



DORIS Cumulative Solution ids17d02

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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 12 from 1993 doy 003 to 2017 doy 001.
 - Position constraints from the IGN DORIS-to-DORIS ties (2016/09/02).
 - Continuity velocity constraints.
 - Aligned to ITRF2014.
- **Available in SINEX (ids17d02.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
Owenga	OWEC	CHTI	GNSS	ITRF2014
Tanna	TANB	TANB	DORIS	DPOD2008 (1.14)

Discontinuity changes wrt ids17d01

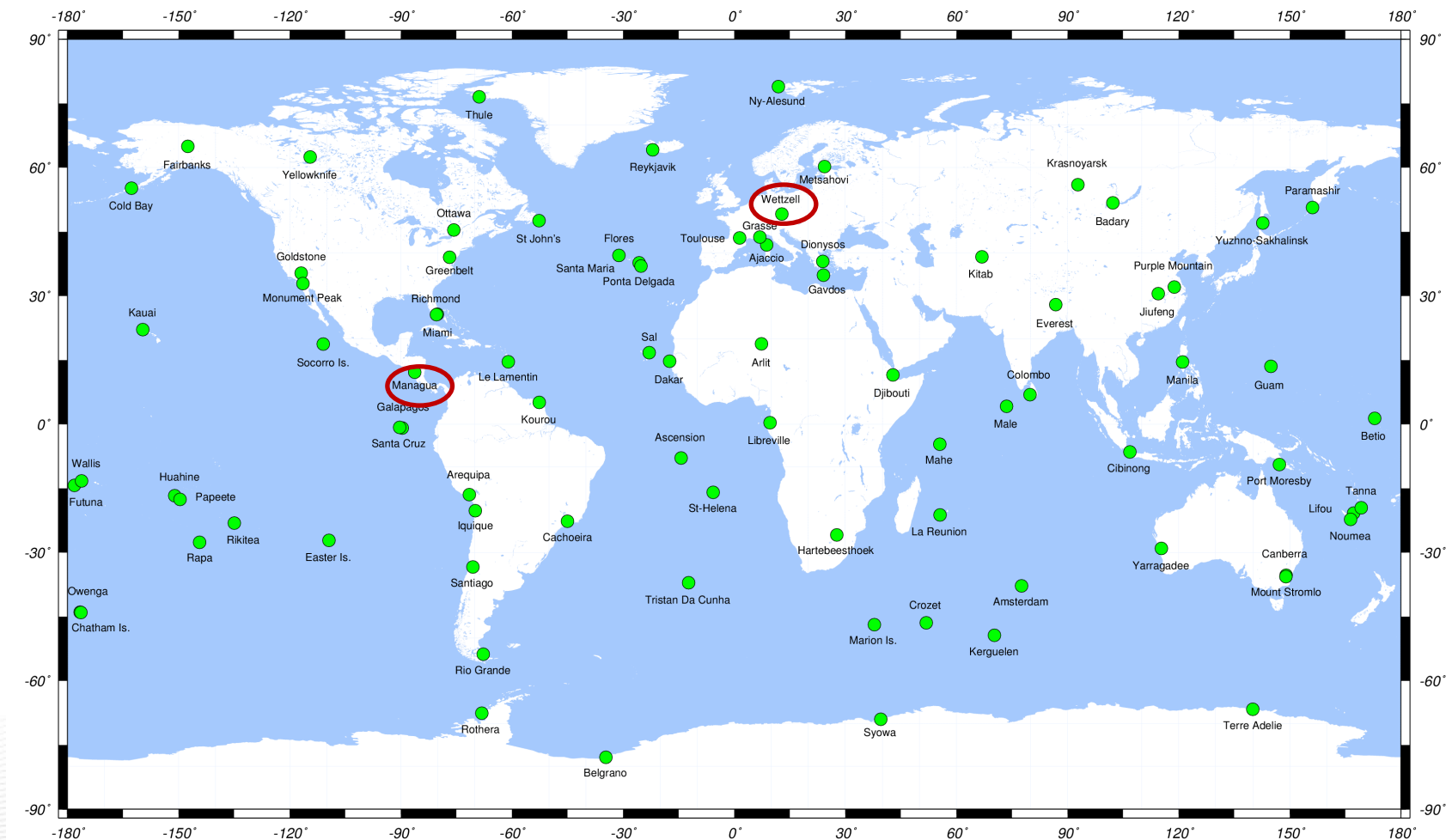
Station	Date	Origin
+ AREA	01:174:73994	Earthquake 2001/06/23
- ARFB	07:227:85258	
+ CADB	16:001:00000	Up discontinuity
+ EASB	12:169:00000	Z offset
- FAIB	03:033:00000	
+ MARB	02:169:00000	North velocity
+ MATB	09:155:62725	Earthquake 2009/06/04
+ MORB	08:243:00000	Earthquake 2008/08/30
+ RIRB	15:343:00000	North position
+ SALB	08:188:00000	North position
+ SANA	96:087:00000	North position
+ SANB	08:353:76768	Earthquake 2008/12/18
+ SANB	09:147:00000	Post-seismic
- SANB	11:045:13200	

ids17d02 - Network

84 DORIS sites – 188 DORIS stations

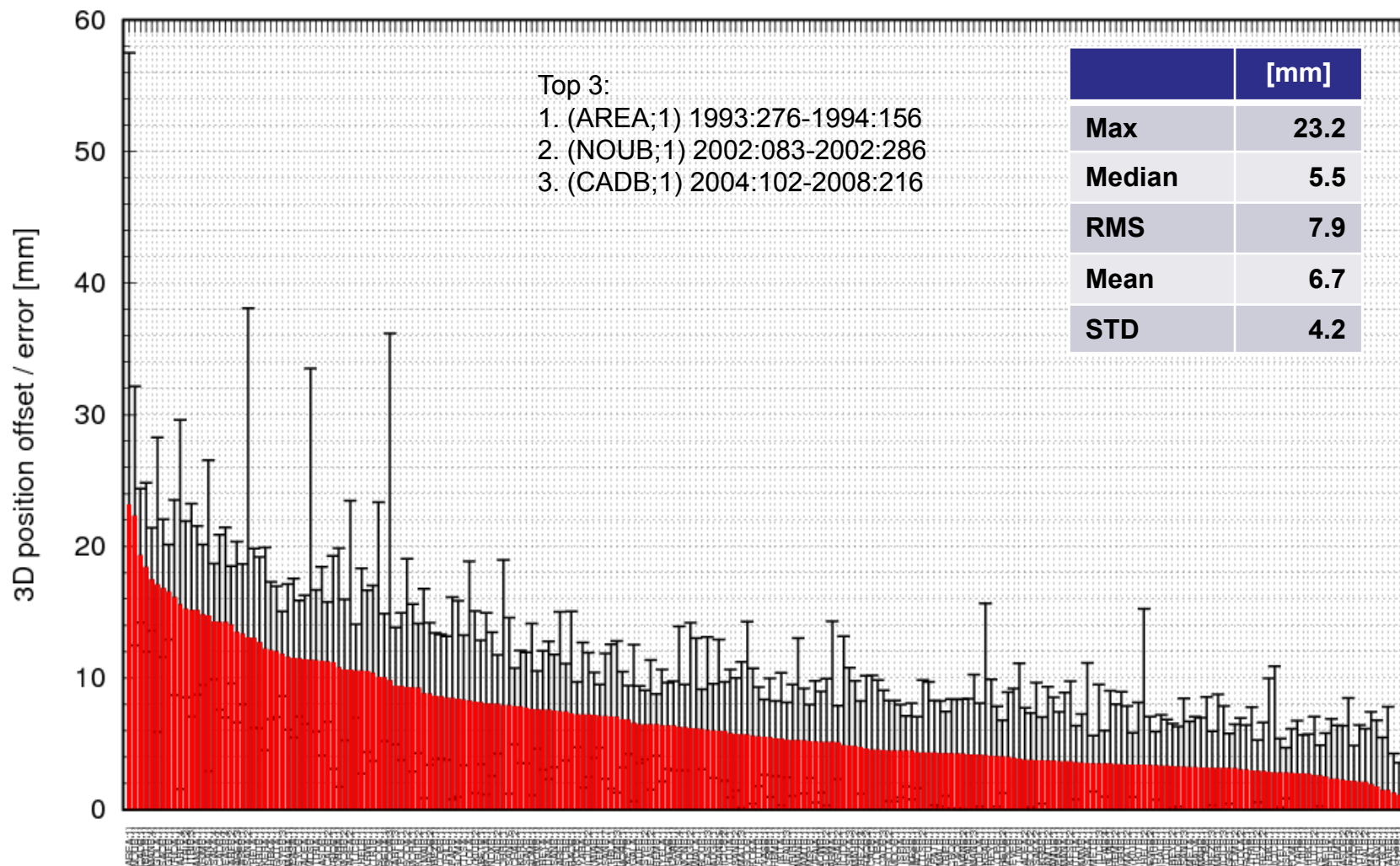
2 new sites wrt ids17d01: Managua and Wettzell

8 new stations wrt ids17d01



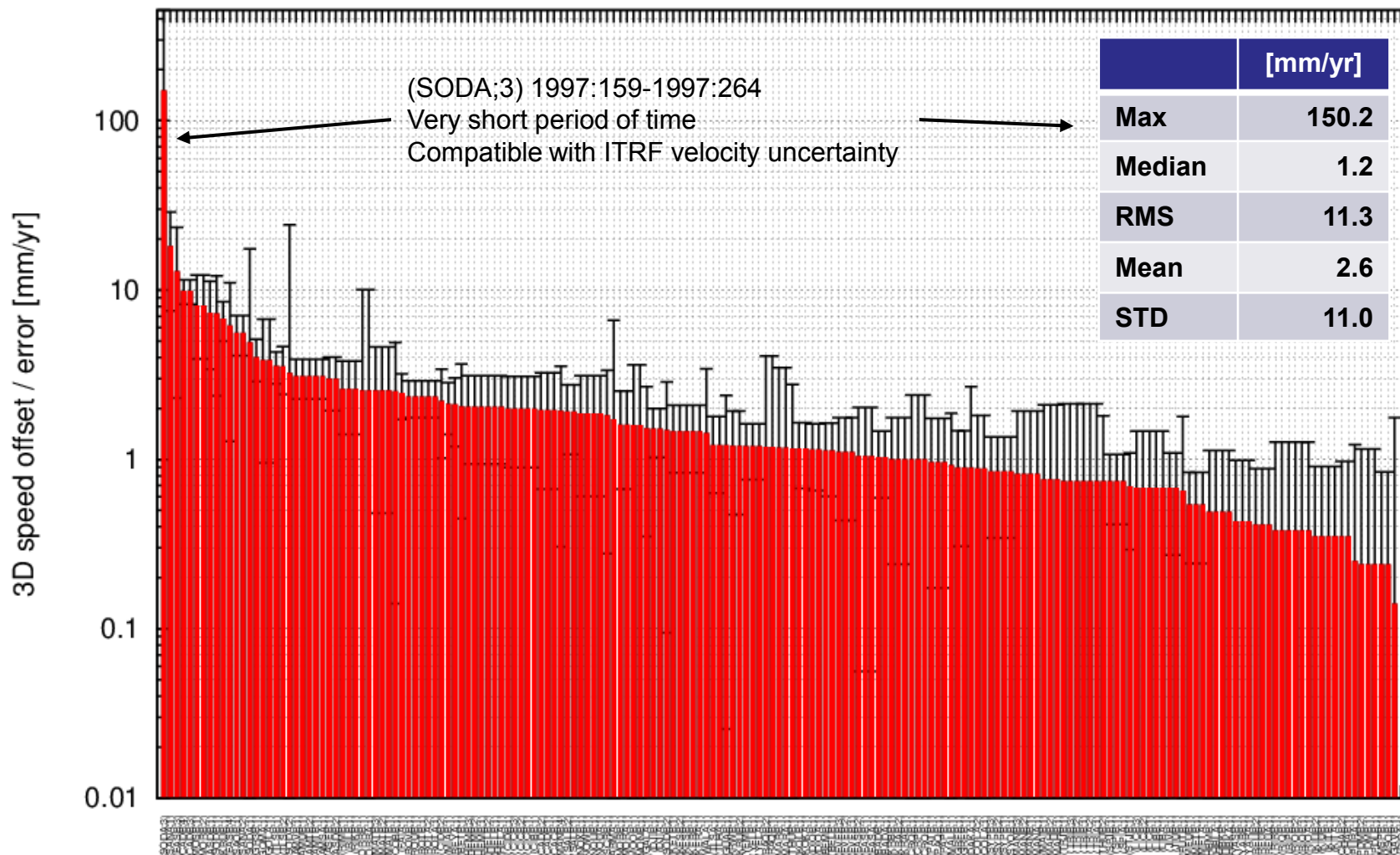
ids17d02 vs ITRF2014 (PSD included)

Position differences at the mean epoch of the observations



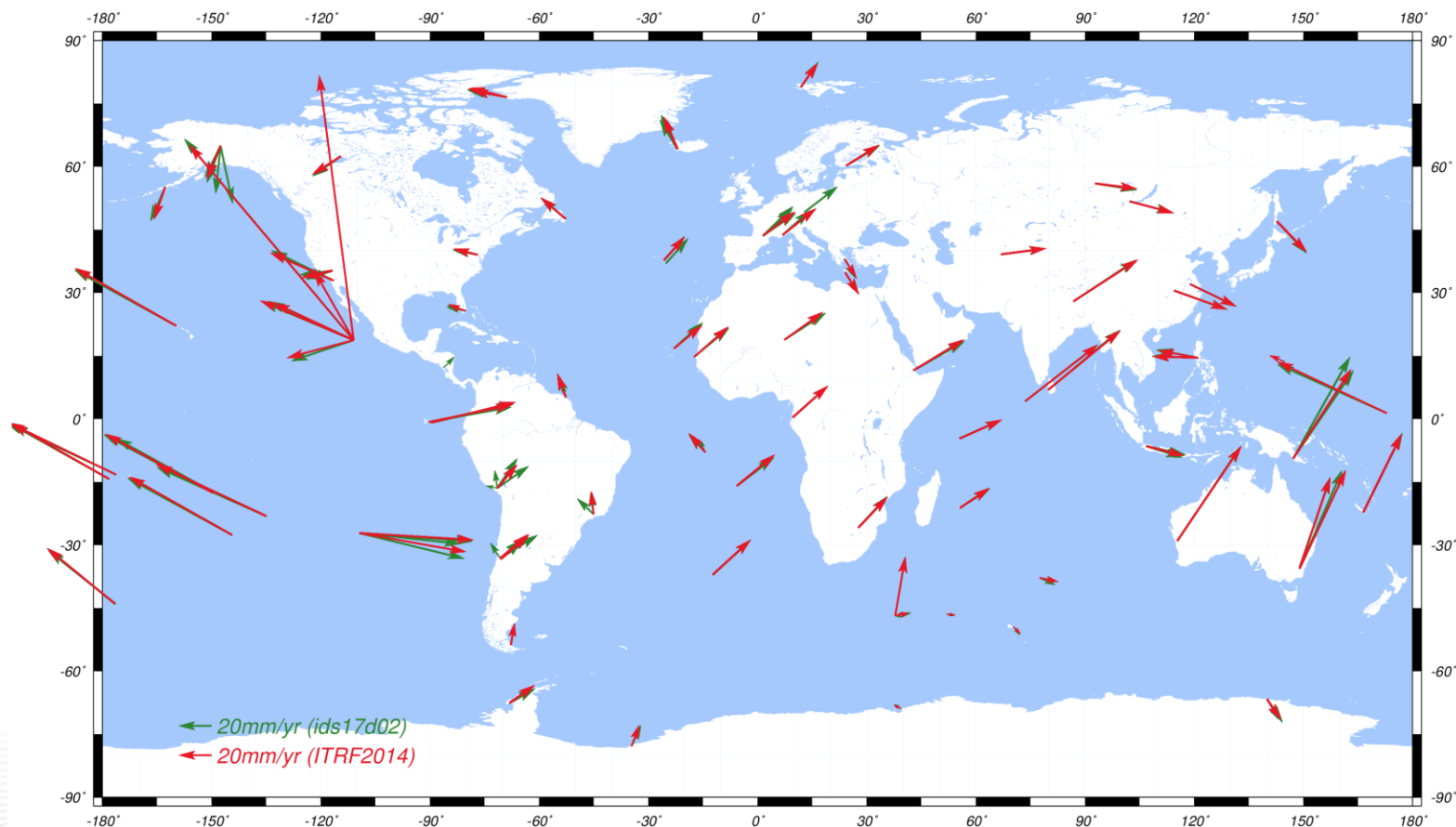
ids17d02 vs ITRF2014

Velocity differences – PSD sites excluded



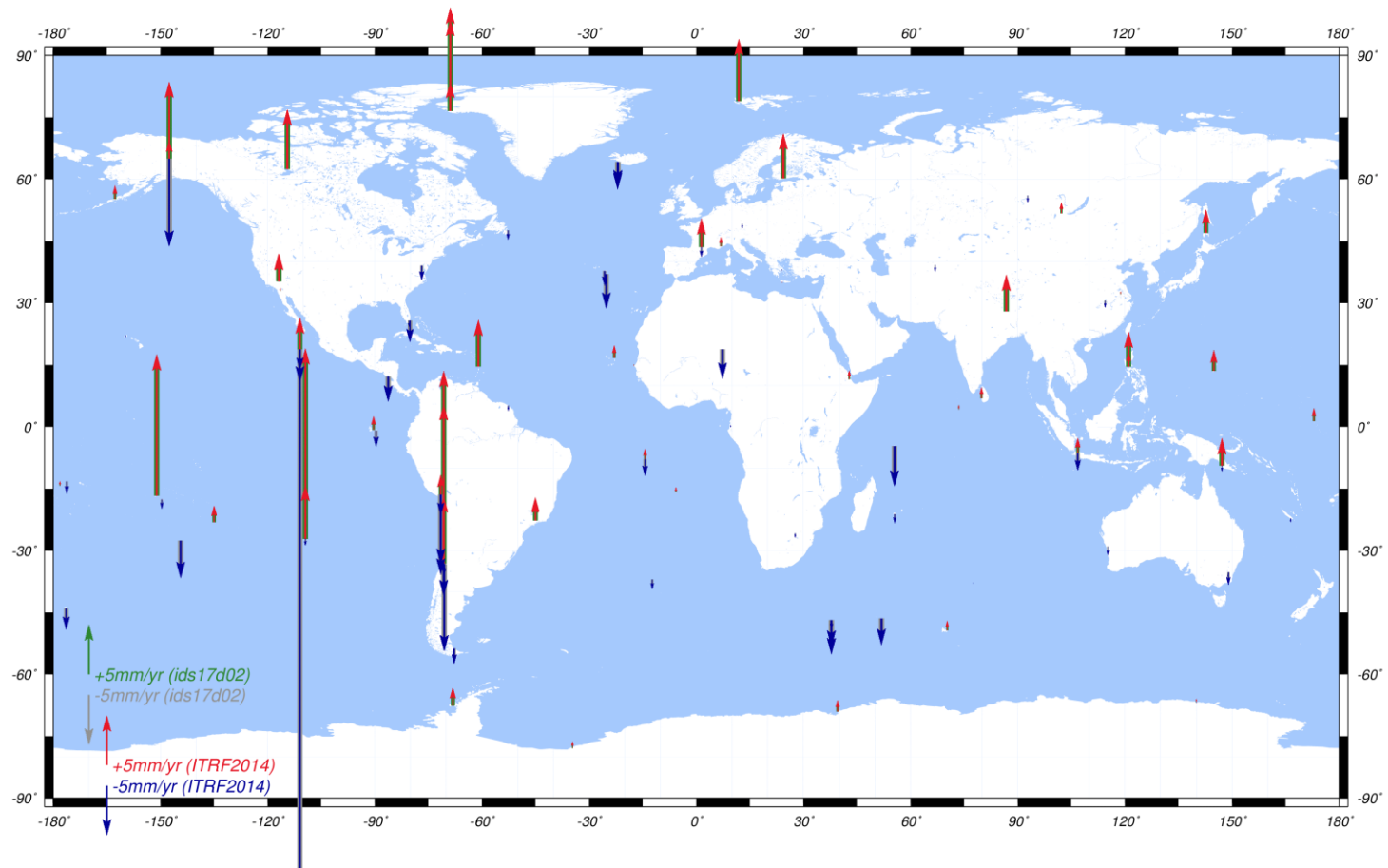
ids17d02 vs ITRF2014 – Horizontal velocities

Horizontal velocities from ids17d02 and ITRF2014



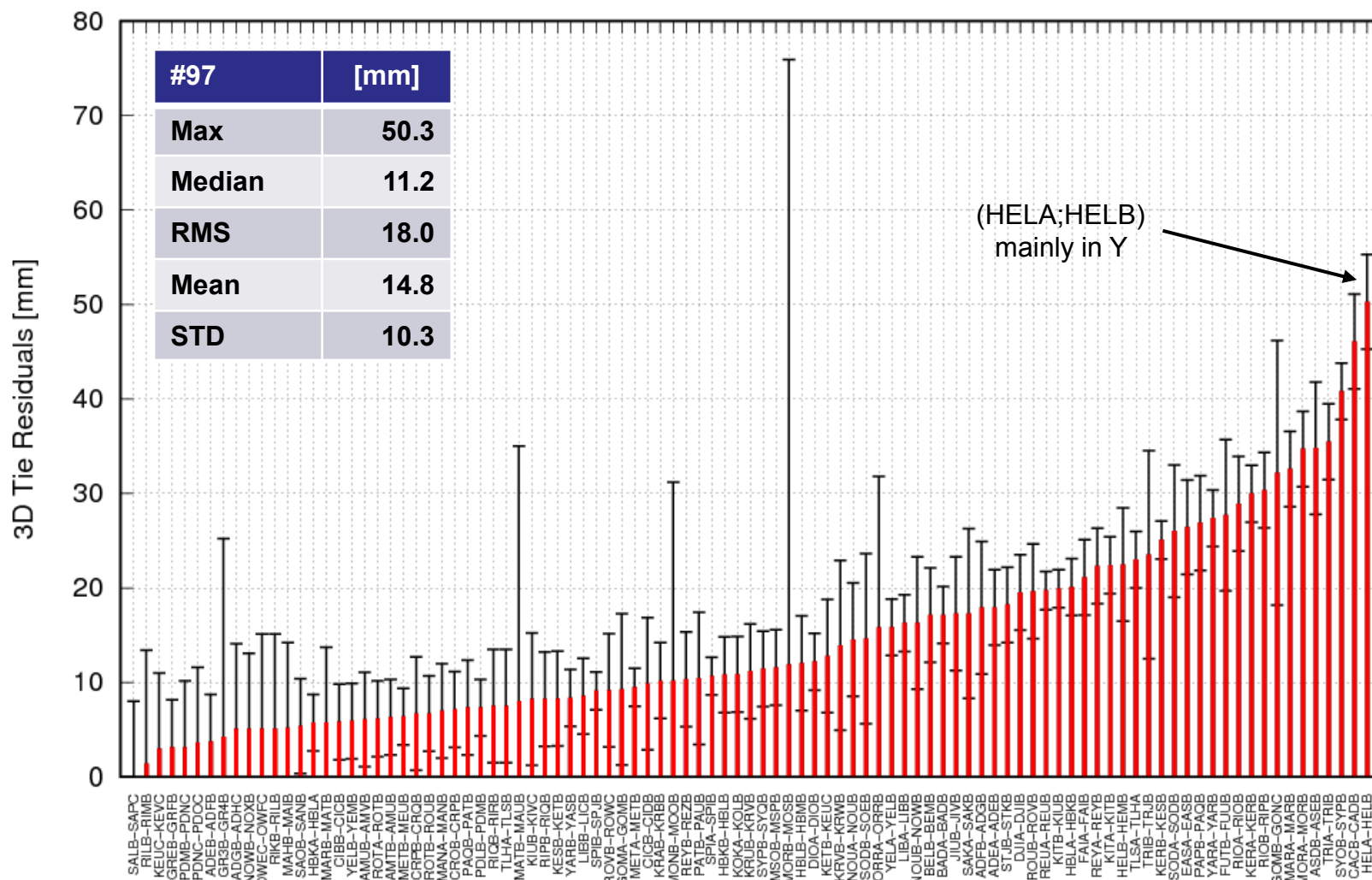
ids17d02 vs ITRF2014 – Vertical velocities

Vertical velocities from ids17d02 and ITRF2014



ids17d02 vs IGN DORIS-to-DORIS ties

Coordinate differences estimated at the begin of the most recent station

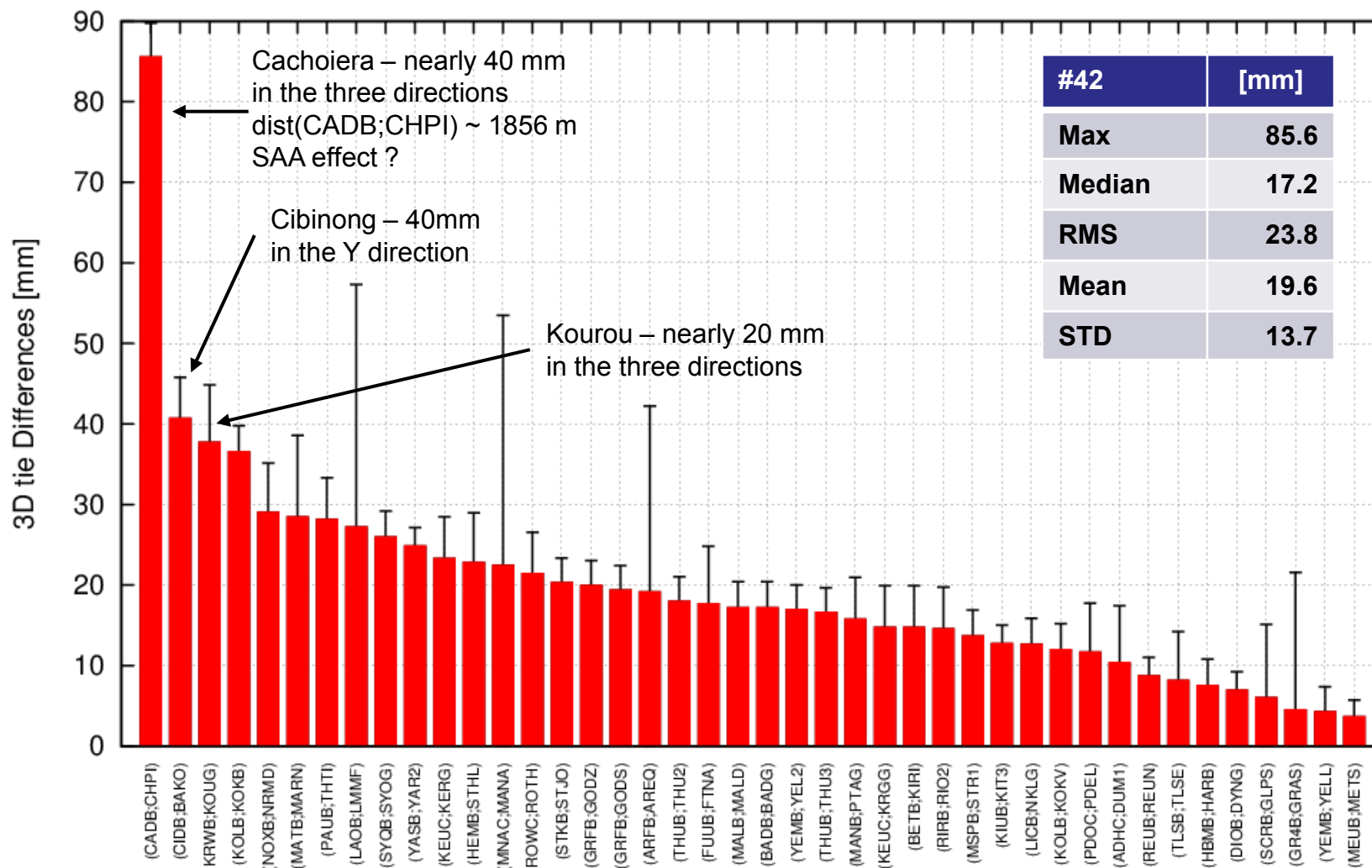


AREA-AREB removed due to earthquakes in between

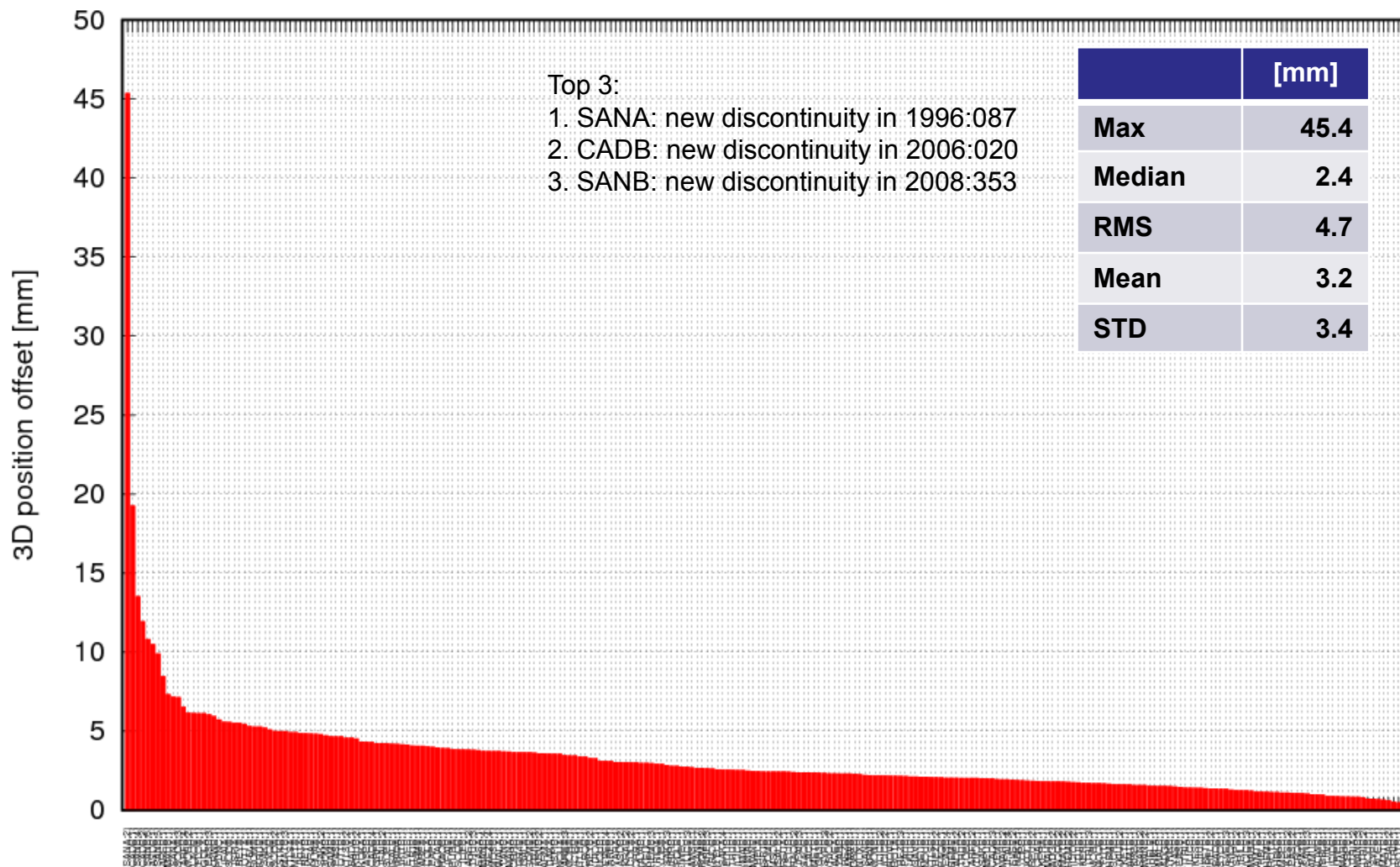
OTTA-OTTB removed due to more than 18 months in between

ids17d02 vs IGN DORIS-to-GNSS ties

Coordinate differences estimated at $\max(\text{time_beg_GNSS}, \text{time_beg_DORIS})$



Position differences at the mean epoch of the observations



ids17d02 vs ids17d01

Velocity differences

