Guideline for the transition of the IGS products to the long filenames

Version 1.0 – 14 November 2022

IGS ACC / IGS RF coordinator

Starting from **27 November 2022**, the IGS will adopt a new reference frame, called IGS20, along with the corresponding igs20.atx antenna file. At the same time as this switch, the IGS will also adopt for its operational products the same conventions and models as in its third reprocessing campaign (repro3), including in particular the adoption of **new long filenames for the IGS products** (see http://acc.igs.org/repro3/Long_Product_Filenames_v1.0.pdf).

Detailed description of the changes are described in [IGSMAIL-8238] and [IGSMAIL-8256].

This document is intended to be used as a practical guide for the users about the changes related to the filenames that impact the access of the users to the IGS products.

Starting from **GPS week 2238, 27 November 2022**, all the IGS final, rapid and ultra-rapid products will only be available in long filenames. There will be no short filenames available. Users need to adapt their software to be able to access the long filename products. Table 1 below lists the variables and their descriptions as used in this document. The remaining tables in this document list the changes in the filenames for specific products, along with examples for each change.

Table 1. Variables used in the document and their descriptions

Variable	Description	Range	Example
${wwww}	4-character GPS week	2222-	2231
${d}	1-character day of week	0-6	3
${yyyy}	4-character year	2022-	2022
${yy}	2-character year	22-	22
${ww}	2-character week of year	01-53	41
${ddd}	3-character day of year	001-366	285
${hh]	2-character hour of the day	00-23	06
${v}	1-character version number	0-9	0

Table 2. IGS terrestrial frame solutions

Product	Old short filename format	New long filename format	Old short filename example	New long filename example
Daily combined SINEX solution	igs${yy}P${wwww}${d}.snx.Z	IGS${v}OPSSNX_${yyyy}${ddd}0000_01D_01D_SOL.SNX.gz	igs22P22313.snx.Z	IGS0OPSSNX_20222850000_01D_01D_SOL.SNX.gz
Daily combined SINEX solution w/o covariance matrices	igs${yy}P${wwww}${d}.ssc.Z	IGS${v}OPSSNX_${yyyy}${ddd}0000_01D_01D_CRD.SNX.gz	igs22P22313.ssc.Z	IGS0OPSSNX_20222850000_01D_01D_CRD.SNX.gz
Daily SINEX combination residuals	igs${yy}P${wwww}${d}.res.Z	IGS${v}OPSSNX_${yyyy}${ddd}0000_01D_01D_RES.RES.gz	igs22P22313.res.Z	IGS0OPSSNX_20222850000_01D_01D_RES.RES.gz
Daily SINEX combination residuals in YAML format	****New file****	IGS${v}OPSSNX_${yyyy}${ddd}0000_01D_01D_RES.YML.gz	-	IGS0OPSSNX_20222850000_01D_01D_RES.YML.gz
Weekly combined SINEX solution	igs${yy}P${wwww}.snx.Z	IGS${v}OPSSNX_${yyyy}${ddd}0000_07D_07D_SOL.SNX.gz	igs22P2231.snx.Z	IGS0OPSSNX_20222820000_07D_07D_SOL.SNX.gz
Weekly combined SINEX solution w/o covariance matrices	igs${yy}P${wwww}.ssc.Z	IGS${v}OPSSNX_${yyyy}${ddd}0000_07D_07D_CRD.SNX.gz	igs22P2231.ssc.Z	IGS0OPSSNX_20222820000_07D_07D_CRD.SNX.gz
Weekly ERP files	igs${yy}P${wwww}.erp.Z	IGS${v}OPSSNX_${yyyy}${ddd}0000_07D_01D_ERP.ERP.gz	igs22P2231.erp.Z	IGS0OPSSNX_20222820000_07D_01D_ERP.ERP.gz
Weekly combination summary	igs${yy}P${wwww}.sum.Z	IGS${v}OPSSNX_${yyyy}${ddd}0000_07D_07D_SUM.SUM.gz	igs22P2231.sum.Z	IGS0OPSSNX_20222820000_07D_07D_SUM.SUM.gz
Weekly combination summary in YAML format	****New file****	IGS${v}OPSSNX_${yyyy}${ddd}0000_07D_07D_SUM.YML.gz	-	IGS0OPSSNX_20222820000_07D_07D_SUM.YML.gz
Cumulative SINEX solution	IGS${yy}P${ww}.snx.Z	IGS${v}OPSSNX_1994002_${yyyy}${ddd}_00U_SOL.SNX.gz *Note: ${ddd} stands here for the **last** day of the GPS week.*	IGS22P41.snx.Z	IGS0OPSSNX_1994002_2022288_00U_SOL.SNX.gz
Cumulative SINEX solution w/o covariance matrix	IGS${yy}P${ww}.ssc.Z	IGS${v}OPSSNX_1994002_${yyyy}${ddd}_00U_CRD.SNX.gz *Note: ${ddd} stands here for the **last** day of the GPS week.*	IGS22P41.ssc.Z	IGS0OPSSNX_1994002_2022288_00U_CRD.SNX.gz

Table 3. IGS final products

Product	Old short filename format	New long filename format	Old short filename example	New long filename example
Final orbits	igs${wwww}${d}.sp3.Z	IGS${v}OPSFIN_${yyyy}${ddd}0000_01D_15M_ORB.SP3.gz	igs22313.sp3.Z	IGS0OPSFIN_20222850000_01D_15M_ORB.SP3.gz
Final clocks (5-min sampling)	igs${wwww}${d}.clk.Z	IGS${v}OPSFIN_${yyyy}${ddd}0000_01D_05M_CLK.CLK.gz	igs22313.clk.Z	IGS0OPSFIN_20222850000_01D_05M_CLK.CLK.gz
Final clocks (30-sec sampling for satellite clocks)	igs${wwww}${d}.clk_30s.Z	IGS${v}OPSFIN_${yyyy}${ddd}0000_01D_30S_CLK.CLK.gz	igs22313.clk_30s.Z	IGS0OPSFIN_20222850000_01D_30S_CLK.CLK.gz
Final clock combination summary	igs${wwww}${d}.cls.Z	IGS${v}OPSFIN_${yyyy}${ddd}0000_01D_01D_CLS.CLS.gz	igs22313.cls.Z	IGS0OPSFIN_20222850000_01D_01D_CLS.CLS.gz
Final ERP	igs${wwww}7.erp.Z	IGS${v}OPSFIN_${yyyy}${ddd}0000_07D_01D_ERP.ERP.gz	igs22317.erp.Z	IGS0OPSFIN_20222820000_07D_01D_ERP.ERP.gz
Final combination summary	igs${wwww}7.sum.Z	IGS${v}OPSFIN_${yyyy}${ddd}0000_07D_01D_SUM.SUM.gz	igs22317.sum.Z	IGS0OPSFIN_20222820000_07D_01D_SUM.SUM

Table 4. IGS rapid products

Product	Old short filename format	New long filename format	Old short filename example	New long filename example
Rapid orbits	igr${wwww}${d}.sp3.Z	IGS${v}OPSRAP_${yyyy}${ddd}0000_01D_15M_ORB.SP3.gz	igr22313.sp3.Z	IGS0OPSRAP_20222850000_01D_15M_ORB.SP3.gz
Rapid clocks	igr${wwww}${d}.clk.Z	IGS${v}OPSRAP_${yyyy}${ddd}0000_01D_05M_CLK.CLK.gz	igr22313.clk.Z	IGS0OPSRAP_20222850000_01D_05M_CLK.CLK.gz
Rapid clock combination summary	igr${wwww}${d}.cls.Z	IGS${v}OPSRAP_${yyyy}${ddd}0000_01D_01D_CLS.CLS.gz	igr22313.cls.Z	IGS0OPSRAP_20222850000_01D_01D_CLS.CLS.gz
Rapid ERP	igr${wwww}${d}.erp.Z	IGS${v}OPSRAP_${yyyy}${ddd}0000_01D_01D_ERP.ERP.gz	igr22313.erp.Z	IGS0OPSRAP_20222850000_01D_01D_ERP.ERP.gz
Rapid combination summary	igr${wwww}${d}.sum.Z	IGS${v}OPSRAP_${yyyy}${ddd}0000_01D_01D_SUM.SUM.gz	igr22313.sum.Z	IGS0OPSRAP_20222850000_01D_01D_SUM.SUM

Table 5. IGS ultra-rapid products

Product	Old short filename format	New long filename format	Old short filename example	New long filename example
Ultra-Rapid orbits	igu${wwww}${d}_${hh}.sp3.Z	IGS${v}OPSULT_${yyyy}${ddd}0000_02D_15M_ORB.SP3.gz	igu22313_06.sp3.Z	IGS0OPSULT_20222840000_02D_15M_ORB.SP3.gz
Ultra-Rapid ERP	igu${wwww}${d}_${hh}.erp.Z	IGS${v}OPSULT_${yyyy}${ddd}0000_02D_01D_ERP.ERP.gz	igu22313_06.erp.Z	IGS0OPSULT_20222840000_02D_01D_ERP.ERP.gz
Ultra-Rapid combination summary	igu${wwww}${d}_${hh}.sum.Z	IGS${v}OPSULT_${yyyy}${ddd}0000_02D_02D_SUM.SUM.gz	igu22313_06.sum.Z	IGS0OPSULT_20222840000_02D_02D_SUM.SUM

Additional Notes

- **Version number**: The version number ${v} as in the tables in this document, is currently used as an indicator for when a product is resubmitted; therefore, the users should look for the highest version number available. There is, however, a review being done through the IGS Infrastructure Committee, which may or may not revise the use of version number. Further announcements will be made in case a revision is made.
- **Ultra-rapid long filenames and weekly directories:** For the ultra-rapid products, the old short filenames referred to the start of the ultra-rapid prediction, i.e. mid-point of the file contents. With the change to the long filename convention, however, the filename refers to the start point of the file content, i.e. the start of observed data. This should be taken care of when retrieving the files. It should also be noted that this has an impact on where the products are stored. As an example, the short filename ultra-rapid products containing the predictions for day of week 0 (e.g. igu22310_06.sp3.Z) used to be stored in the week directory 2231 in the data centres. However, since the new long filename refers to the start of the observed data, the same file is now stored as IGS0OPSULT_20222810000_02D_15M_ORB.SP3.gz in the week directory 2230 as the last day of this directory. The same applies to erp and sum files, as well as to other hours of the day (00,06,12,18).
- **Multi-GNSS orbit/clock/bias combinations:** The repro3 campaign involved combination of the GPS/GAL/GLO orbit, clock and bias products, for which the results are available (see [IGSMAIL-8248]). IGS ACC is now working on operationalizing the repro3-like multi-GNSS combinations and will soon release them as experimental products on a regular basis. These products will initially replace the current experimental GLONASS combinations. There is also a multi-GNSS task force group currently being run as a joint effort between IGS ACC and IGS Multi-GNSS working group to consolidate the efforts on multi-GNSS combination. The multi-GNSS combinations will eventually replace the GPS-only combinations as operational IGS products.
- **Future versions of this document:** This document will be updated to include the most recent information as the transition of the IGS products to the long filenames occurs, and more products are available in long filename formats.