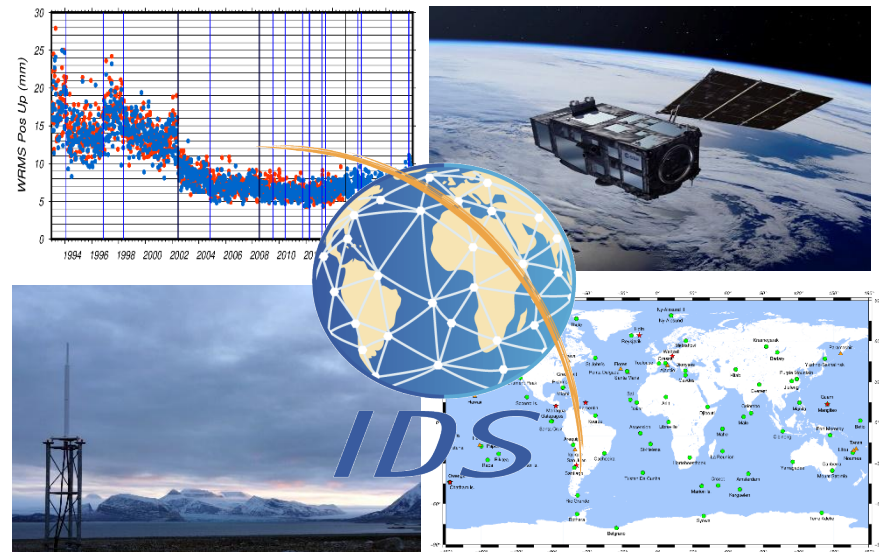


IDS Combined Earth Rotation Parameters

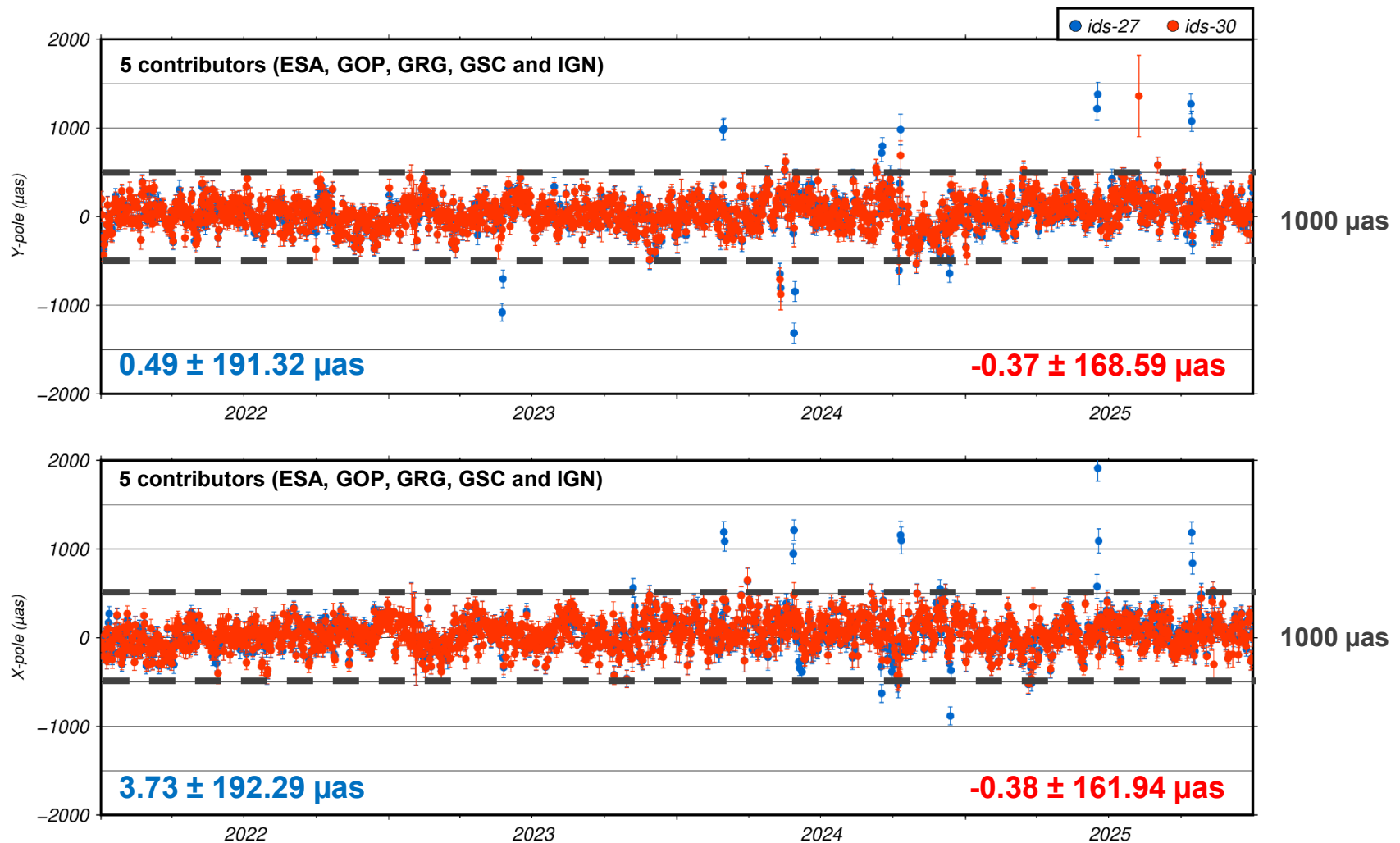
Guilhem Moreaux (CLS)



The IDS contribution (IDS 27) to the ITRF2020-u2025 is the first IDS combined series including LOD daily estimations.

AC	Software	Series number	EOPs	Time Span	Comments
ESA	EPNS	17	PM+PM rate+ LOD	2021.0-	
GOP	BERNESE	70	PM+PM rate+ LOD +UT	2021.0-	LOD & UT since 2024doy098
GRG	GINs-DYNAMO	56	PM	2021.6-	
GSC	GEODYN	62	PM	2021.0-	
IGN	GIPSY-X	22-23	PM	2021.0-	
IDS	CATREF	27	PM+LOD	2021.6-	LOD since 2024doy098

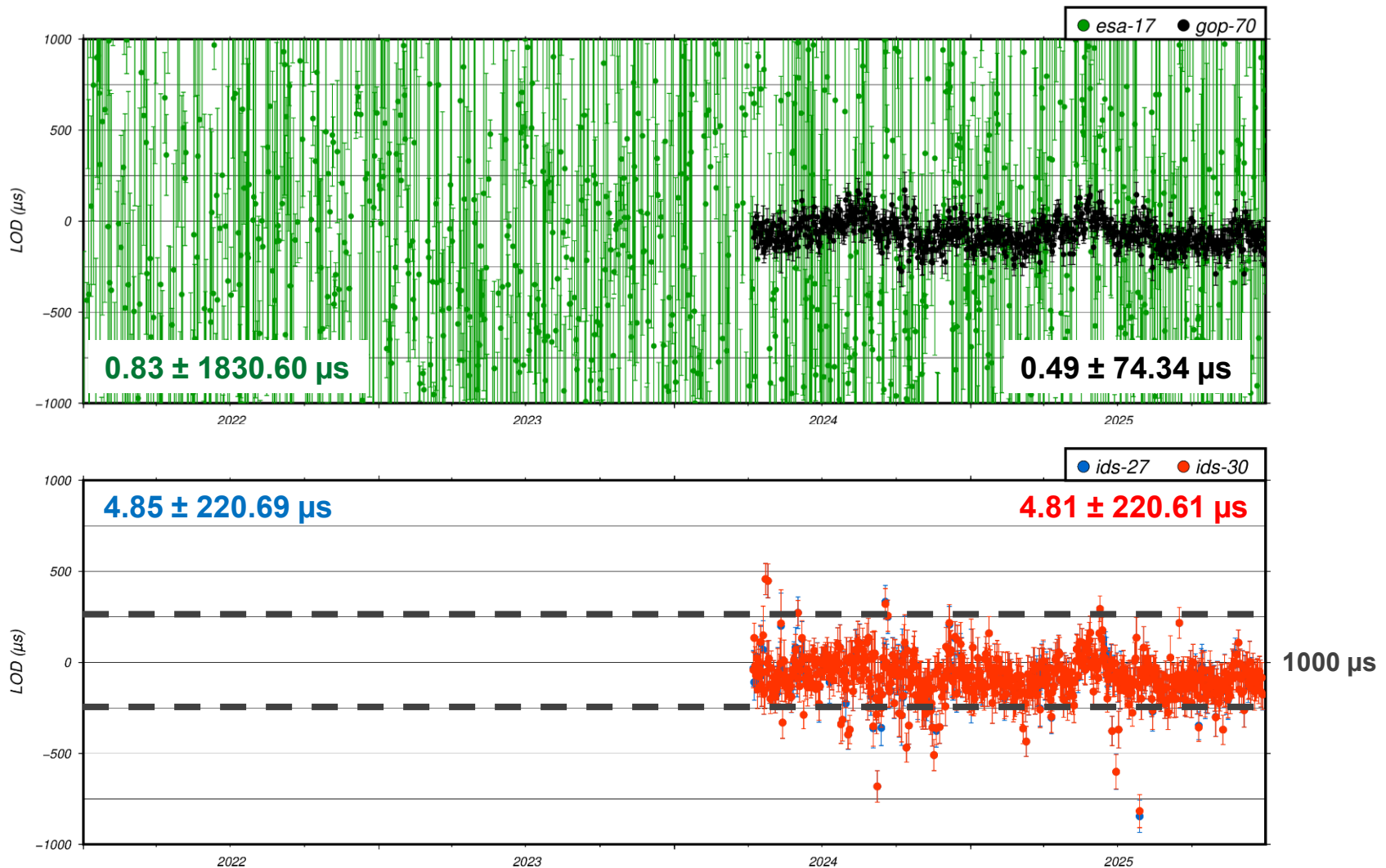
IDS 27 & 30 Pole Coordinate Differences wrt IERS-C04



New selection strategy in IDS 30 reduces the STD by 11-16%.



IDS 27 & 30 LOD Differences wrt IERS-C04



IDS 27 and 30 LOD are based on two contributors (ESA and GOP) only without any preprocessing.

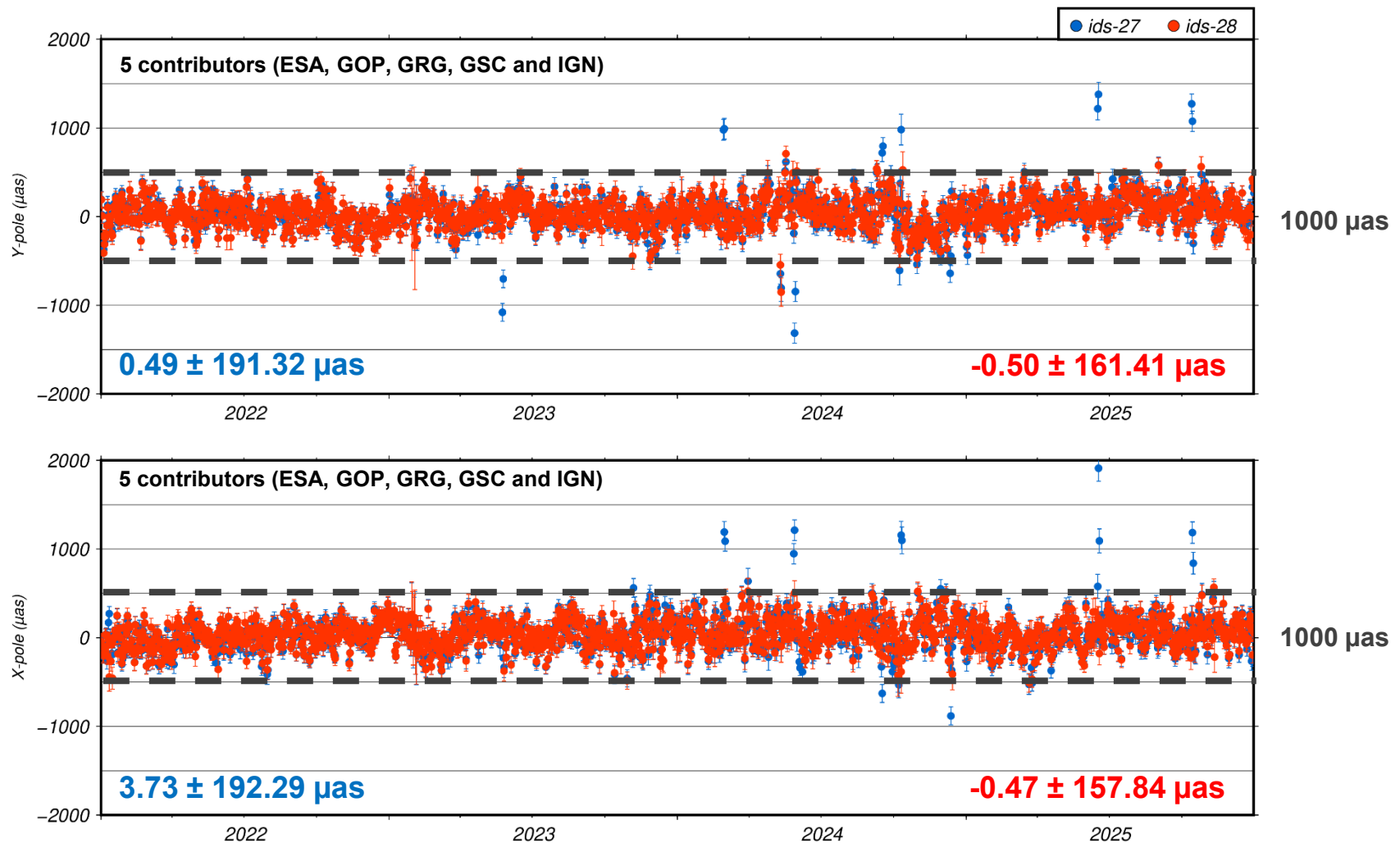
The IDS 28 is the first IDS combined series including, in addition to pole rate and LOD, pole rate daily estimations.

AC	Software	Series number	EOPs	Time Span	Comments
ESA	EPNS	17	PM+PM rate+LOD	2021:003 -	
GOP	BERNESE	70	PM+PM rate+LOD+UT	2021:003 -	LOD & UT since 2024doy098
GRG	GINs-DYNAMO	54	PM	2021:003 - 2021:213	
GRG	GINs-DYNAMO	56	PM	2021:220 - 2023:050	
GRG	GINs-DYNAMO	58	PM	2023:057 -	SWOT included
GSC	GEODYN	62	PM	2021:003 - 2024:091	
GSC	GEODYN	64	PM+LOD	2024:098 -	LOD
IGN	GIPSY-X	22	PM	2021:003 - 2024:357	
IGN	GIPSY-X	23	PM	2024:364 -	SWOT included
IDS	CATREF	28	PM+LOD+PM rate	2021:003 -	Pole contribution selection

Similar to X- and Y-pole coordinates, IDS 28 includes a selection strategy for LOD contributions.



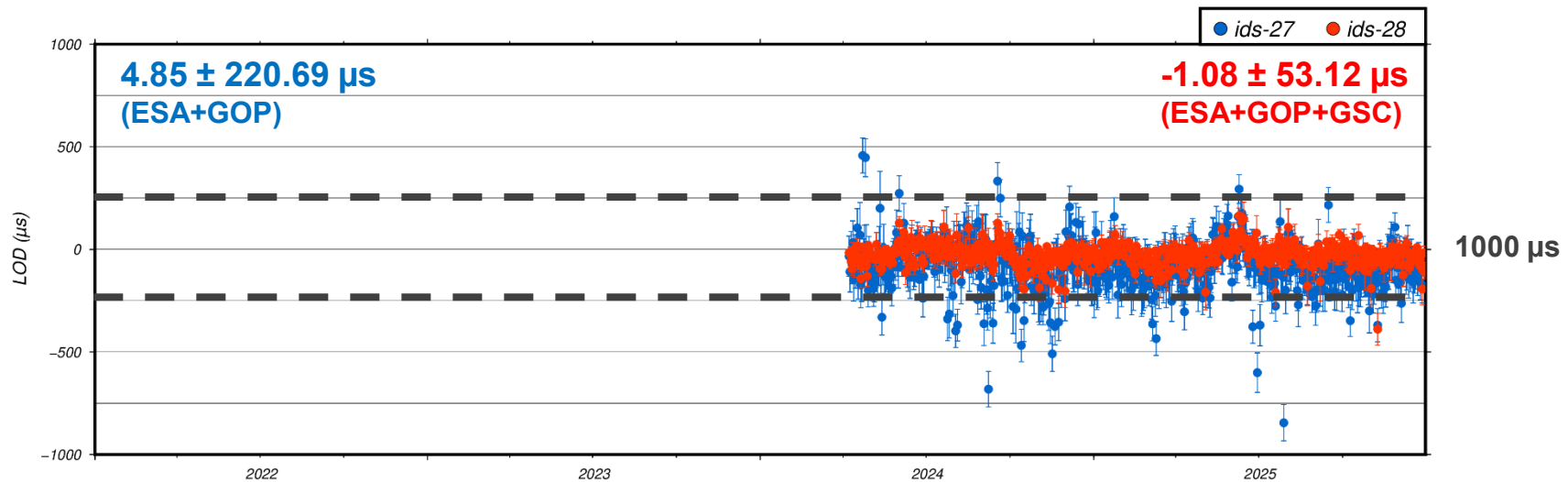
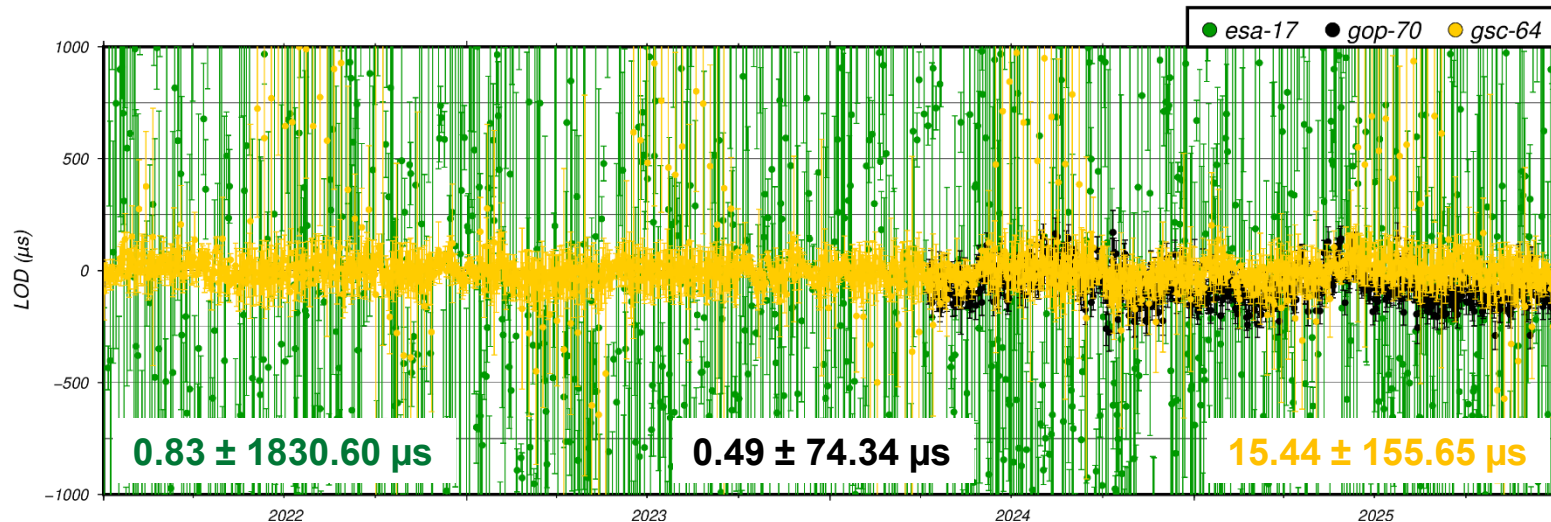
IDS 28 vs 27 Pole Coordinate Differences wrt IERS-C04



Compared to IDS 27, IDS 28 pole coordinates differences wrt IERS C04 are better centered and show smaller STD (reduction by 16-18%).



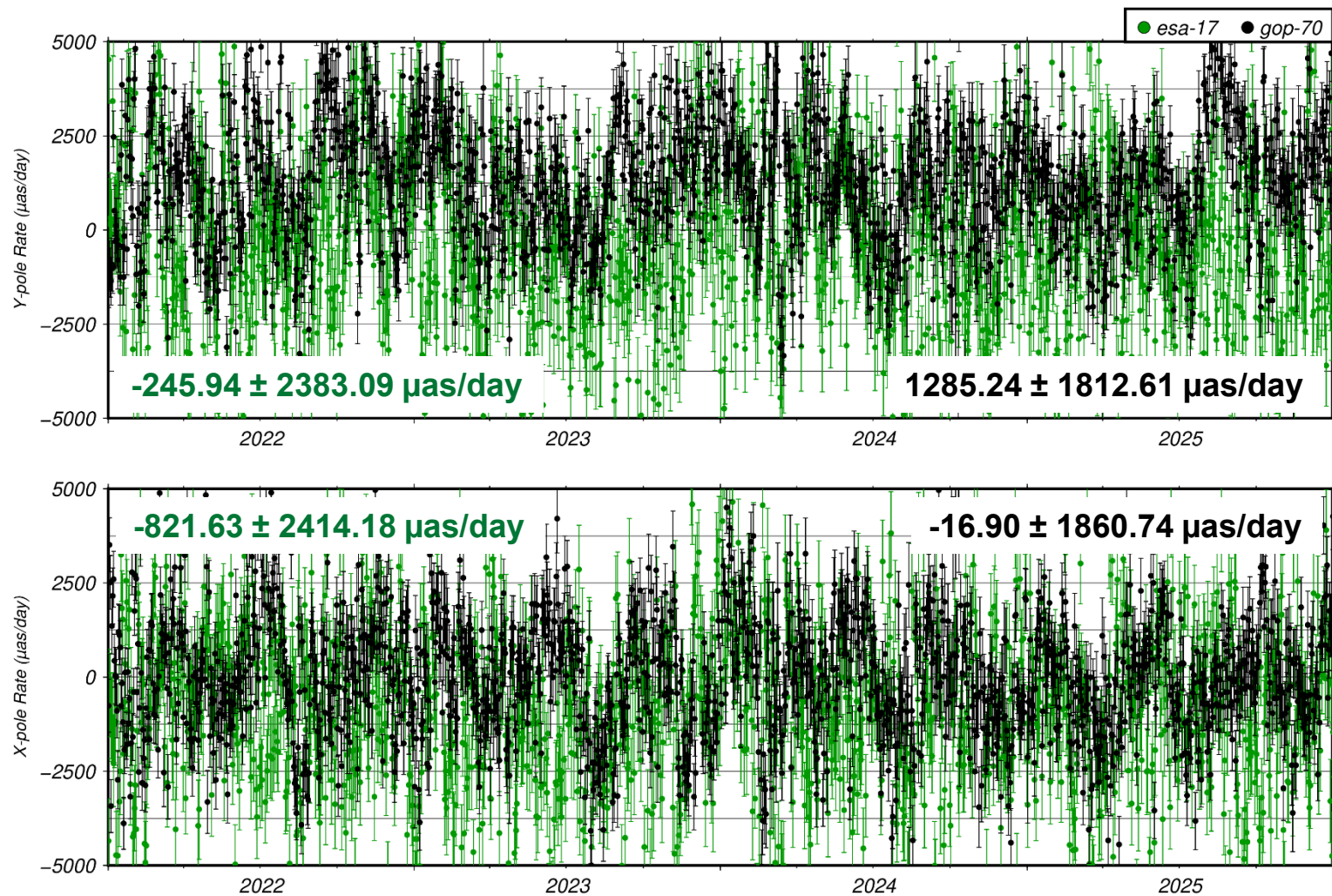
IDS 28 vs 27 LOD Differences wrt IERS-C04



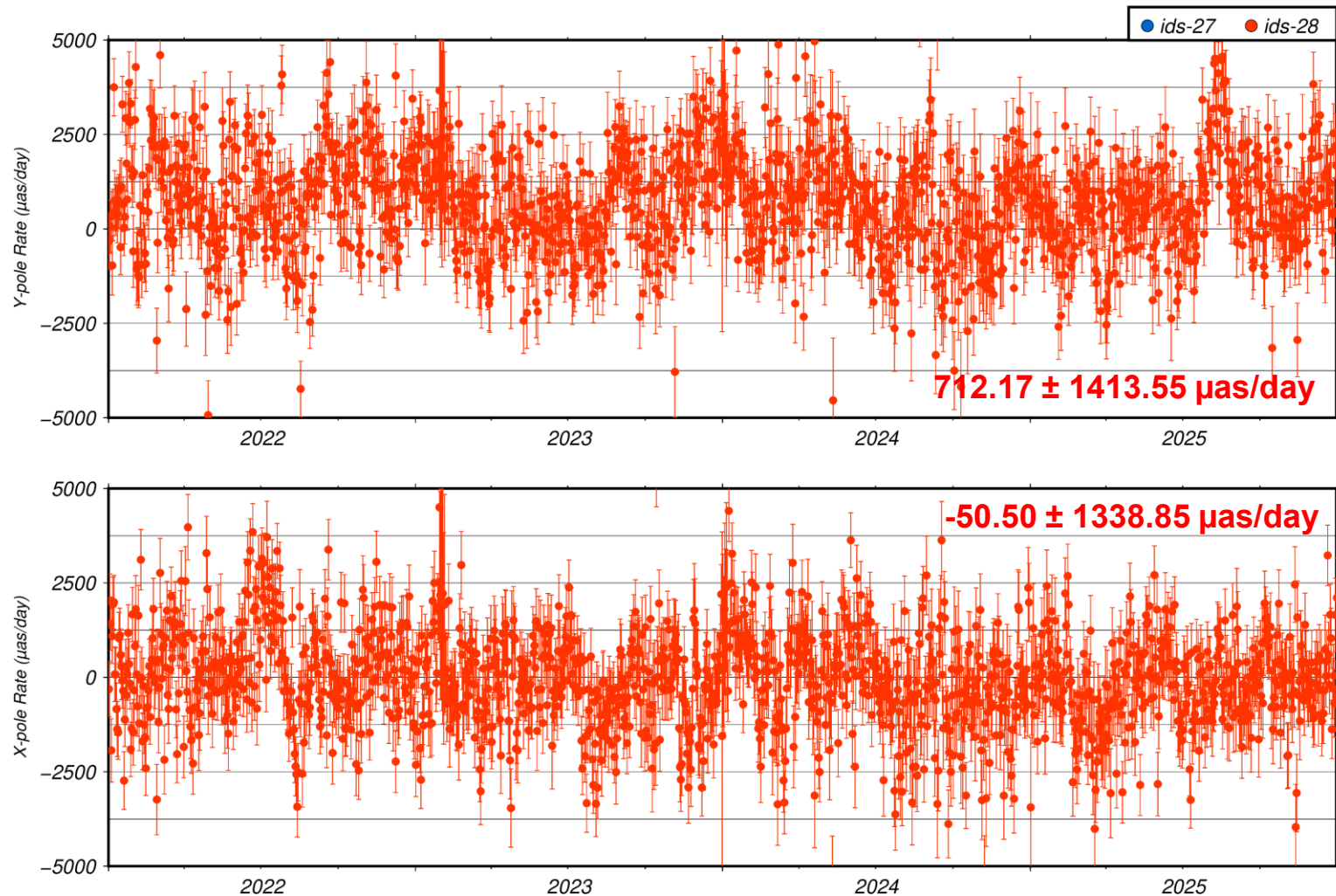
Compared to IDS 27, IDS 28 LOD differences wrt IERS C04 show smaller STD thanks to GSC contribution and to the preprocessing.



ESA 17 & GOP 70 Pole Rate Differences wrt IERS-C04



IDS 28 Pole Rate Differences wrt IERS-C04



May be improved since based on 2 contributors (ESA and GOP) only and so without any preprocessing.



IDS Combined Series and ERPs

- ❑ **IDS 27 (IDS contribution to the ITRF2020-u2025)**
 - ❑ Is the first combined series including daily LOD estimations since 2024doy098.
 - ❑ Shows X- and Y-pole differences wrt IERS C04 at the order of 190 μ as and LOD differences at the order of 220 μ s.

- ❑ **IDS 28**
 - ❑ Is the latest IDS combined solution including, in addition to pole coordinates and LOD (since 2024doy098), pole rates (since 2021doy003).
 - ❑ makes use of the new pole coordinate and LOD preprocessing.
 - ❑ Shows X- and Y-pole differences wrt IERS C04 at the order of 160 μ as and LOD differences at the order of 55 μ s.