



DPOD2014 version 4.0

Guilhem Moreaux (IDS Combination Center) – November 7th, 2019

- **Based on the DORIS position and velocity cumulative solution ids19d04 (stacking of the IDS combined series ids 12 from 1993 doy 003 to 2018 doy 364).**
- **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 DPOD2014v03.
- **Text solution contains a new column 11 (from the left) to identify stations with non-negligible position change wrt DPOD2014 v03**
 - **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 DPOD2014v03).**

Site	DORIS station	Reference station	Technique	Source
Ajaccio	AJAB	AJAC	GNSS	ITRF2014
Flores	FLOA	FLOA	DORIS	DPOD2008 (1.14)
Mangilao	MLAC		DORIS	DORISmail
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
+Ny Alesund II	SVAC		DORIS	DORISmail



<http://ids-doris.org>

Sites with less than 2.5 years of observations (2/2)

- **Velocities must be constrained (differences wrt DPOD2014v03).**

Site	DORIS station	Reference station	Technique	Source
Owenga	OWEC OWFC	CHTI	GNSS	ITRF2014
San Juan	SJUC		DORIS	DORISmail (1159 vs 1141)
+St John's	STKC		DORIS	DORISmail 1204
Tanna	TANB	TANB	DORIS	DPOD2008 (1.14)
Wetzell	WEUC	WTZS	GNSS	ITRF2014

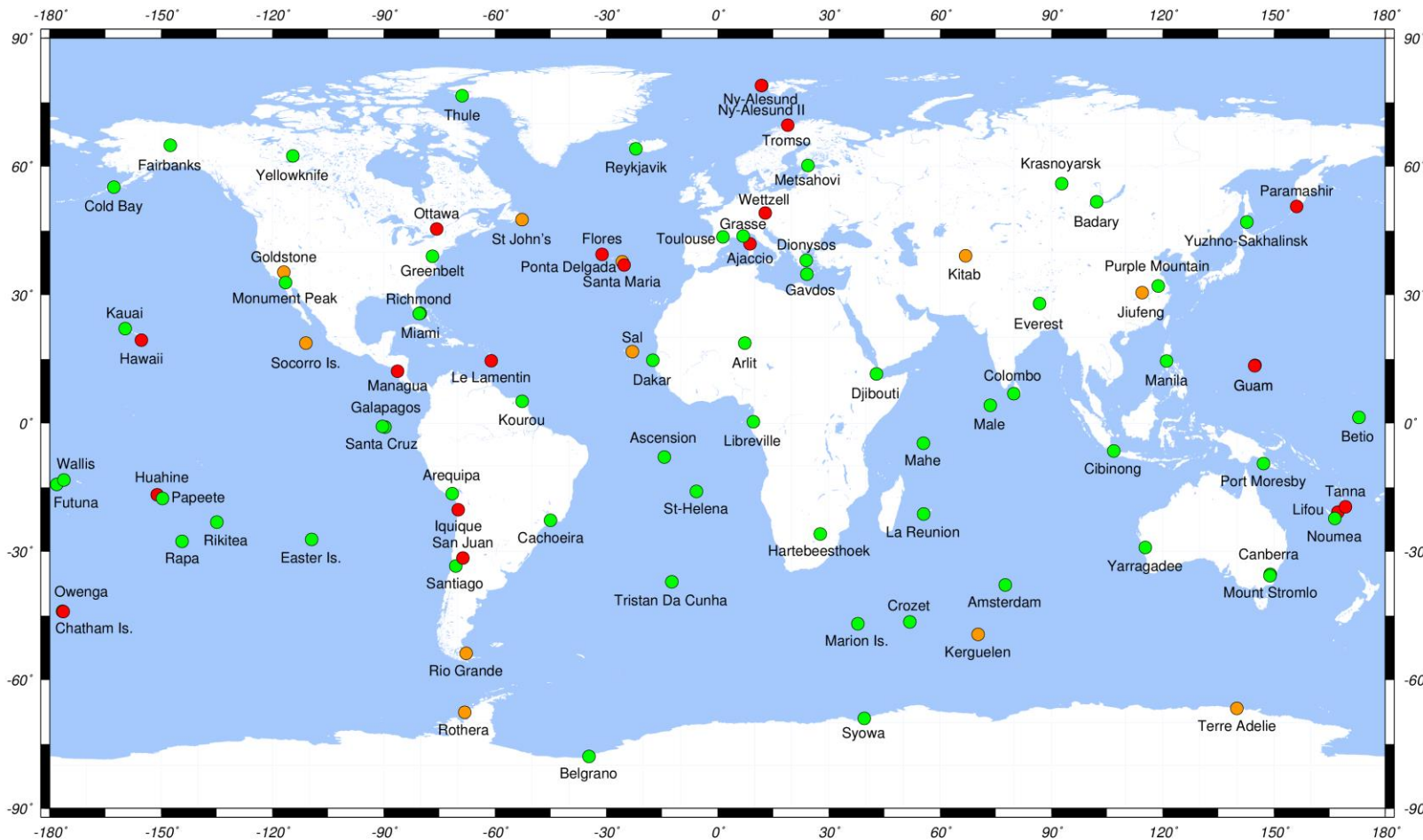
Station:w	Date	Origin
+ AREB	02:198:00000	East and Up discontinuity
+ SOEB	14:309:00000	Post-seismic



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DPOD2014 v04 - Network

89 DORIS sites – 205 DORIS stations
New site: Ny-Alesund II (Norway)
New stations : STKD (Saint John's), SVAC (Ny-Alesund II)

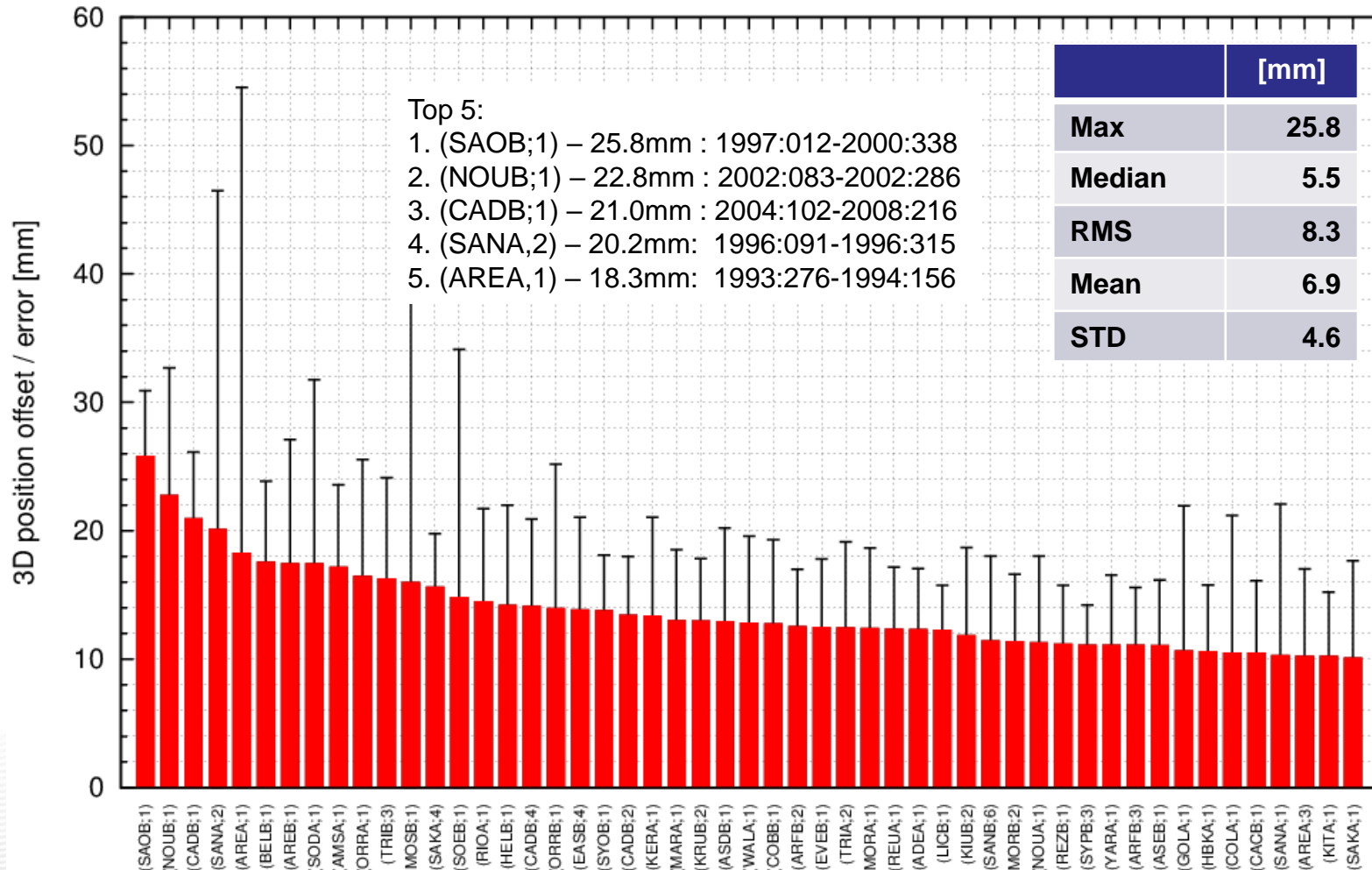


Site not included ITRF2014 (# 18) – Site with new station(s) since ITRF2014 (# 12)

DPOD2014 v04 vs ITRF2014

Position differences

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

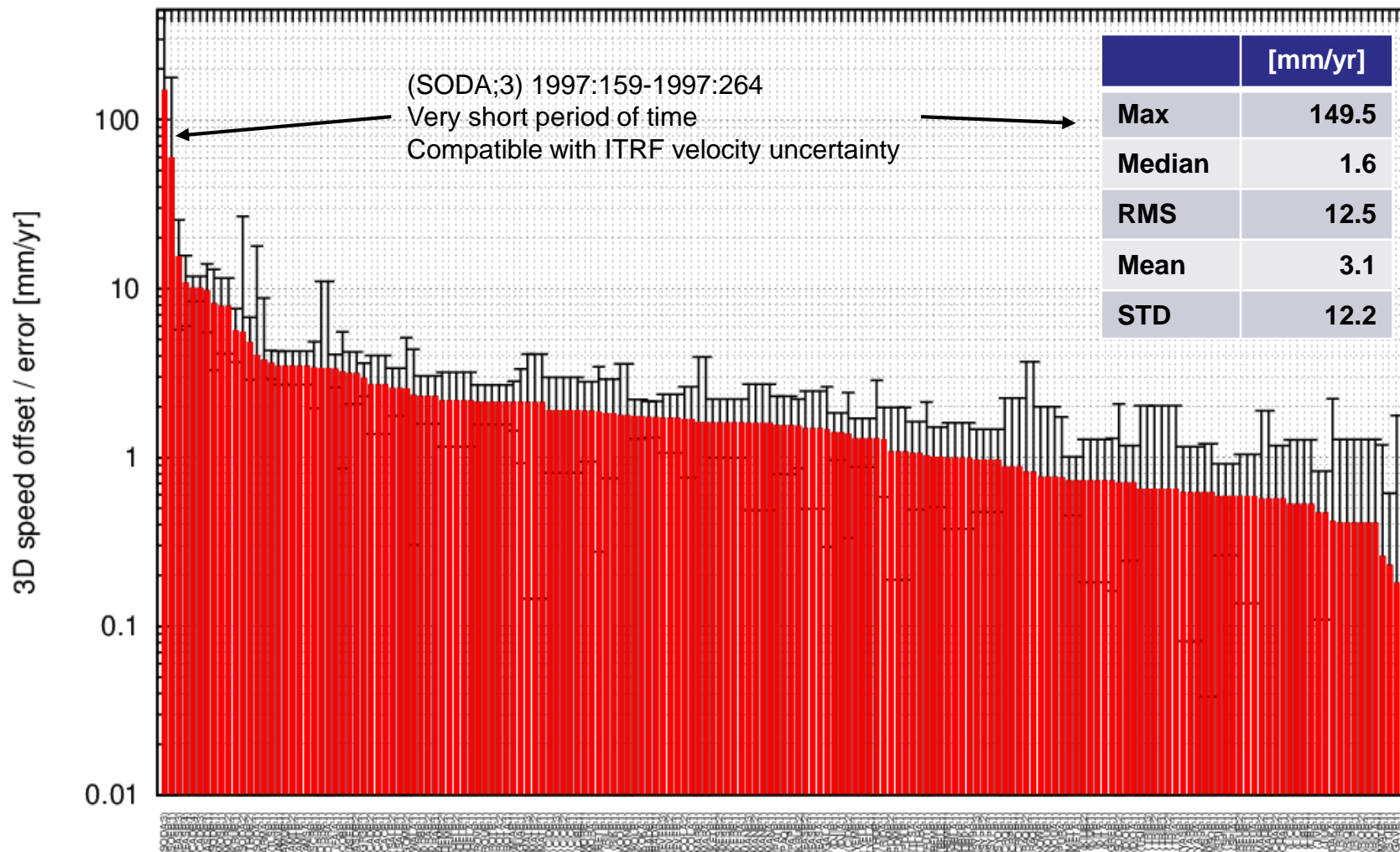




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DPOD2014 v04 vs ITRF2014

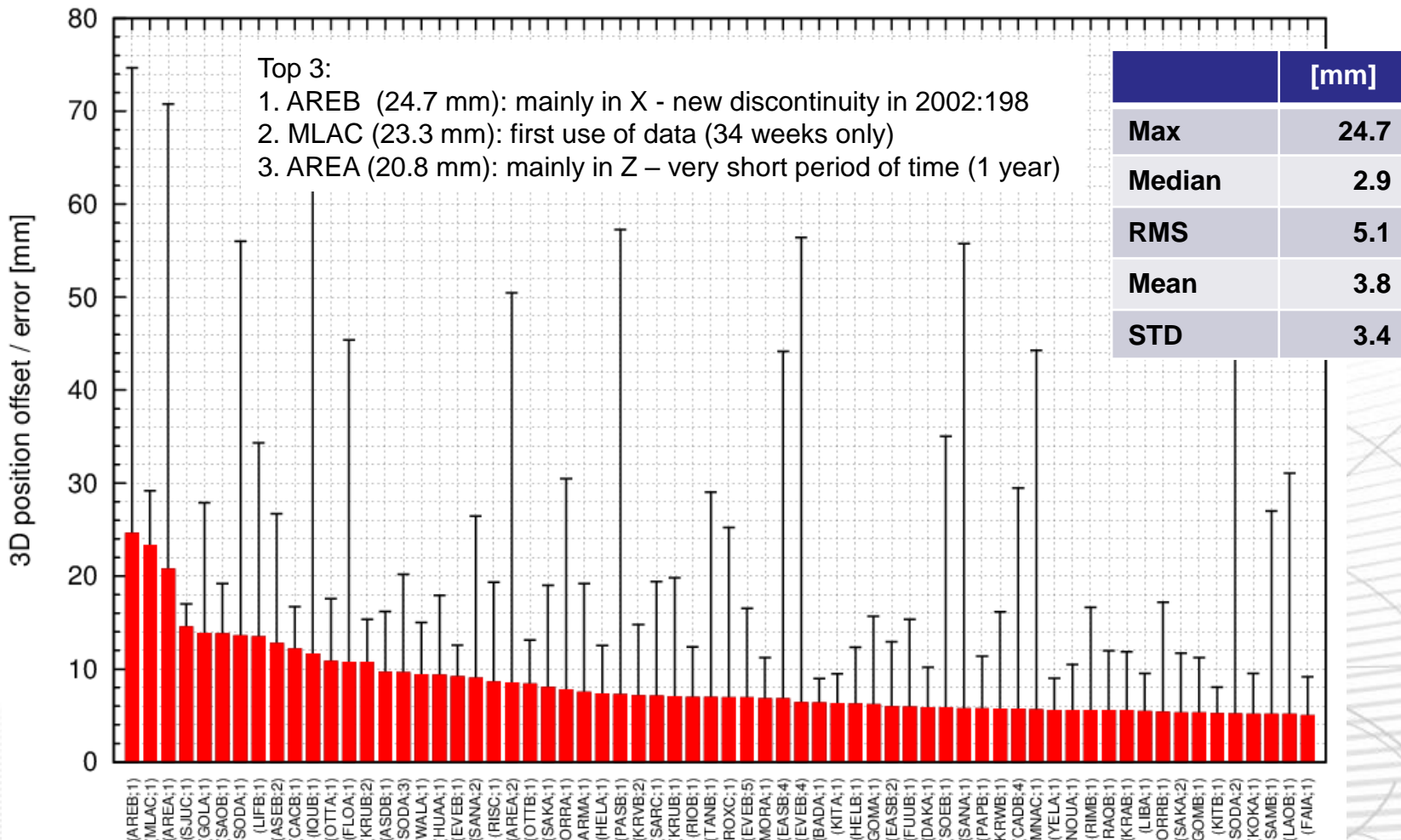
Velocity differences – PSD sites excluded



DPOD2014 v04 vs DPOD2014 v03

Position differences

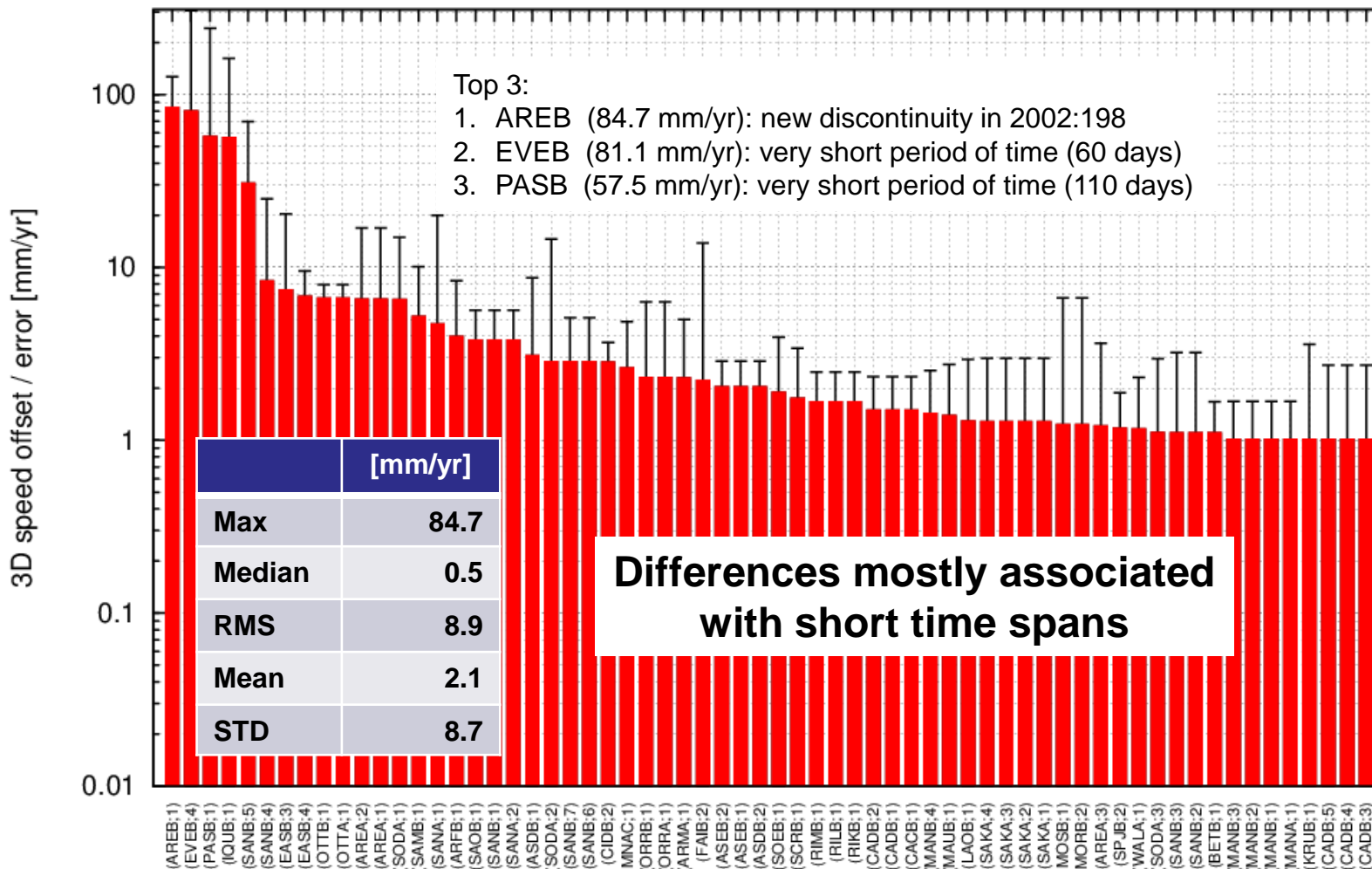
Position differences at the mean epoch of the observations
Plot of differences larger than 5mm only





DPOD2014 v04 vs DPOD2014 v03 Velocity differences

Plot of differences larger than 1mm/yr only

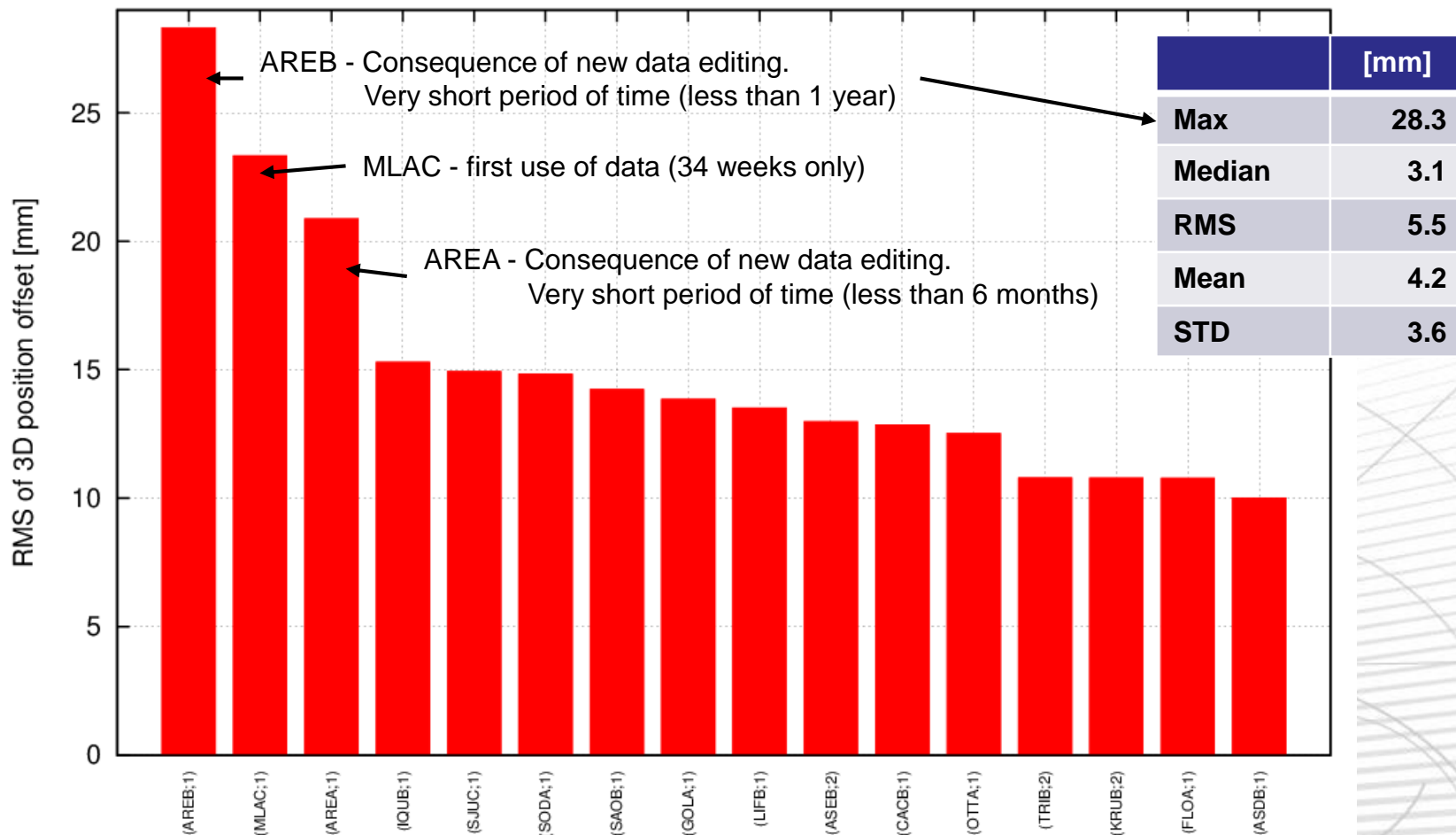


DPOD2014 v04 vs DPOD2014 v03

Position differences

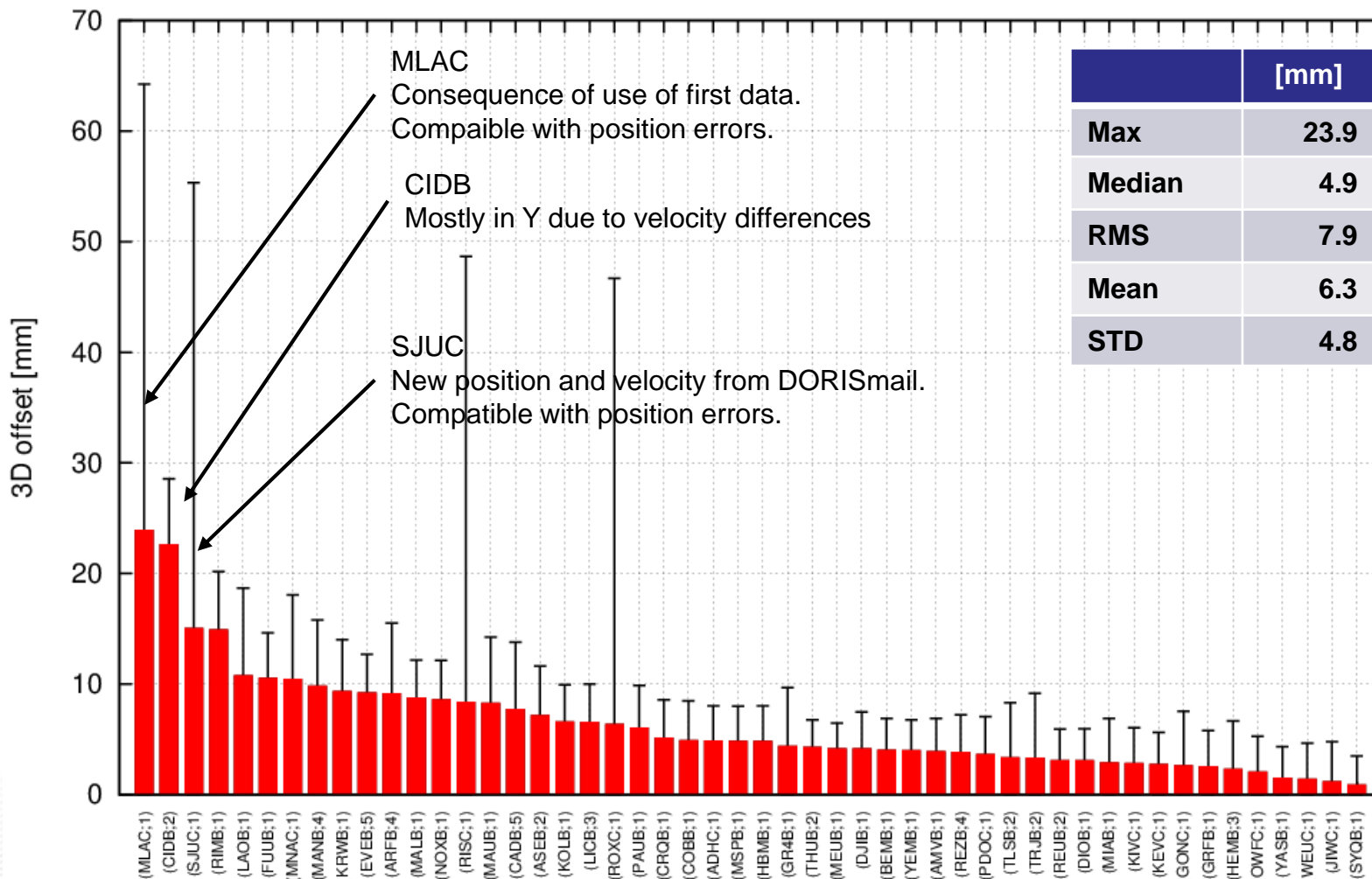
RMS of 3D position differences over the whole period of the observations

Plot of differences larger than 10mm





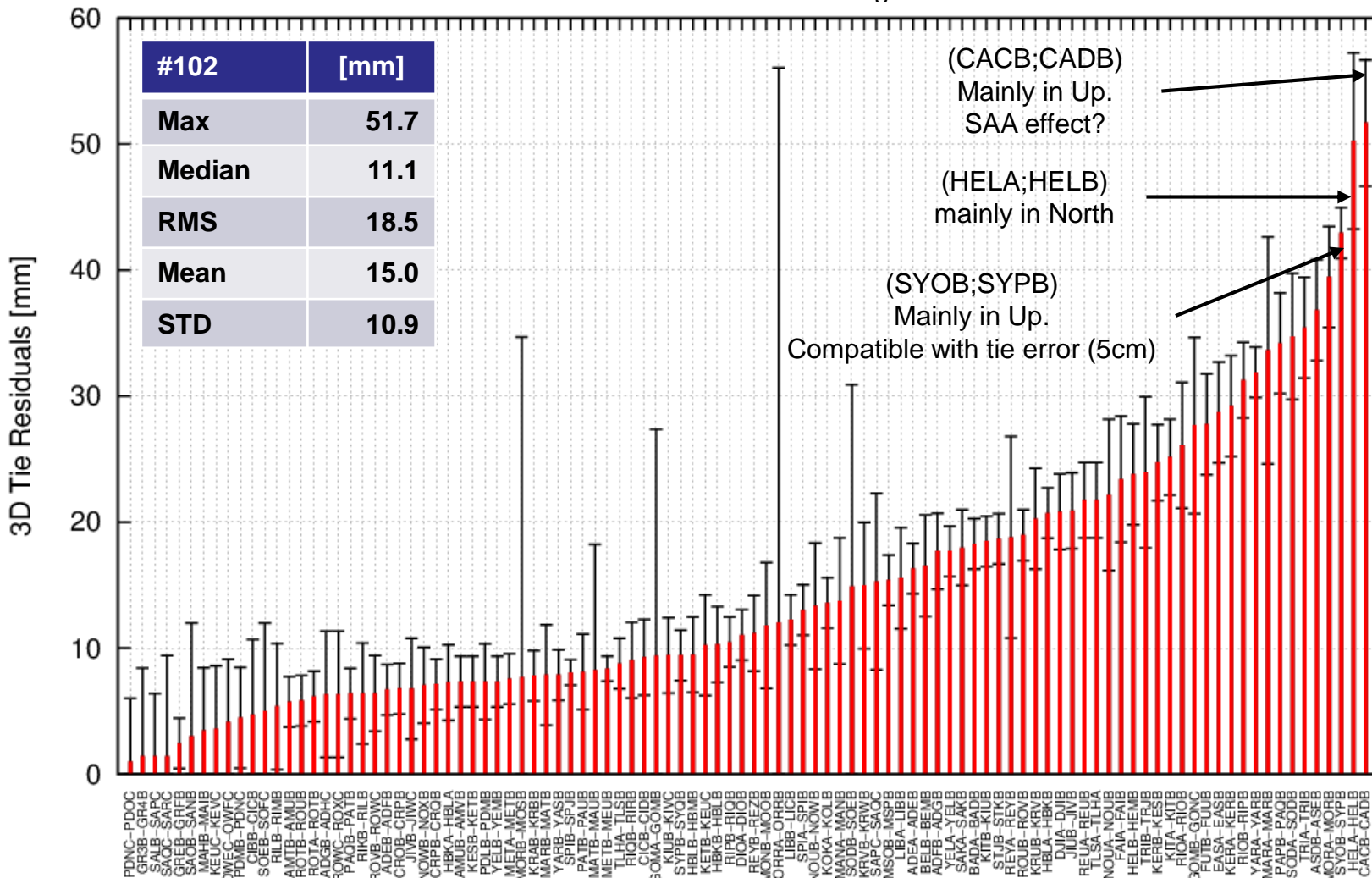
DPOD2014 v04 vs DPOD2014 v03 Position differences in 2020:365





DPOD2014 v04 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

DPOD2014 v04 vs IGN DORIS-to-GNSS ties

Coordinate differences estimated at max(time_beg_GNSS, time_beg_DORIS)

