



DORIS Cumulative Solution ids19d04

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- **Second version of the DORIS position and velocity cumulative solution from the IDS Combination Center.**
 - Stacking of the IDS combined series ids 13 from 1993 doy 003 to 2018 doy 364.
 - Position constraints from the IGN DORIS-to-DORIS ties (2018/05/14).
 - Continuity velocity constraints.
 - Aligned to ITRF2014.
- **Available in SINEX (ids19d04.snx) format.**
- **SINEX solution contains two additional (and unofficial) blocks:**
 - SOLUTION/DISCONTINUITY: origin (ex: earthquake, beacon change, antenna problem...) of the position discontinuities.
 - SOLUTION/DATA_REJECT: periods of time not included in the combination.
- **Can be downloaded from the IDS Data Centers (CDDIS, IGN).**
 - ftp://cddis.gsfc.nasa.gov/pub/doris/products/sinex_global/ids/
 - ftp://doris.ensg.ign.fr/pub/doris/products/sinex_global/ids/
- **Questions and/or comments: ids.combination@ids-doris.org**

- **Velocities must be constrained.**

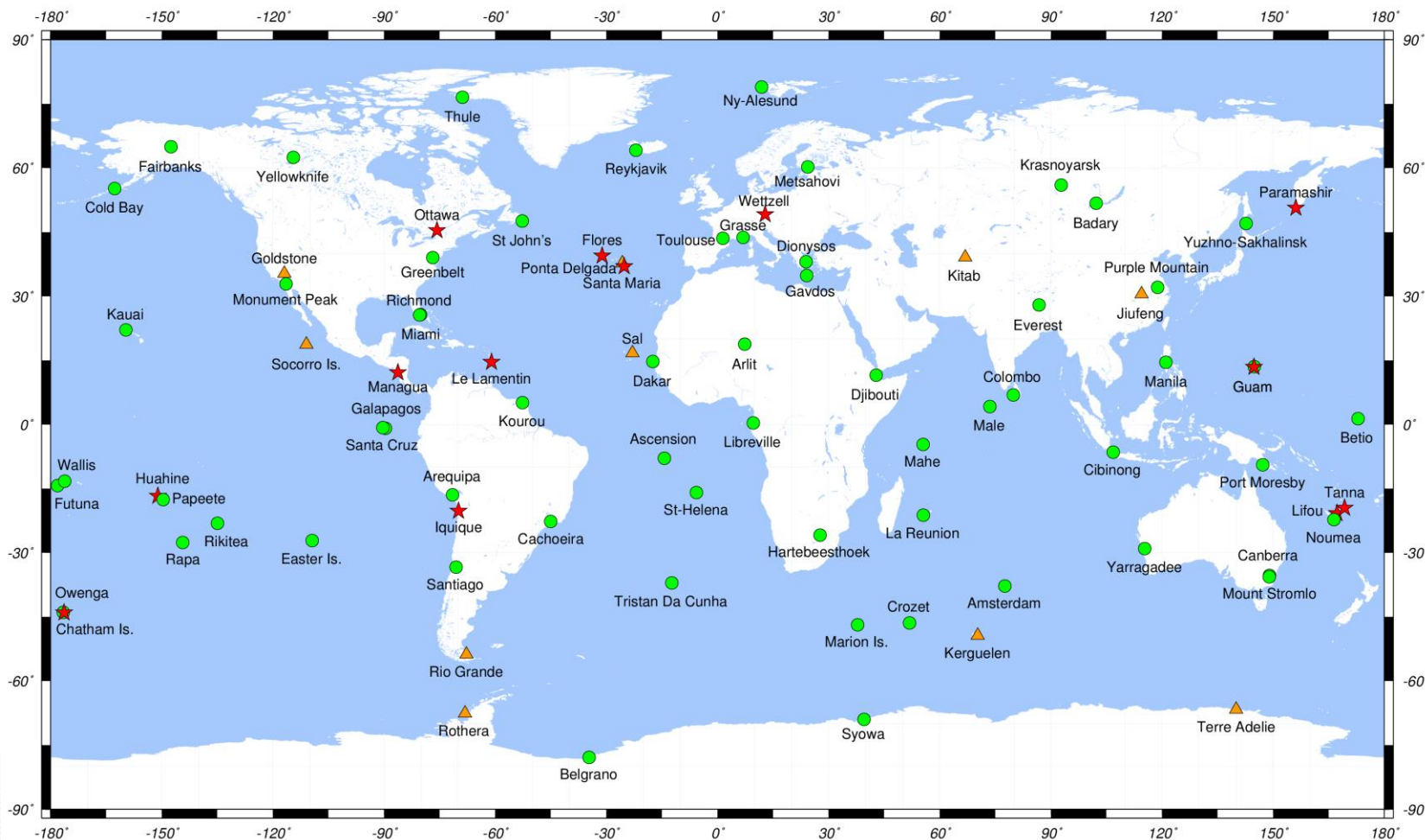
Site	DORIS station	Reference station	Technique	Source
Ajaccio	AJAB	AJAC	GNSS	ITRF2014
Flores	FLOA	FLOA	DORIS	DPOD2008 (1.14)
Huahine	HUAA	7123	Laser Ranging	ITRF2014
Iquique	No constraint since seismic active site and no colocation			
Lifou	LIFB	LPIL	GNSS	ITRF2014
Managua	MNAC	MANA	GNSS	ITRF2014
Mangilao (Guam)	MLAC	GUUG	GNSS	ITRF2014
Ottawa	OTTA OTTB	NRC1	GNSS	ITRF2014
Owenga	OWEC OWFC	CHTI	GNSS	ITRF2014
Tanna	TANB	TANB	DORIS	DPOD2008 (1.14)
Wetzell	WEUC	WTZS	GNSS	ITRF2014

Discontinuity changes wrt ids18d03

Station:w	Date	Origin
+ AREB	02:198:00000	East and Up discontinuity
+ SOEB	14:309:00000	Earthquake in 2015/05/31

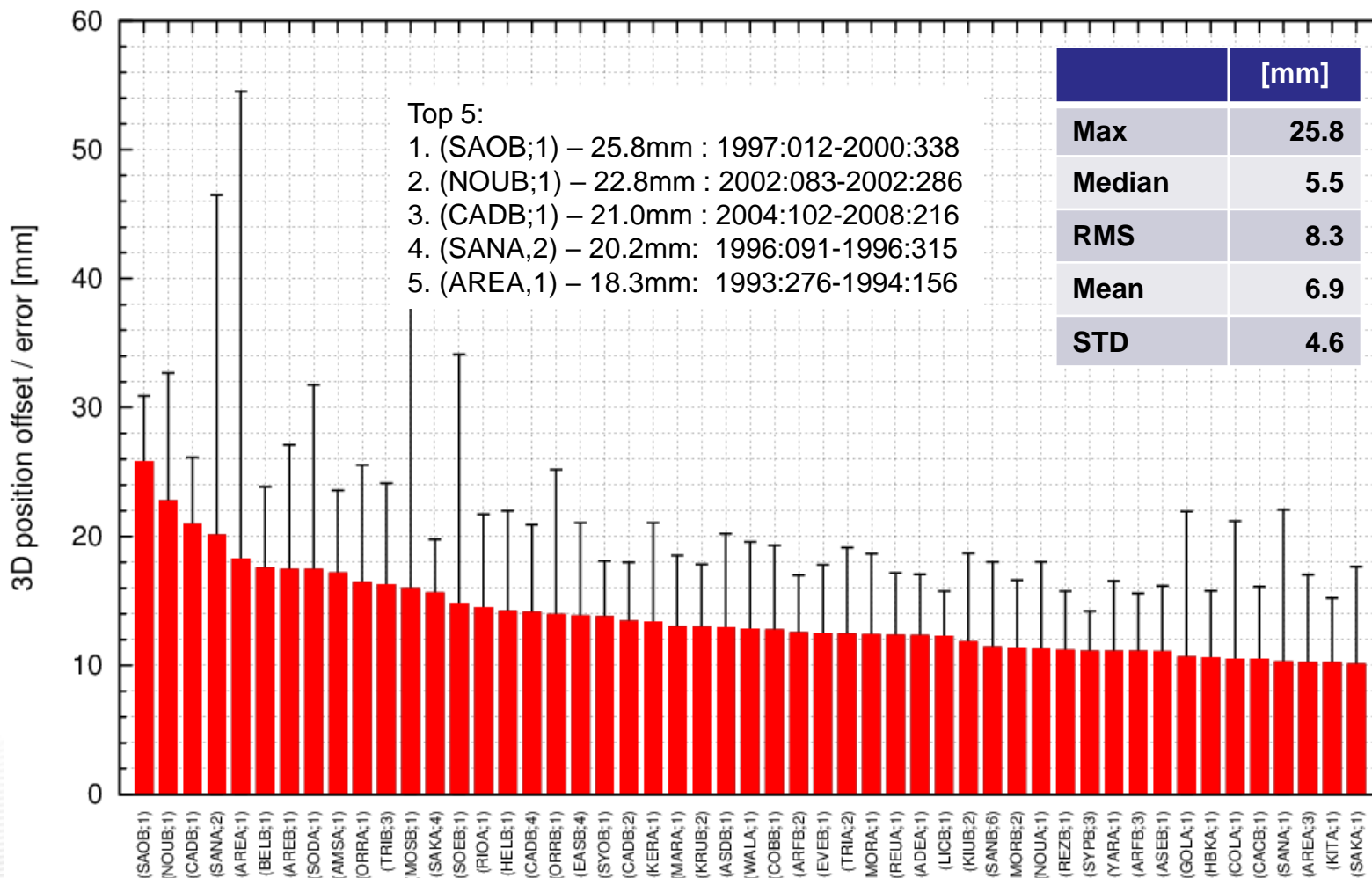
84 DORIS sites – 193 DORIS stations

3 new stations wrt ids18d03: RISC (Rio Grande), ROXC (Rothera), and SARC (Sal)



Green circles: ITRF2014 sites. Orange triangles: ITRF2014 sites with new station(s) since ITRF2014. Red stars: sites not included in the ITRF2014.

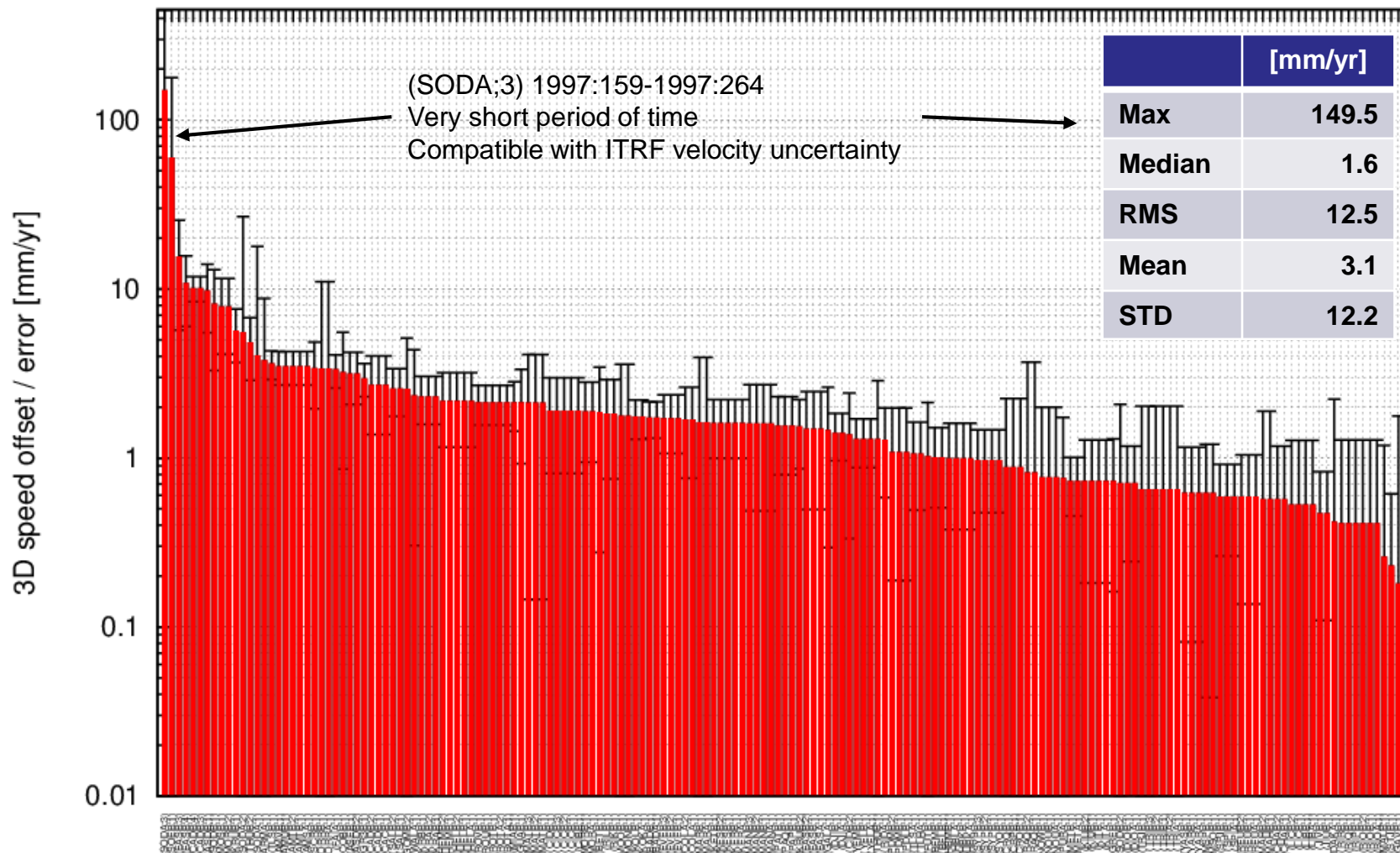
Position differences at the mean epoch of the observations Differences larger than 10mm only



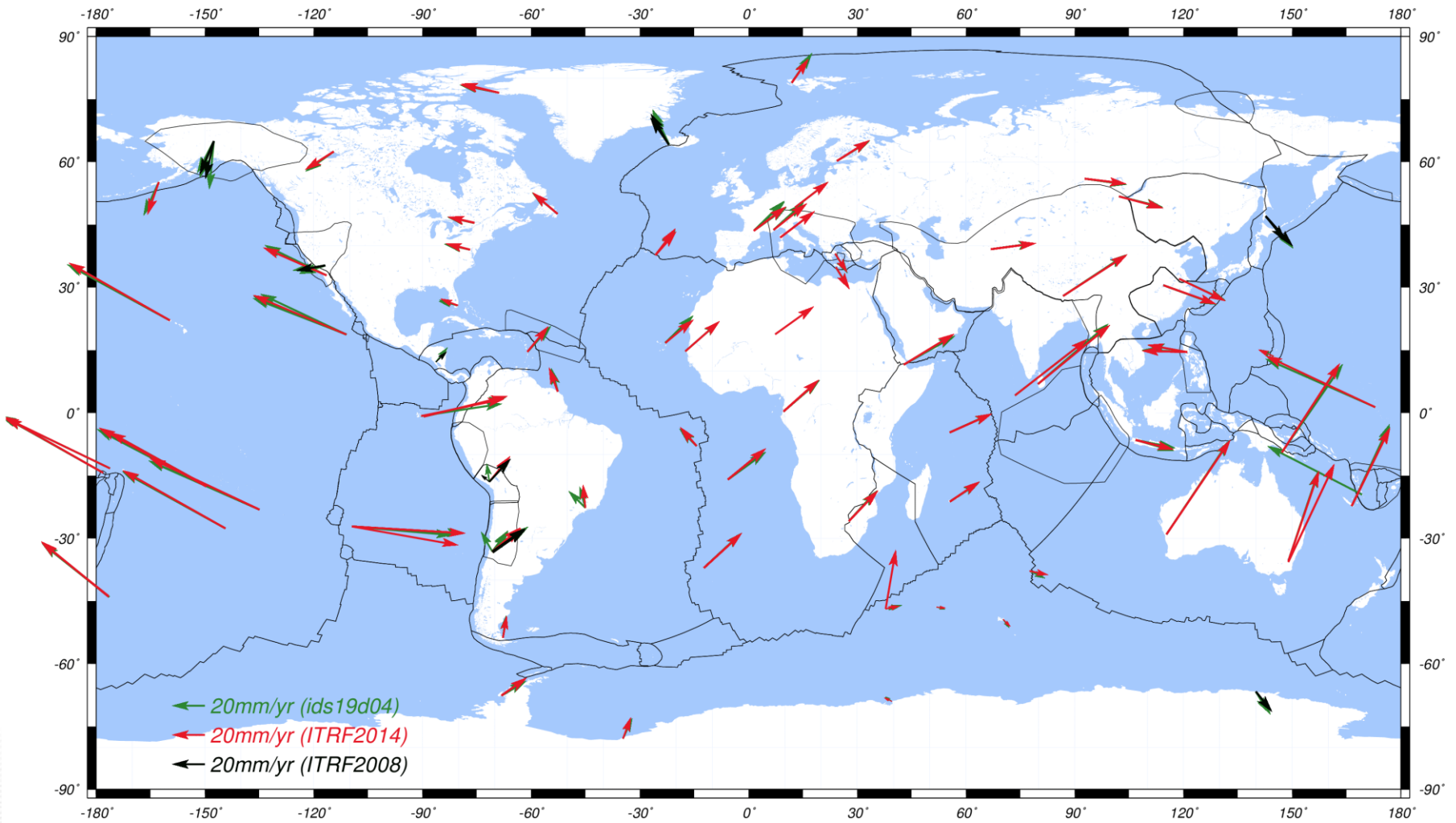


<http://ids-doris.org>

ids19d04 vs ITRF2014 Velocity differences – PSD sites excluded



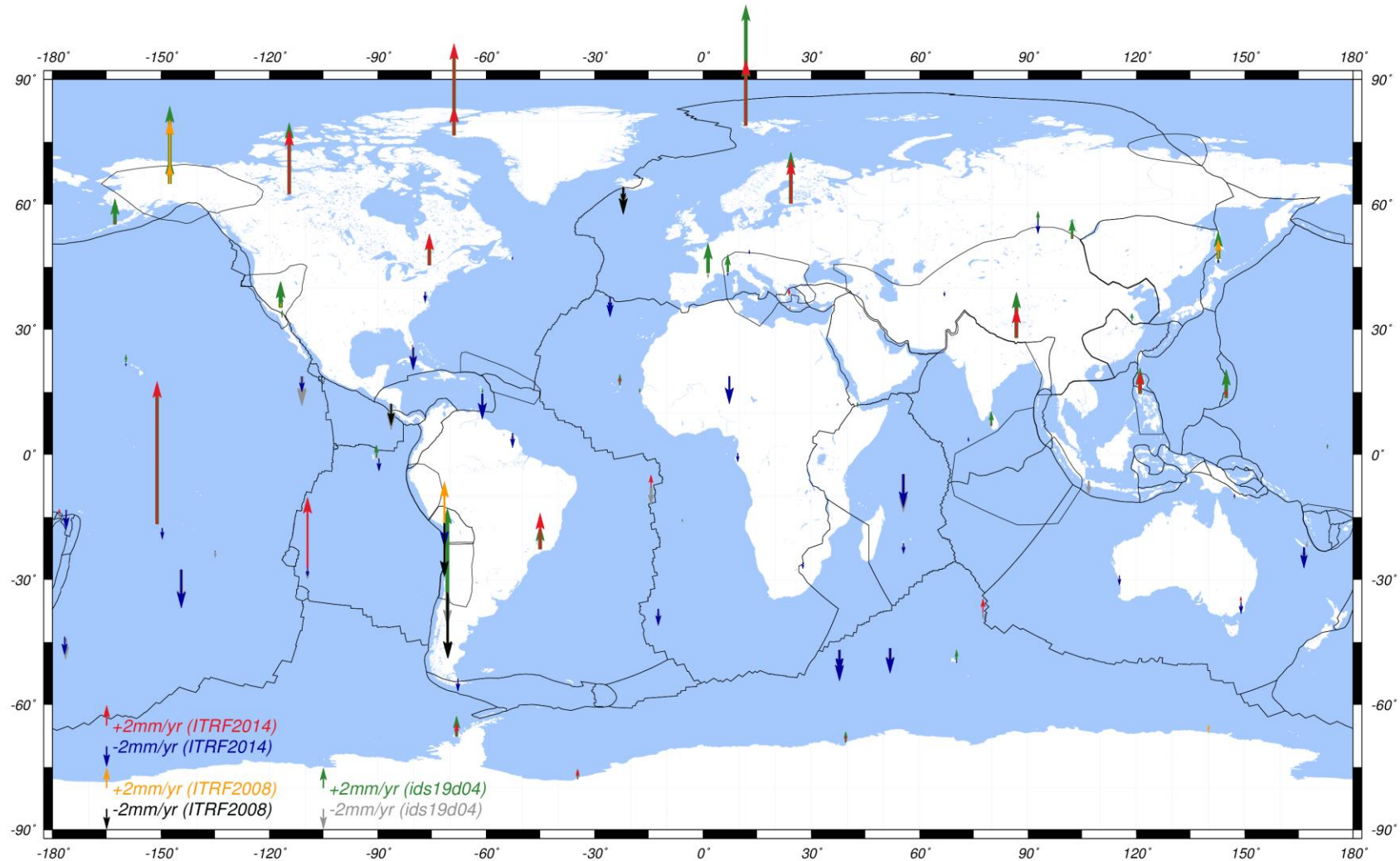
ids19d04 vs ITRF2014 (ITRF2008 at PSD sites) – Horizontal velocities





<http://ids-doris.org>

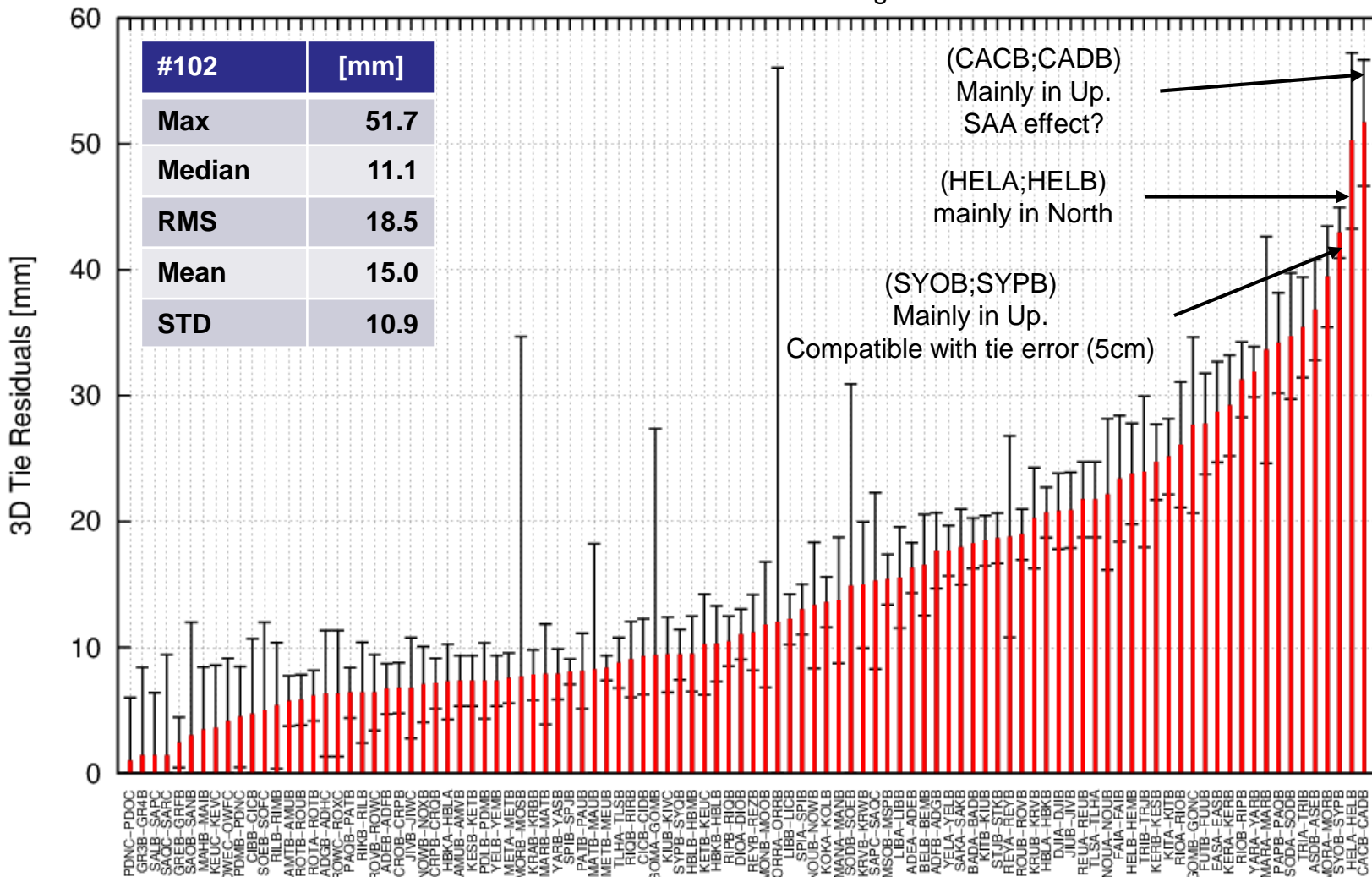
ids19d04 vs ITRF2014 (ITRF2008 at PSD sites) – Vertical velocities





ids19d04 vs IGN DORIS-to-DORIS ties

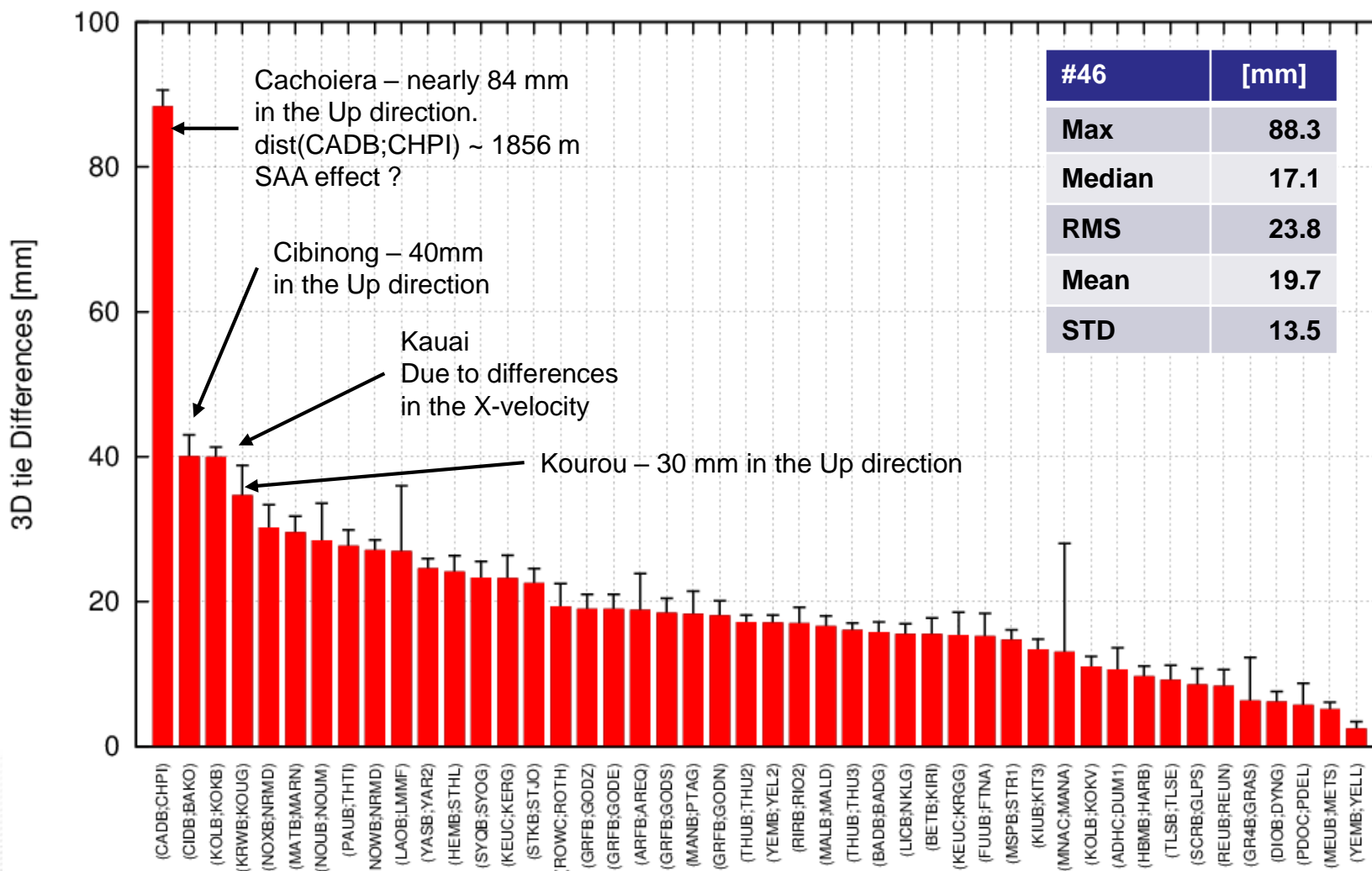
Coordinate differences estimated at the begin of the most recent station



AREA-AREB removed due to earthquakes in between
 OTTA-OTTB removed due to more than 18 months in between

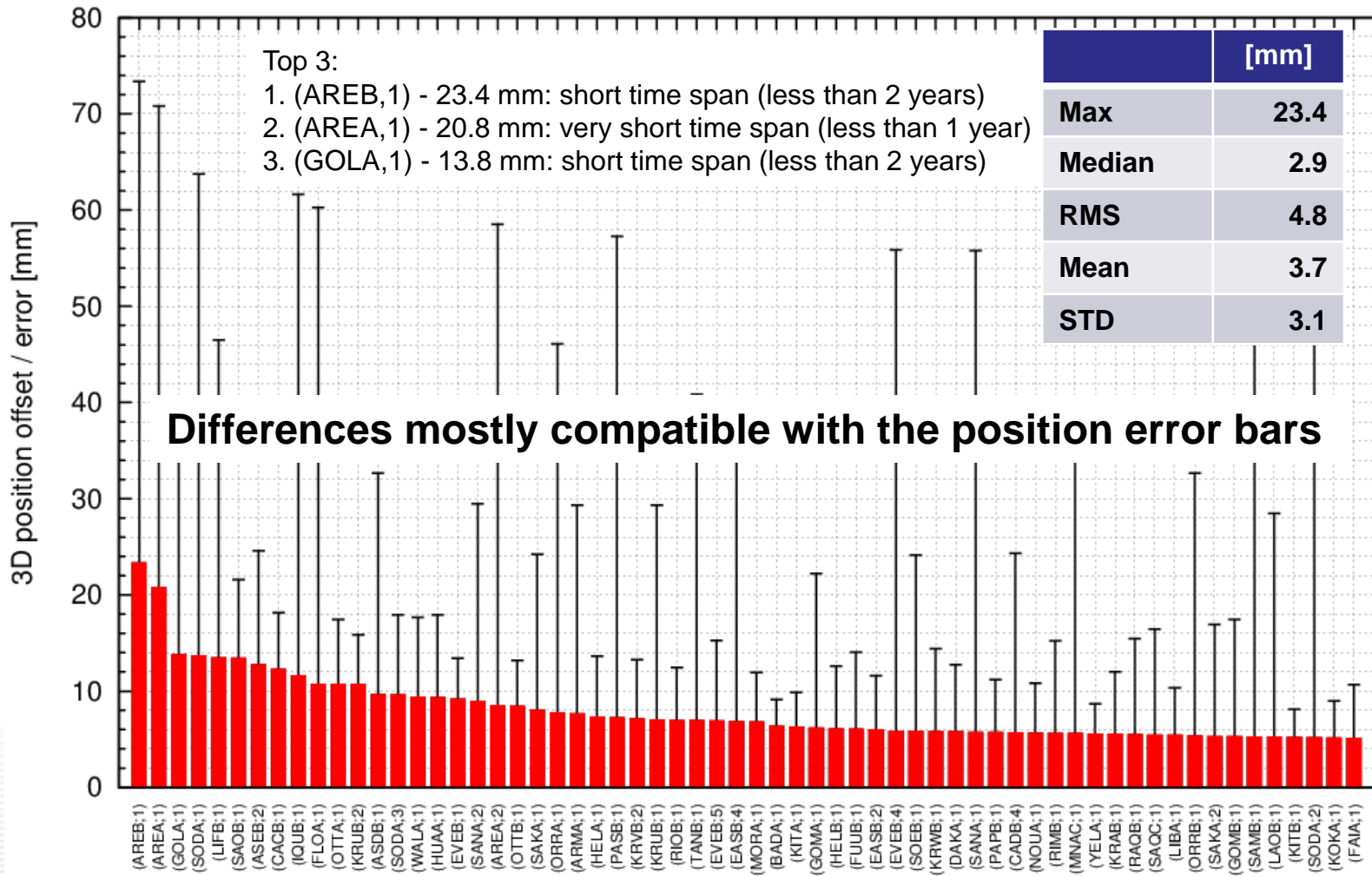
ids19d04 vs IGN DORIS-to-GNSS ties

Coordinate differences estimated at max(time_beg_GNSS, time_beg_DORIS)



ids19d04 vs ids18d03

Position differences at the mean epoch of the observations Differences larger than 5mm only



ids19d04 vs ids18d03 Velocity differences

Differences larger than 1mm/yr only

