



IERS COL-WG project SINEX COMPATIBILITY GRGS ANALYSES

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Analysis Centers participating

Delivered SINEX on ftp site: ftp://hpiers.obspm.fr/iers/eop/grgs/Meetings/Paris_Nov_2011/

| Analysis Center | SLR | GNSS | VLBI | DORIS | Pre combined |
|-----------------|---|---|---|---|--|
| AIUB/BKG | Delivered 04-Oct-2011 SINEX version n3 available | Delivered 14-Nov-2011 SINEX version n3 available | | | |
| ASI | Expected | | | | |
| DGFI | Delivered 11-Oct-2011 SINEX version 02 available | | Delivered 07-Jun-2011 SINEX version n2 available | | |
| ESOC | Expected | | | | SLR-GPS expected SLR-DORIS expected |
| GFZ | | | | | SLR-GPS expected |
| GRGS | Expected | Delivered 16-11-2011 SINEX version n7 available | Delivered 09-Nov-2011 SINEX version n4 available | Delivered 06-Oct-2011 SINEX version n5 available | |
| GSFC | Expected | Expected | Expected | Expected | |
| MAO | | Expected | Expected | | |
| OPA | | | Delivered 05-Oct-2011 SINEX version n1 available | | |
| TUW | | | Delivered 23-May-2011 SINEX version n1 available | | |

| AIUB | GNSS daily | SLR weekly |
|---------------------------|--|---|
| SINEX format Method 6c | +SOLUTION/STATISTICS +SITE/ID +SITE/RECEIVER +SITE/ANTENNA +SITE/GPS_PHASE_CENTER +SITE/ECCENTRICITY +SATELLITE/ID +SATELLITE/PHASE_CENTER +SOLUTION/EPOCHS +SOLUTION/NORMAL_EQUATION_VECTOR +SOLUTION/ESTIMATE +SOLUTION/APRIORI +SOLUTION/NORMAL_EQUATION_MATRIX L | +SOLUTION/STATISTICS +SITE/ID +SITE/ECCENTRICITY +SOLUTION/EPOCHS +BIAS/EPOCHS +SOLUTION/NORMAL_EQUATION_VECTOR +SOLUTION/ESTIMATE +SOLUTION/APRIORI +SOLUTION/NORMAL_EQUATION_MATRIX L |
| Parameters | XPO, YPO, UT, (00h, 24h) NUT_OB (delta Psi) (00h, 24h), Initial Value Nul NUT_LN (delta Eps) (00h, 24h), Initial Value Nul Apriori : EOP initial values have not extracted from C04 series STAX, STAY, STAZ (12h) TGETOT (00h 24h), troposphere gradient in east (wet + dry) m TGNTOT (00h, 24h), troposphere gradient in north (wet + dry) m TROTOT (2h) wet + dry Trop. delay, m XGC, YGC, ZGC at 11h59mn45s (Geocenter) SATA_X, SATA_Y, SATA_Z Phase center offset for satellite antenna at 11h59mn45s | XPO, YPO, UT 0h XPOR, YPOR, LOD 12h STAX, STAY, STAZ mid epoch 12h XGC, YGC, ZGC mid epoch 11h40 RBIAS mid epoch 11h40 |
| GINS format | Normal Equations converted Mix of some troposphere parameters Some stations without DOMES number "MNLS, CTWN" | Normal Equations converted |

| DGFI | VLBI daily | SLR weekly |
|---------------------------|---|---|
| SINEX format Method 6c | +SITE/ID +NUTATION/DATA +PRECESSION/DATA +SITE/ECCENTRICITY +SOLUTION/EPOCHS +SOLUTION/APRIORI +SOLUTION/STATISTICS +SOLUTION/NORMAL_EQUATION_MATRIX U +SOLUTION/NORMAL_EQUATION_VECTOR | +SITE/ID +SOLUTION/EPOCHS +BIAS/EPOCHS +SITE/ECCENTRICITY +SOLUTION/APRIORI +SOLUTION/STATISTICS +SOLUTION/NORMAL_EQUATION_MATRIX U +SOLUTION/NORMAL_EQUATION_VECTOR |
| Parameters | <p>EOP: OFFSET + DRIFT: XPO, YPO, UT, 1pt/d at 12h01:21 → to interpolate at 00h XPOR, YPOR, LOD, 1pt/d at 12h01:21 → to interpolate at 00h NUT_Y, NUT_X 1pt/d at 12h01:21 → Nutation a-priori = 0 -Some EOP parameters are not at 12h and so cannot be combined with other EOP coming from different analysis centers -Apriori : EOP initial values have not extracted from C04 series -RS-DA, RS-DE Quasar parameters → Not furnished STAX, STAY, STAZ 1pt/d at 12h *Code PT Domes____ T Station description____ 7213 A 10402S002 R ONSALA60 60-ft Onsala, 7224 A 14201S004 R WETTZELL Wetzell, Ger 7298 A 40424S007 R KOKEE Kokee Park, K 7209 A 40440S003 R WESTFORD Westford, MA, 7640 A 41719S001 R TIGOCONC TIGO at Conce 7331 A 10317S003 R NYALES20 Ny Alesund, S 7230 A 12711S001 R MEDICINA Medicina, Ita 7380 A 12350S001 R SVETLOE Svetloe, Russ 7381 A 12351S001 R ZELENCHK Zelenchukskay 7232 A 30302S001 R HARTRAO Hartebeesthoe 7345 A 21730S007 R TSUKUB32 32-m at Tsuku</p> | <p>EOP: PIECEWISE LINEAR OFFSET XPO, YPO, UT, 1DAY INTERVALS at 00h TRO_TOT, TGE_TOT, TGN_TOT tropospher parameters → Not furnished STAX, STAY, STAZ 1WEEK INTERVALS MID ARC at 12h</p> |
| GINS format | Normal Equations converted | Normal Equations converted |

| GRGS | VLBI weekly | GPS weekly |
|--------------|---|--|
| SINEX format | +SITE/ID +NUTATION/DATA (a-priori nutation model, exp. IAU_2000A) +PRECESSION/DATA (a-priori precession model, exp. IAU_2000A) +SOURCE/ID necessary to identify the sources +SOLUTION/STATISTICS +SOLUTION/EPOCHS +SOLUTION/APRIORI +SOLUTION/NORMAL_EQUATION_VECTOR +SOLUTION/NORMAL_EQUATION_MATRIX L | +SITE/ID +SITE/RECEIVER +SITE/ANTENNA +SITE/GPS_PHASE_CENTER +SITE/ECCENTRICITY +SOLUTION/STATISTICS +SOLUTION/EPOCHS +SOLUTION/APRIORI +SOLUTION/NORMAL_EQUATION_VECTOR +SOLUTION/NORMAL_EQUATION_MATRIX L |
| Parameters | EOP PWL offset XPO, YPO, UT-TAI 1 pt/d, 00h NUT_OB, NUT_LN 2 pt/d 00h,12h STAX, STAY, STAZ 1 pt/d 12h *Code Pt __Domes__ T_Station Description__ 7331 A 10317S003 V Ny Alesund 7213 A 10402S002 V Onsala, Sweden 7380 A 12350S001 C SVETLOE Svetloe,Russ 7381 A 12351S001 V Zelenchukskaya, Russia 7230 A 12711S001 V Bologna, Italy 7224 A 14201S004 V Wetzell, FRG 7345 A 21730S007 V Tsukuba, Japan (32 m) 7232 A 30302S001 V Hartebeesthoek S Afr. 7298 A 40424S007 V Kokee Park Kauai, HI 7209 A 40440S003 V Westford, MA 7640 A 41719S001 V TIGOCONC RS_DA, RS_DE 1pt/d 00h now sources are identified TBIAS, ZBIAS intervalle 1h → 2h & lack of station's numbers | EOP Offset + Drift XPO, XPOR, YPO, YPOR , 12h 1Day intervalle UT, LOD , 12h 1Day intervalle NUT_LN, NUTRLN , 12h 1Day intervalle NUT_OB, NUTROB , 12h 1Day intervalle STAX, STAY, STAZ (121 stations) 1 pt/w mid epoch 12h TROTOT 01h 03h 05h ... 23h troposphere TGE, TGN (à 03h et 21h) un reduced for: NyAlesund 10317 NYA1, NYAL Hartbeesthoek 30302 HRAO Kokee Park 40424 KOKB Washington 40451 GODE and USN3 TIGO Concepcion 41719 CONZ Mount Stromlo 50119 STR1 Papeete Tahiti 92201 THTI |

| GRGS | DORIS weekly | SLR weekly |
|--------------|---|--|
| SINEX format | +SITE/ID +SOLUTION/STATISTICS +SOLUTION/EPOCHS +SOLUTION/APRIORI +SOLUTION/NORMAL_EQUATION_VECTOR +SOLUTION/NORMAL_EQUATION_MATRIX L | +SITE/ID +SOLUTION/STATISTICS +SOLUTION/EPOCHS +SOLUTION/APRIORI +SOLUTION/NORMAL_EQUATION_VECTOR +SOLUTION/NORMAL_EQUATION_MATRIX L |
| Parameters | EOP PWL offset XPO, YPO, UT 1 pt/d, 00h NUT_OB, NUT_LN 2 pt/d 00h,12h STAX, STAY, STAZ 1 pt/w mid epoch 12h TROTOT for stations (1h) → (2h) NyAlesund SPJB 10317S005 Hartebeesthoek HBMB 30302S008 Kokee Park KOLB 40424S009 Greenbelt (Washington) GREB 40451S176 Mount Stromlo MSPB 50119S004 Papeete (Tahiti) PATB 92201S010 | EOP PWL offset XPO, YPO, UT 1 pt/d, 00h NUT_OB, NUT_LN 2 pt/d 00h,12h STAX, STAY, STAZ 1 pt/w mid epoch 12h Selected Statin 7501 A 30302M003 L HARTEBEESTHOEK 7105 A 40451M105 L GREENBELT 7405 A 41719M001 L CONCEPCION 7825 A 50119S003 L Mount Stromlo 7124 A 92201M007 L TAHITI |

TUW VLBI daily

| SINEX structure | Parameters in SINEX format | GINs format |
|---|--|--|
| +NUTATION/DATA +PRECESSION/DATA +SOURCE/ID +SITE/ID +SITE/ECCENTRICITY +SOLUTION/EPOCHS +SOLUTION/STATISTICS +SOLUTION/APRIORI +SOLUTION/NORMAL_EQUATION_VECTOR +SOLUTION/NORMAL_EQUATION_MATRIX L | EOP PWL offset XPO, YPO, UT 1 pt/d at 00h NUT_X, NUT_Y 1 pt/d at 00h model IAU 2000A RS_DA, RS_DE 1 pt/d at 12h TROWET, TGETOT, TGNTOT intervals 2h STAX, STAY, STAZ 1 pt/d at 12h *CODE PT DOMES____ T STATION_DESCRIPTION____ 7331 A 10317S003 R Ny Alesund, Svalbard, 7224 A 14201S004 R Wettzell, Germany 7213 A 10402S002 R 60-ft Onsala, Sweden 7640 A 41719S001 R TIGO at Concepcion, Ch 7345 A 21730S007 R 32-m at Tsukuba, Japan 7209 A 40440S003 R Westford, MA, USA 7380 A 12350S001 R Svetloe, Russia 7230 A 12711S001 R Medicina, Italy 7232 A 30302S001 R Hartebeesthoek, South 7298 A 40424S007 R Kokee Park, Kauai, HI, | SX, SY, SZ with DOMES number PX, PY, PT, NE, NP 1pt/d at 00h QRA, QDE with source identifier and date year/month MZW, MGN, MGE with DOMES number intervals 2h |