



DPOD2014 version 2.0

Guilhem Moreaux (IDS Combination Center) – October 31st, 2017



- **Based on the DORIS position and velocity cumulative solution ids17d02 (stacking of the IDS combined series ids 12 from 1993 doy 003 to 2016 doy 360).**
- **Available in SINEX and text formats.**
- **SINEX solution contains three 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.
 - **STATION/TO_BE_UPDATED:** stations with non-negligible position change wrt DPOD2014v01.
- **Text solution contains a new column 11 (from the left) to identify stations with non-negligible position change wrt DPOD2014 v01**
 - **Y** means station to be updated
 - **N** means station no to be updated
 - **X** means period to not use

- **Velocities must be constrained** (differences wrt DPOD2014v01).

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
Owenga	OWEC	CHTI	GNSS	ITRF2014
Tanna	TANB	TANB	DORIS	DPOD2008 (1.14)
+ Wettzell	WEUC	WTZS	GNSS	ITRF2014

Discontinuity changes wrt DPOD2014 v01

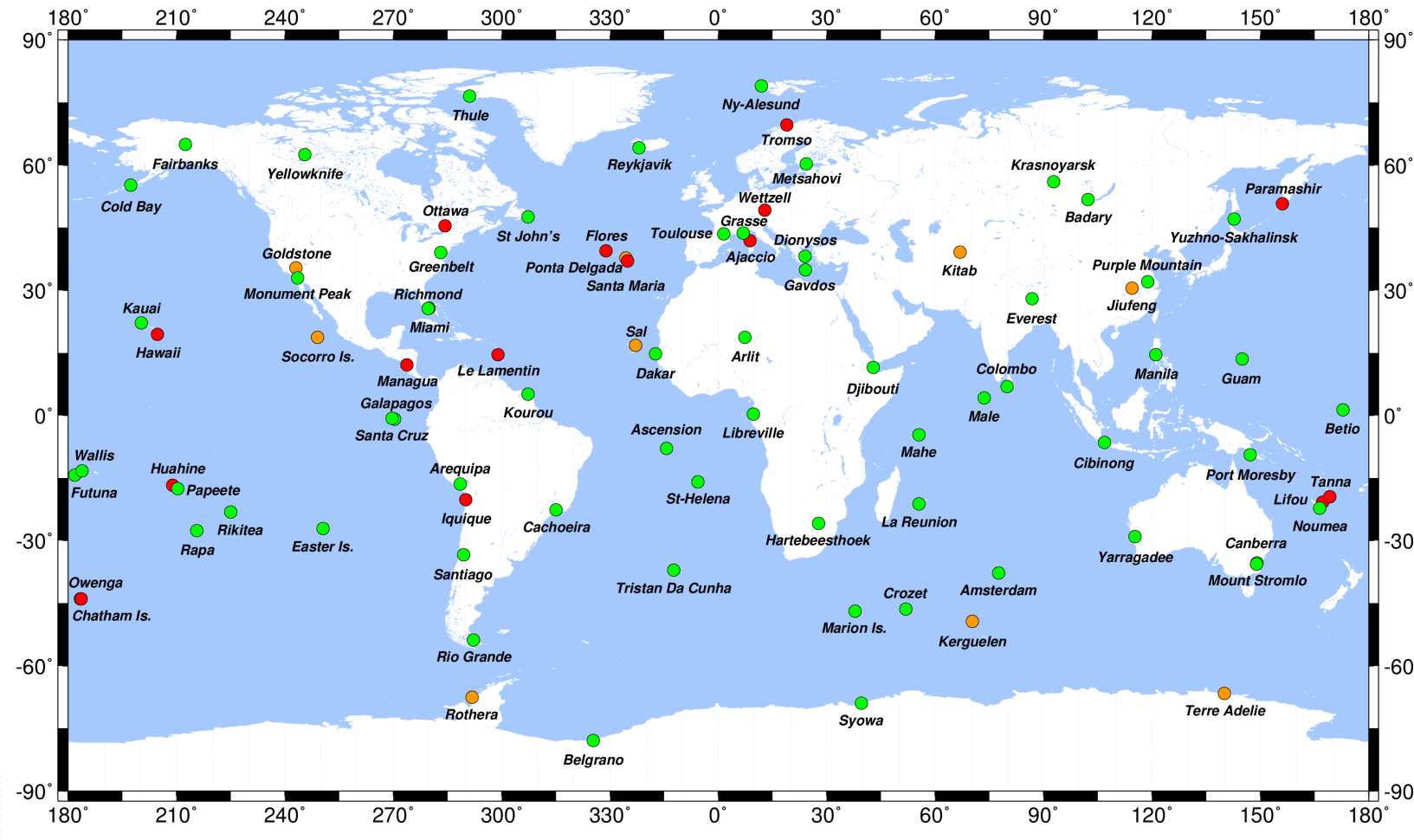
Station	Date	Origin
+ AREA	01:174:73994	Earthquake 2001/06/23
- ARFB	07:227:85258	
+ CADB	16:001:00000	Up discontinuity
+ EASB	12:169:00000	Z offset
- FAIB	03:033:00000	
+ MARB	02:169:00000	North velocity
+ MATB	09:155:62725	Earthquake 2009/06/04
+ MORB	08:243:00000	Earthquake 2008/08/30
+ RIRB	15:343:00000	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	



<http://ids-doris.org>

DPOD2014v02 - Network

86 DORIS sites – 197 DORIS stations



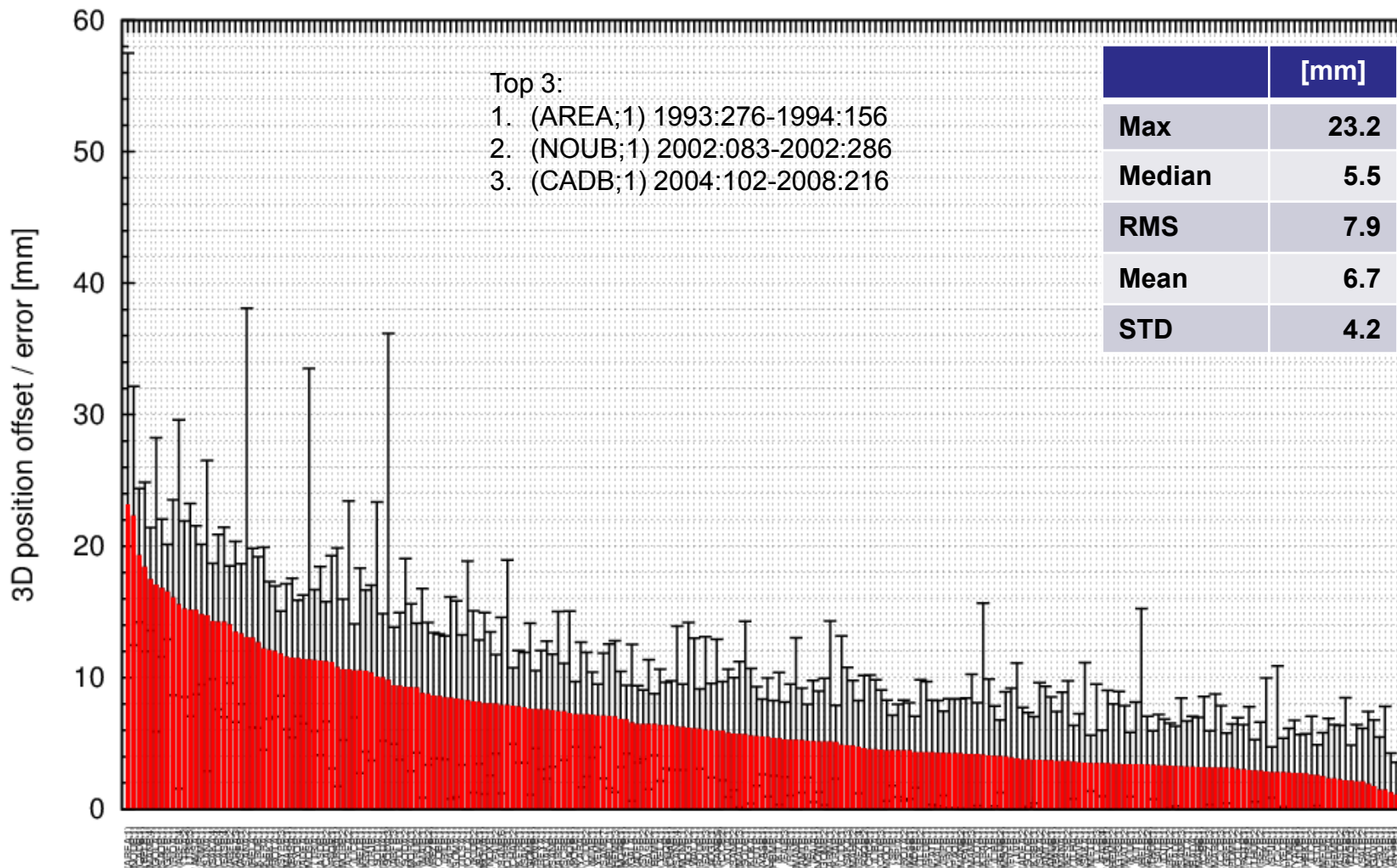
Site not included ITRF2014 (# 15) – Site with new station(s) since ITRF2014 (# 8)



<http://ids-doris.org>

DPOD2014 v02 vs ITRF2014 Position differences

Position differences at the mean epoch of the observations

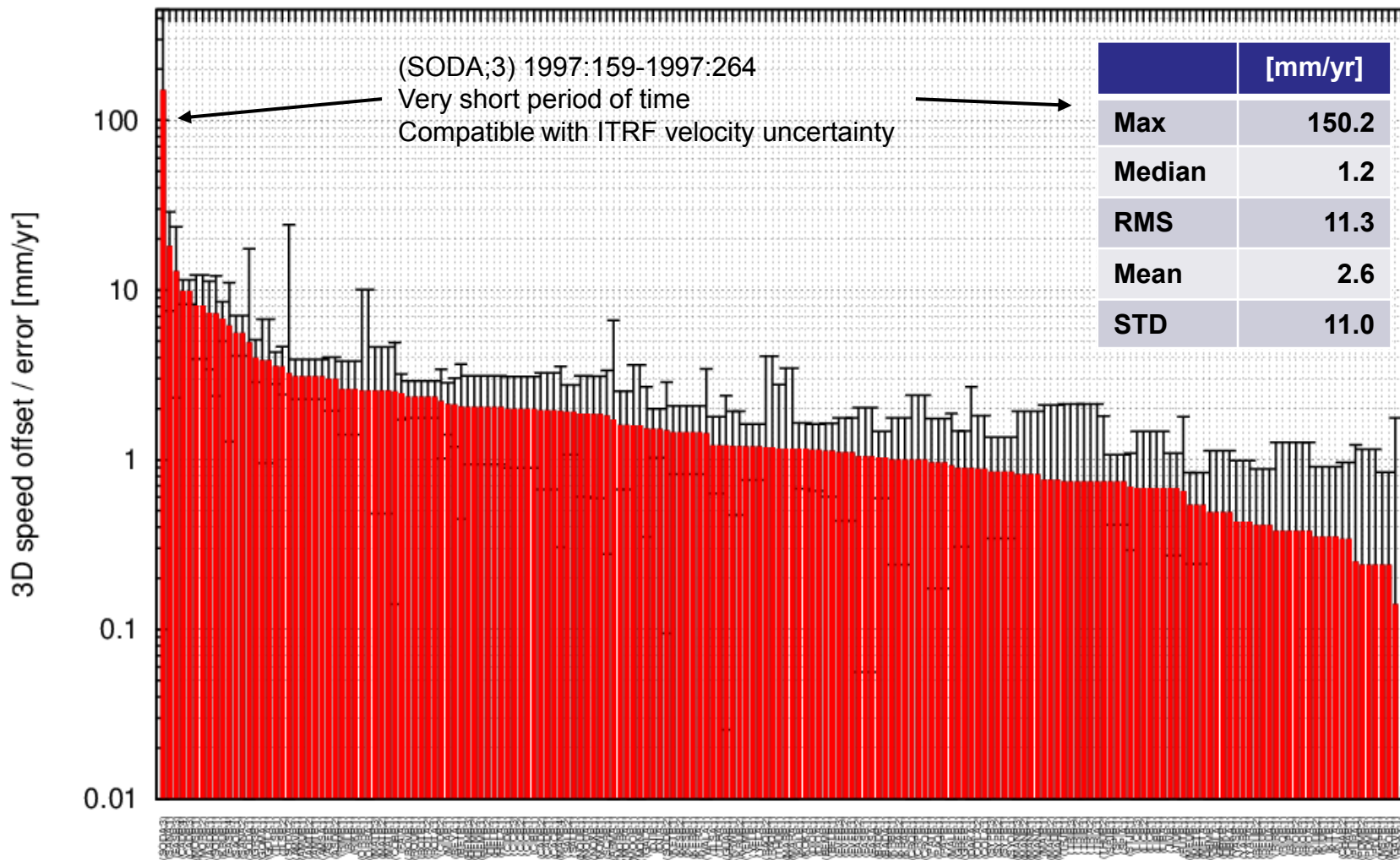




<http://ids-doris.org>

DPOD2014 v02 vs ITRF2014

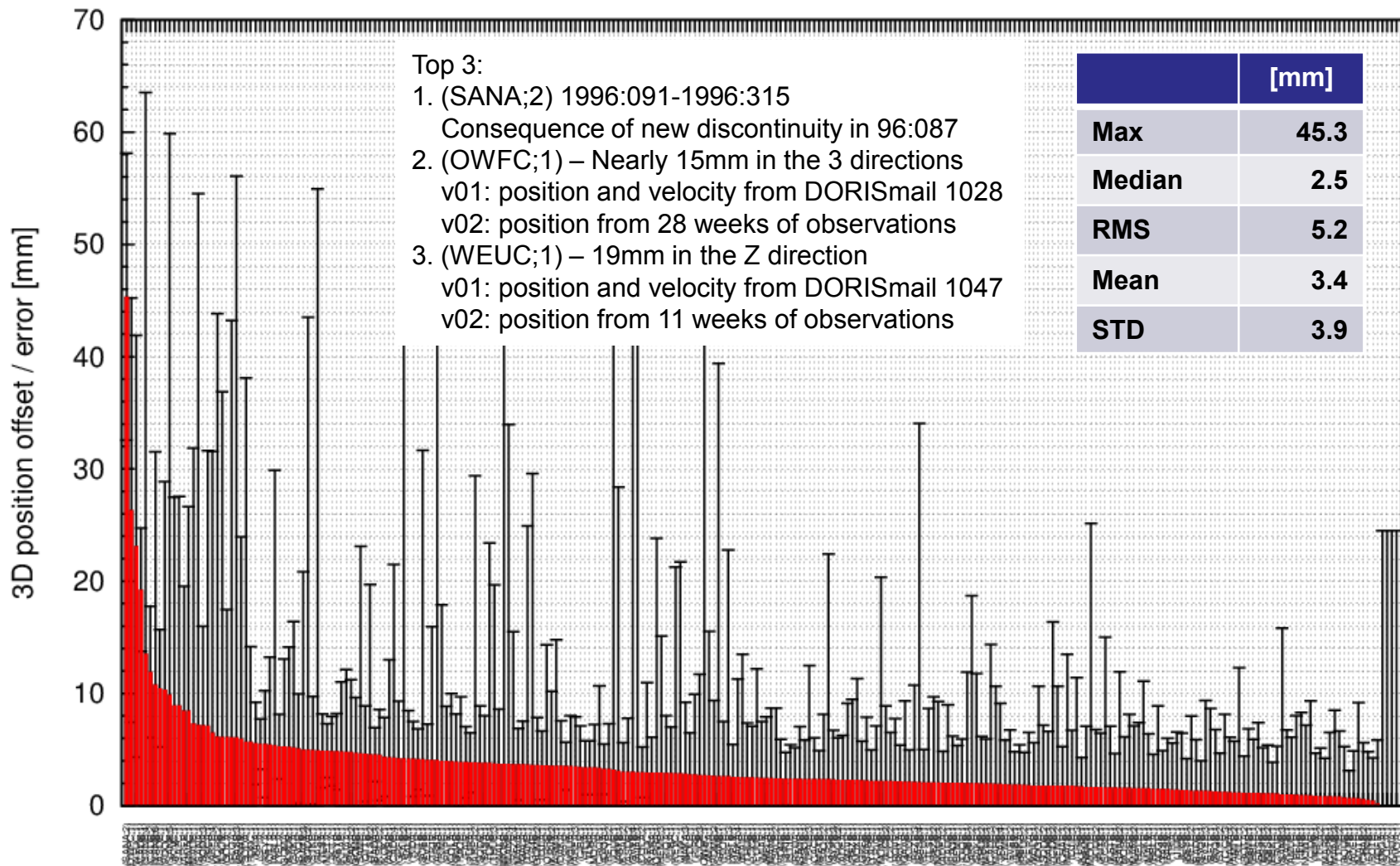
Velocity differences – PSD sites excluded





DPOD2014 v02 vs DPOD2014 v01 Position differences

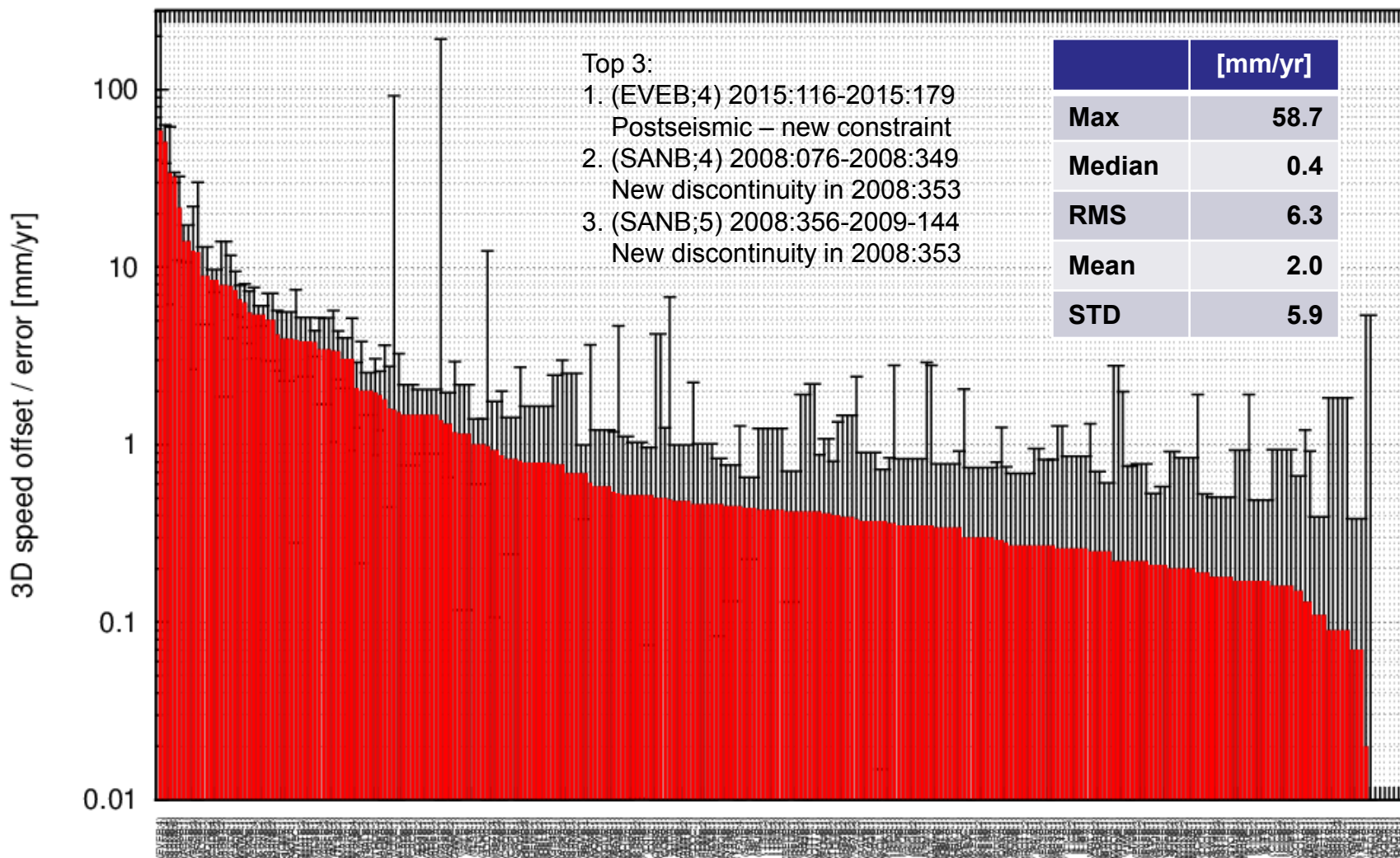
Position differences at the mean epoch of the observations





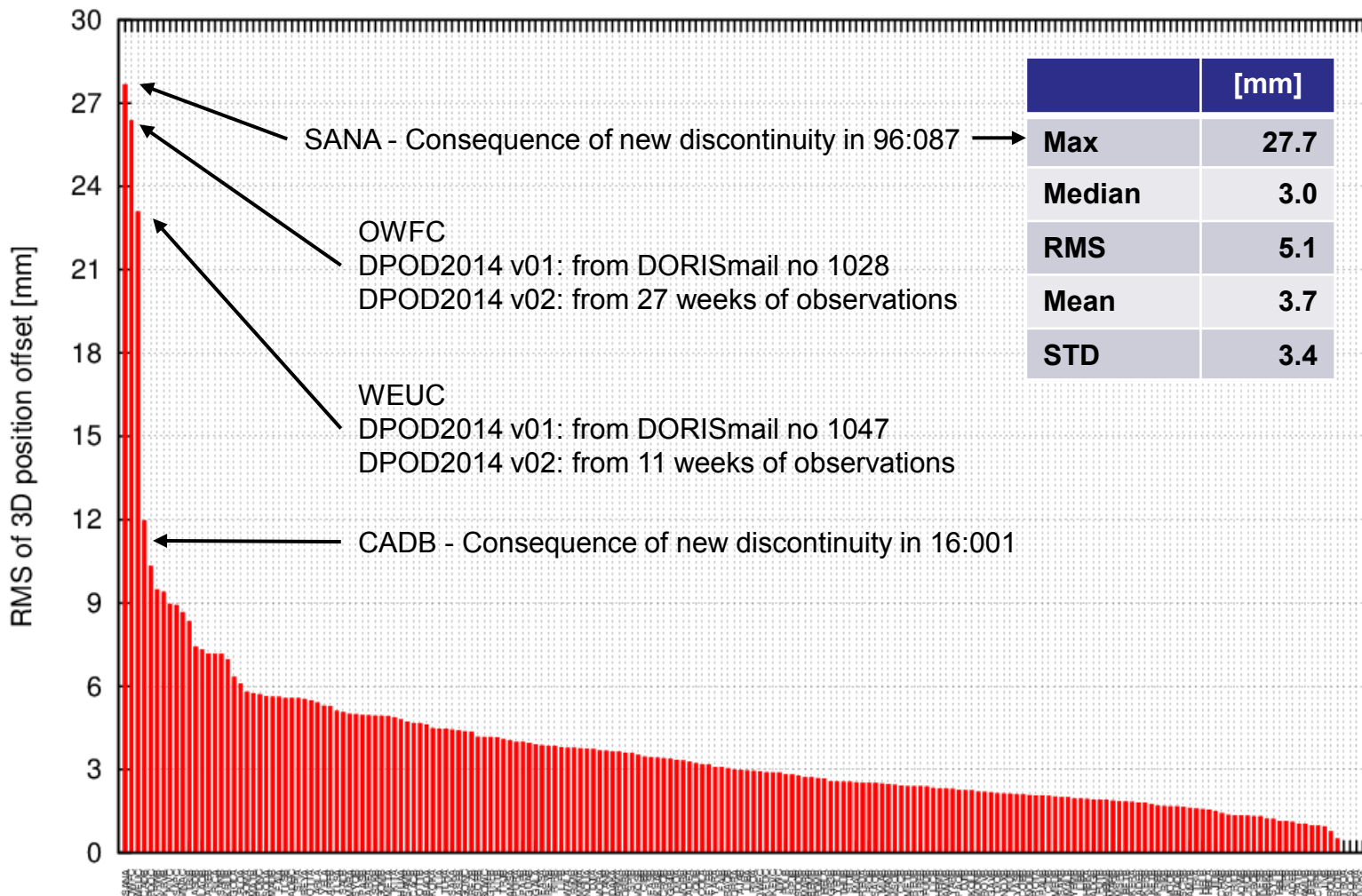
<http://ids-doris.org>

DPOD2014 v02 vs DPOD2014 v01 Velocity differences



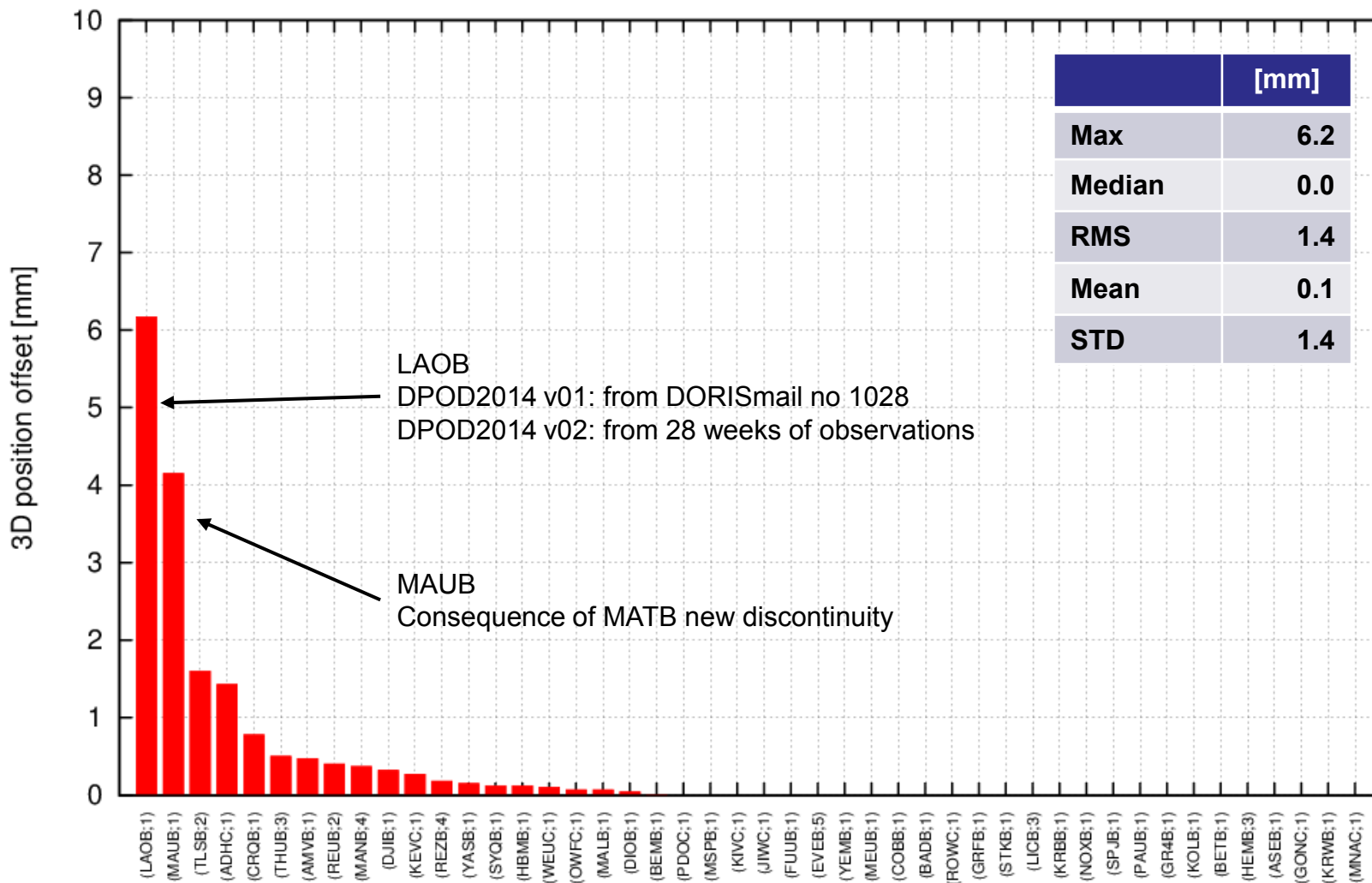
DPOD2014 v02 vs DPOD2014 v01 Position differences

RMS of 3D position differences over the whole period of the observations



DPOD2014 v02 vs DPOD2014 v01

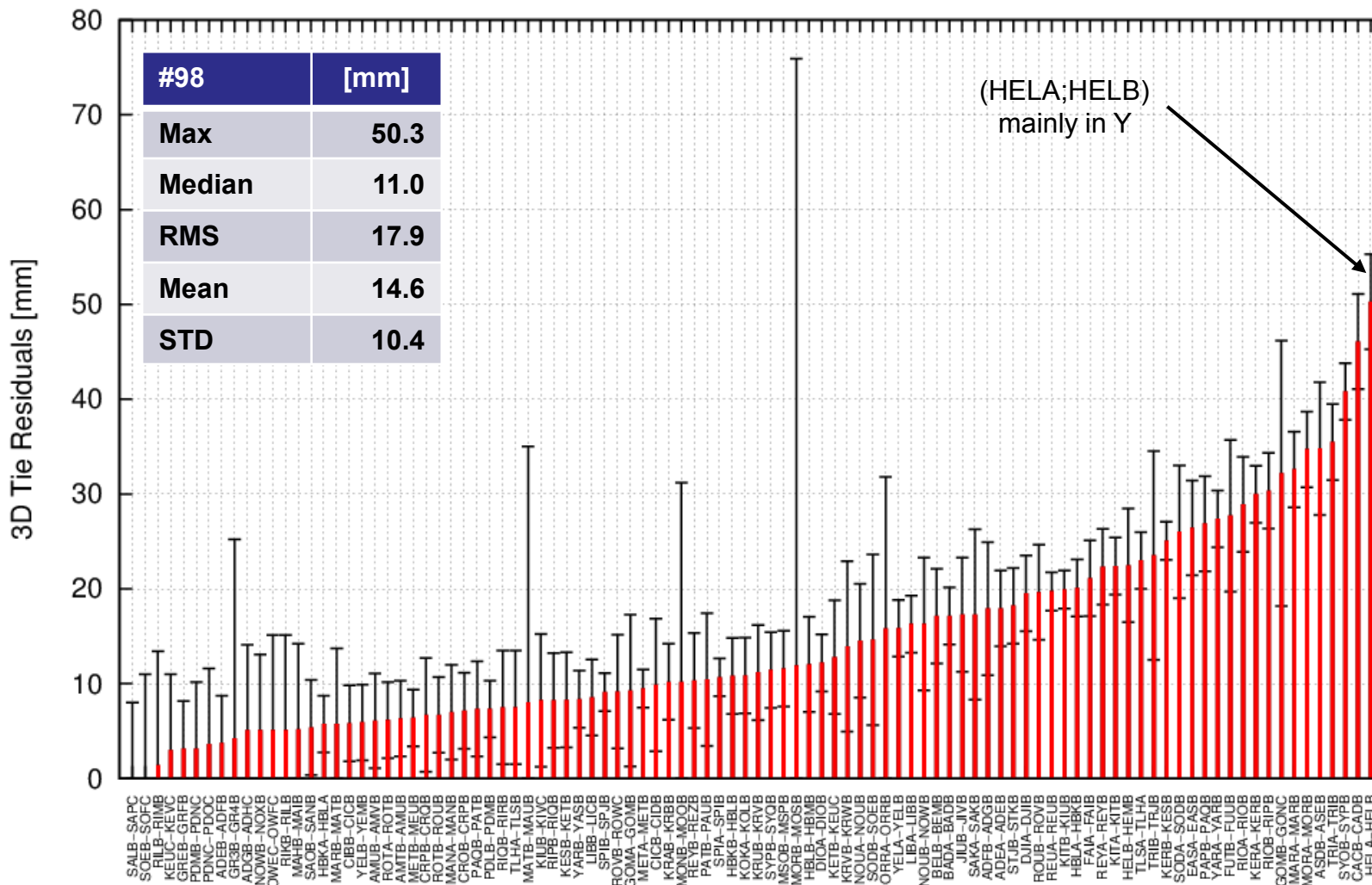
Position differences in 2018:365





DPOD2014v02 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

DPOD2014v02 vs IGN DORIS-to-GNSS ties

Coordinate differences estimated at max(time_beg_GNSS, time_beg_DORIS)

