.19	0.00	0.00	0.00	0.00	0.50
ASH701945C_M	SCIS	East	-0.08	0.00	0.00	-0.10	-0.70	0.02	0.42	0.19
ASH701945C_M	SCIS	North	1.95	0.00	0.00	-0.21	0.06	0.23	-0.15	0.10
ASH701945C_M	SCIS	Up	7.04	-14.89	1.14	5.80	-0.52	0.00	0.00	0.45
ASH701945D_M	NONE	East	2.10	0.00	0.00	0.12	-0.39	-0.21	0.19	0.18
ASH701945D_M	NONE	North	1.07	0.00	0.00	0.13	-0.42	-0.15	0.75	0.12
ASH701945D_M	NONE	Up	-11.02	20.52	-0.47	-9.79	0.20	0.00	0.00	0.34
ASH701945D_M	SCIS	East	2.07	0.00	0.00	0.07	-0.43	-0.27	0.27	0.17
ASH701945D_M	SCIS	North	1.33	0.00	0.00	-0.31	-0.04	0.23	0.05	0.08
ASH701945D_M	SCIS	Up	-0.49	-1.58	0.63	0.00	0.00	0.17	0.22	0.44
ASH701945E_M	SCIS	East	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.17
ASH701945E_M	SCIS	North	-0.91	0.00	0.00	-0.21	0.08	0.13	-0.44	0.12
ASH701945E_M	SCIS	Up	5.45	3.31	0.11	0.00	0.00	-0.18	-0.18	0.41
ASH701945G_M	NONE	East	0.55	0.00	0.00	0.04	-0.58	-0.22	0.34	0.18
ASH701945G_M	NONE	North	0.69	0.00	0.00	0.15	-0.26	-0.21	0.41	0.09
ASH701945G_M	NONE	Up	-6.08	14.36	-1.25	-6.42	0.63	0.00	0.00	0.37
ASH701945G_M	SCIS	East	1.21	0.00	0.00	-0.05	-0.70	-0.04	0.48	0.20
ASH701945G_M	SCIS	North	-0.13	0.00	0.00	-0.26	-0.07	0.09	0.19	0.13
ASH701945G_M	SCIS	Up	-2.00	0.00	0.00	-1.06	-0.06	0.00	0.00	0.51
ASH701946.2	NONE	East	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.12
ASH701946.2	NONE	North	-0.42	0.20	-0.19	0.00	0.00	-0.08	0.07	0.07
ASH701946.2	NONE	Up	-2.49	16.13	-0.19	-6.31	-0.16	0.00	0.00	0.27
ASH701946.3	NONE	East	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.12
ASH701946.3	NONE	North	-0.42	0.20	-0.19	0.00	0.00	-0.08	0.07	0.07
ASH701946.3	NONE	Up	-2.49	16.13	-0.19	-6.31	-0.16	0.00	0.00	0.27
JAVRINGANT_DM	NONE	East	-2.07	0.00	0.00	0.09	0.82	-0.02	-0.89	0.20
JAVRINGANT_DM	NONE	North	1.00	0.00	0.00	0.00	0.00	0.06	-0.00	0.09
JAVRINGANT_DM	NONE	Up	2.28	-8.83	0.65	3.12	-0.40	0.00	0.00	0.28
LEIAR10	NONE	East	-1.12	-1.85	0.57	0.72	-0.66	0.00	0.00	0.28
LEIAR10	NONE	North	1.23	-1.68	-0.47	0.00	0.00	0.54	0.14	0.17
LEIAR10	NONE	Up	3.71	-5.12	9.02	1.33	-6.54	0.00	0.00	0.64
LEIAR20	LEIM	East	-1.34	0.04	0.06	0.00	0.00	0.03	-0.05	0.05
LEIAR20	LEIM	North	-0.39	0.04	0.07	0.00	0.00	0.01	-0.06	0.03
LEIAR20	LEIM	Up	0.58	0.00	0.00	0.10	0.04	0.20	0.02	0.13
LEIAR25	LEIT	East	1.50	0.00	0.00	-0.05	-0.38	-0.04	0.28	0.21
LEIAR25	LEIT	North	0.62	0.00	0.00	0.13	0.51	0.07	-0.78	0.11
LEIAR25	LEIT	Up	-9.86	0.00	0.00	1.72	0.54	1.72	0.22	0.45
LEIAR25.R3	LEIT	East	-0.39	0.00	0.00	0.02	0.28	-0.00	-0.31	0.08
LEIAR25.R3	LEIT	North	-0.65	0.00	0.00	0.09	-0.11	-0.10	0.22	0.05
LEIAR25.R3	LEIT	Up	2.02	-8.52	-1.15	2.62	0.63	0.00	0.00	0.27
LEIAR25.R3	NONE	East	-0.71	0.00	0.00	0.06	0.14	0.03	-0.16	0.09
LEIAR25.R3	NONE	North	-1.71	0.00	0.00	0.06	-0.16	-0.06	0.20	0.05
LEIAR25.R3	NONE	Up	-11.74	19.78	-0.27	-7.81	0.13	0.00	0.00	0.25
LEIAR25.R4	LEIT	East	0.79	0.00	0.00	0.02	0.22	-0.05	-0.16	0.12
LEIAR25.R4	LEIT	North	-0.36	0.00	0.00	0.00	0.00	0.04	0.03	0.05

LEIAR25.R4	LEIT	Up	15.11	-20.38	0.03	7.53	0.07	0.00	0.00	0.32
LEIAR25.R4	NONE	East	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.09
LEIAR25.R4	NONE	North	0.34	0.00	0.00	-0.10	0.09	0.14	-0.18	0.05
LEIAR25.R4	NONE	Up	11.60	-10.65	1.60	4.60	-1.02	0.00	0.00	0.18
NOV702GG	NONE	East	-0.21	0.00	0.00	-0.03	-0.36	0.02	0.26	0.10
NOV702GG	NONE	North	-1.37	0.00	0.00	-0.12	-0.13	0.11	0.27	0.05
NOV702GG	NONE	Up	0.50	-2.05	0.28	0.00	0.00	-0.11	-0.05	0.25
RNG80971.00	NONE	East	-0.57	0.00	0.00	0.04	0.28	-0.07	-0.39	0.11
RNG80971.00	NONE	North	-0.07	0.00	0.00	-0.06	0.10	-0.00	-0.21	0.09
RNG80971.00	NONE	Up	-2.80	13.33	0.84	-4.69	-0.75	0.00	0.00	0.26
TPSCR.G5	TPSH	East	0.60	0.00	0.00	0.03	0.10	-0.04	-0.05	0.07
TPSCR.G5	TPSH	North	-0.37	0.00	0.00	0.06	-0.15	-0.10	0.22	0.04
TPSCR.G5	TPSH	Up	-0.93	0.00	0.00	-0.40	-0.25	-0.48	0.17	0.20
TPSCR4	NONE	East	0.31	0.00	0.00	-0.01	-0.18	-0.01	0.16	0.05
TPSCR4	NONE	North	-0.48	0.00	0.00	0.01	-0.07	-0.03	0.14	0.02
TPSCR4	NONE	Up	0.54	-0.71	-0.09	0.00	0.00	-0.27	0.01	0.06
TRM29659.00	NONE	East	-0.13	0.00	0.00	0.01	0.14	0.02	-0.13	0.04
TRM29659.00	NONE	North	-0.45	0.00	0.00	0.01	-0.03	-0.01	0.06	0.02
TRM29659.00	NONE	Up	3.39	-4.58	0.10	1.55	-0.14	0.00	0.00	0.09
TRM29659.00	SCIS	East	1.09	0.00	0.00	-0.00	0.07	0.00	-0.05	0.04
TRM29659.00	SCIS	North	0.68	0.00	0.00	0.04	-0.02	0.01	0.10	0.02
TRM29659.00	SCIS	Up	-1.10	0.00	0.00	-0.22	0.12	0.01	-0.12	0.11
TRM29659.00	UNAV	East	4.47	0.00	0.00	-0.10	-0.46	0.05	0.46	0.23
TRM29659.00	UNAV	North	5.26	0.00	0.00	-0.05	-0.25	0.09	0.52	0.16
TRM29659.00	UNAV	Up	-7.04	0.00	0.00	-1.69	0.52	0.00	0.00	0.95
TRM41249.00	SCIT	East	2.36	0.00	0.00	-0.03	-0.28	0.08	0.31	0.27
TRM41249.00	SCIT	North	1.32	0.45	-0.07	0.00	0.00	0.00	0.00	0.15
TRM41249.00	SCIT	Up	-40.65	65.49	-1.04	-23.84	1.30	0.00	0.00	1.32
TRM57971.00	NONE	East	-0.57	0.00	0.00	0.04	0.28	-0.07	-0.39	0.11
TRM57971.00	NONE	North	-0.07	0.00	0.00	-0.06	0.10	-0.00	-0.21	0.09
TRM57971.00	NONE	Up	-2.80	13.33	0.84	-4.69	-0.75	0.00	0.00	0.26
TRM57971.00	TZGD	East	-0.19	0.01	0.08	0.00	0.00	-0.10	-0.22	0.13
TRM57971.00	TZGD	North	0.10	0.00	0.00	-0.15	0.15	0.02	-0.39	0.13
TRM57971.00	TZGD	Up	-9.09	25.80	0.95	-8.99	-0.85	0.00	0.00	0.43
TRM59800.00	NONE	East	1.44	0.00	0.00	0.07	0.33	-0.08	-0.37	0.11
TRM59800.00	NONE	North	-1.36	-0.03	-0.03	0.00	0.00	0.06	0.10	0.06
TRM59800.00	NONE	Up	-6.52	-1.09	0.08	0.00	0.00	0.32	-0.26	0.25
TRM59800.00	SCIS	East	1.51	0.00	0.00	0.04	0.49	-0.10	-0.50	0.15
TRM59800.00	SCIS	North	-0.78	-0.21	0.01	0.00	0.00	0.15	0.03	0.06
TRM59800.00	SCIS	Up	-4.62	-0.90	0.40	0.00	0.00	0.67	-0.26	0.32
TRM59800.80	NONE	East	1.44	0.00	0.00	0.07	0.33	-0.08	-0.37	0.11
TRM59800.80	NONE	North	-1.36	-0.03	-0.03	0.00	0.00	0.06	0.10	0.06
TRM59800.80	NONE	Up	-6.52	-1.09	0.08	0.00	0.00	0.32	-0.26	0.25
TRM59800.80	SCIS	East	1.51	0.00	0.00	0.04	0.49	-0.10	-0.50	0.15
TRM59800.80	SCIS	North	-0.78	-0.21	0.01	0.00	0.00	0.15	0.03	0.06
TRM59800.80	SCIS	Up	-4.62	-0.90	0.40	0.00	0.00	0.67	-0.26	0.32
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