



DORIS Cumulative Solution ids22d01

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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 19 from 1993 doy 003 to 2021 doy 360.
 - Position constraints from the IGN DORIS-to-DORIS ties (2022/03/17).
 - Continuity velocity constraints.
 - Aligned to ITRF2020.
- **Available in SINEX (ids22d01.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**

Site	DORIS station	Reference station	Technique	Source
Ajaccio	AJAB	AJAC	GNSS	ITRF2020
Huahine	HUAA	7123	Laser Ranging	ITRF2020
Hofn	HOFC	HOFN	GNSS	ITRF2020
San Juan	SJUC	OAFA	GNSS	ITRF2020



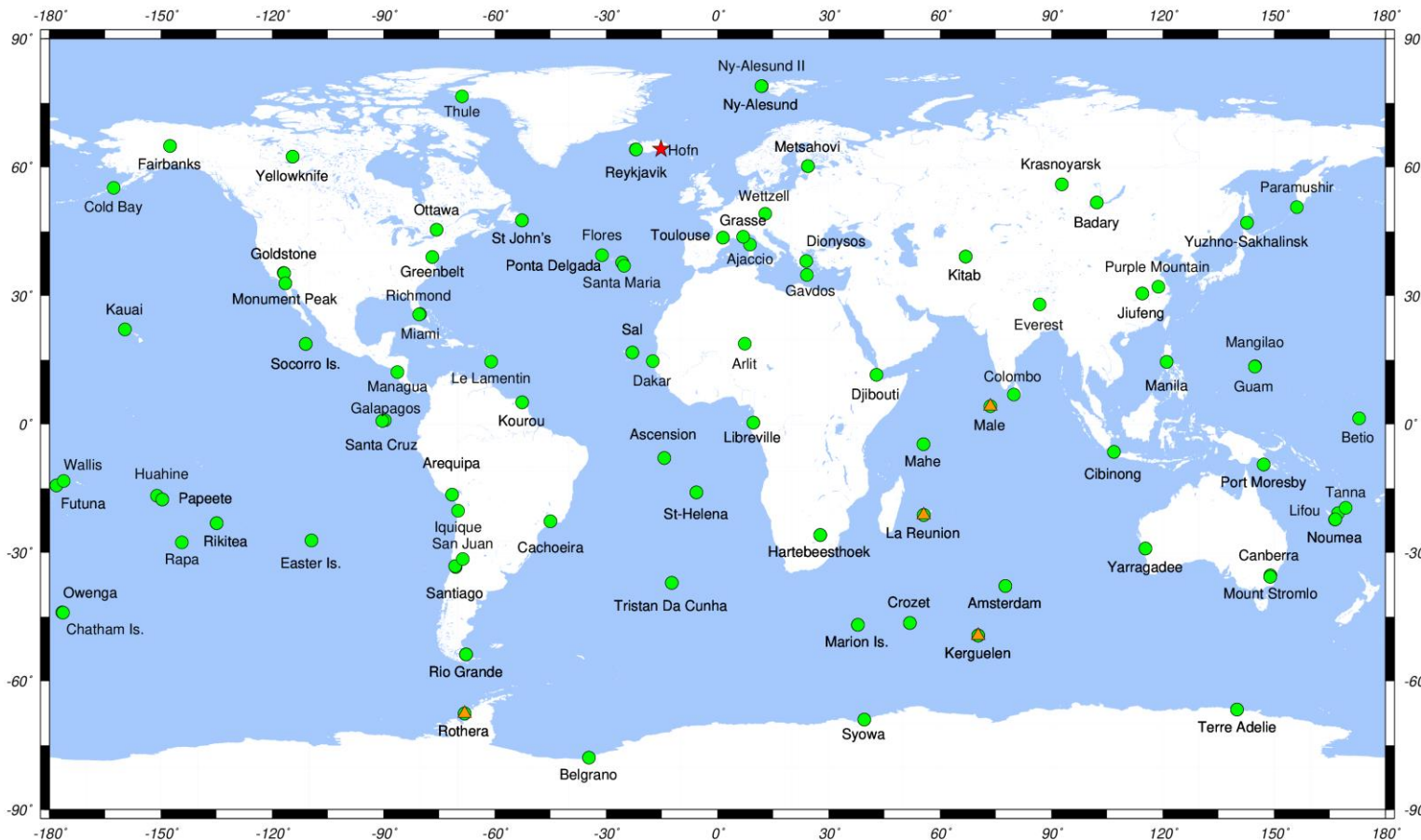
<http://ids-doris.org>

ids22d01 - Network

88 DORIS sites – 207 DORIS stations

New site / ITRF2020: Höfn (Iceland)

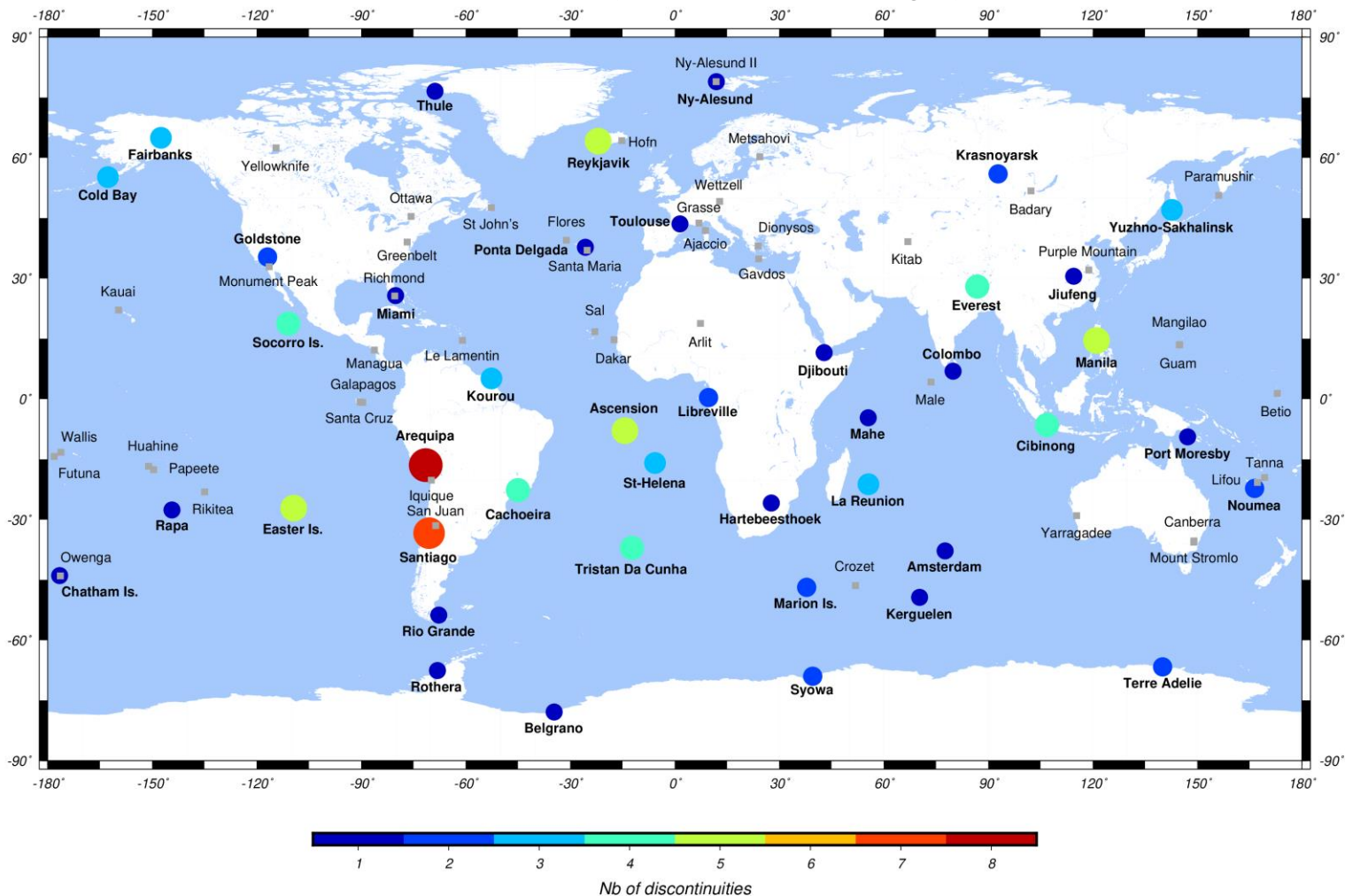
New stations / ITRF2020: HOFC (Höfn), KEXC-KEYC (Kerguelen), MALC (Male), REVC (La Réunion), ROZC (Rothera)



Site not included ITRF2020 (# 1) – Site with new station(s) since ITRF2020 (# 4)

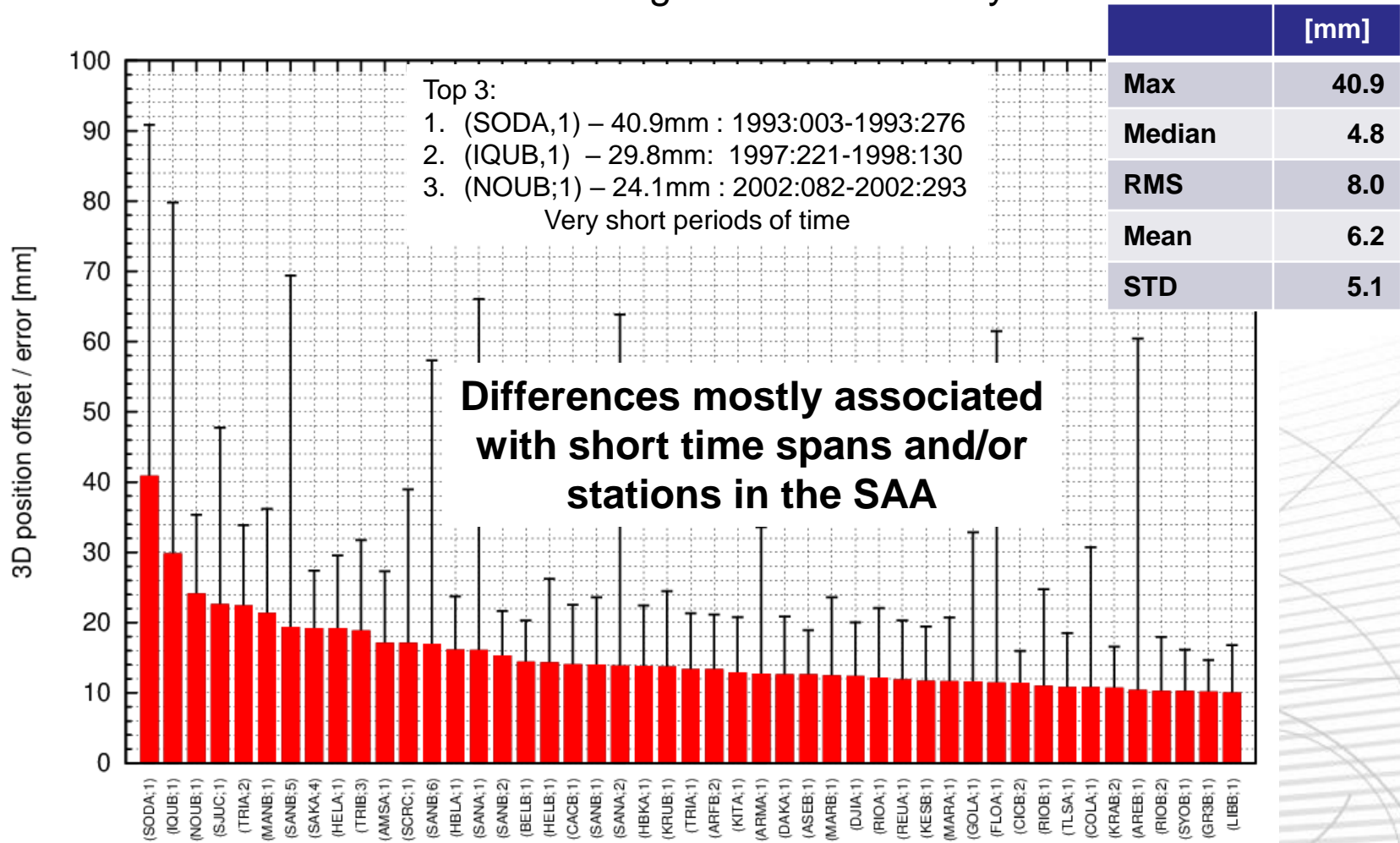
ids22d01 – Position Discontinuities

Number of discontinuities by DORIS site. Sites with discontinuities are in boldface. Sites with no discontinuity are indicated with grey squares.



ids22d01 vs ITRF2020 Position differences

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





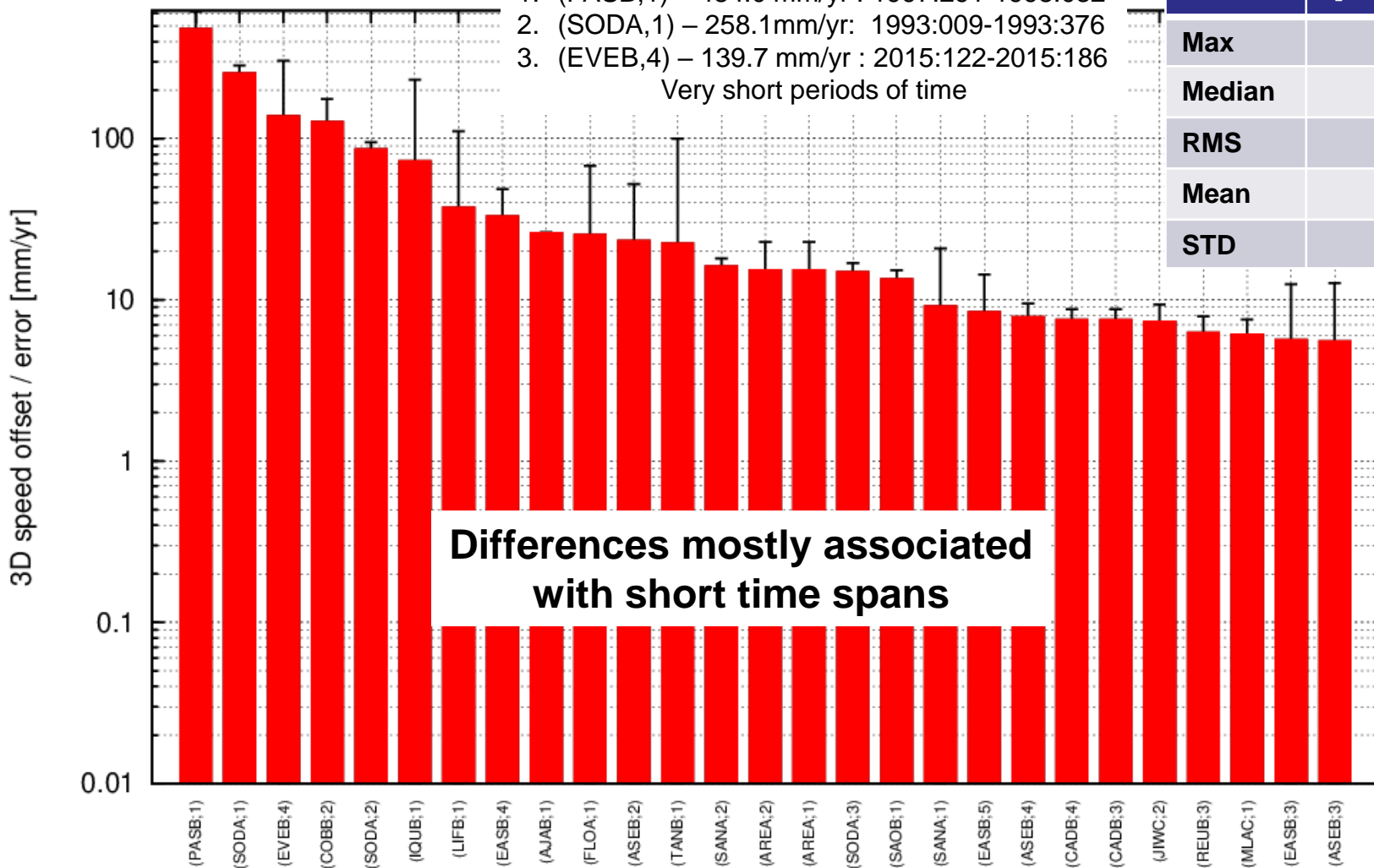
ids22d01 vs ITRF2020 Velocity differences – PSD sites excluded

Top 3:

1. (PASB,1) – 484.0 mm/yr : 1997:291-1998:032
2. (SODA,1) – 258.1mm/yr: 1993:009-1993:376
3. (EVEB,4) – 139.7 mm/yr : 2015:122-2015:186

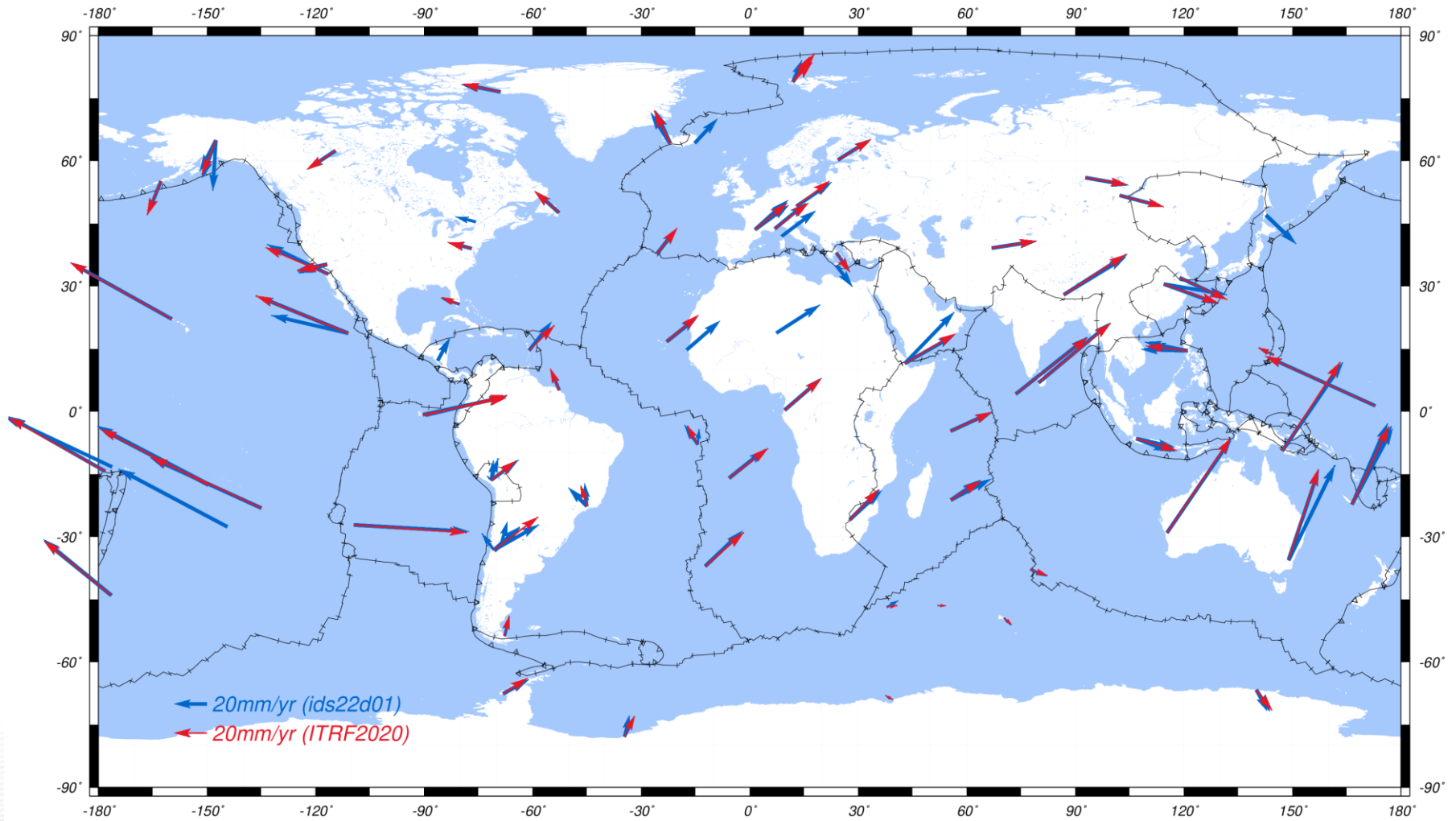
Very short periods of time

	[mm/yr]
Max	484.0
Median	1.2
RMS	37.0
Mean	6.9
STD	36.4



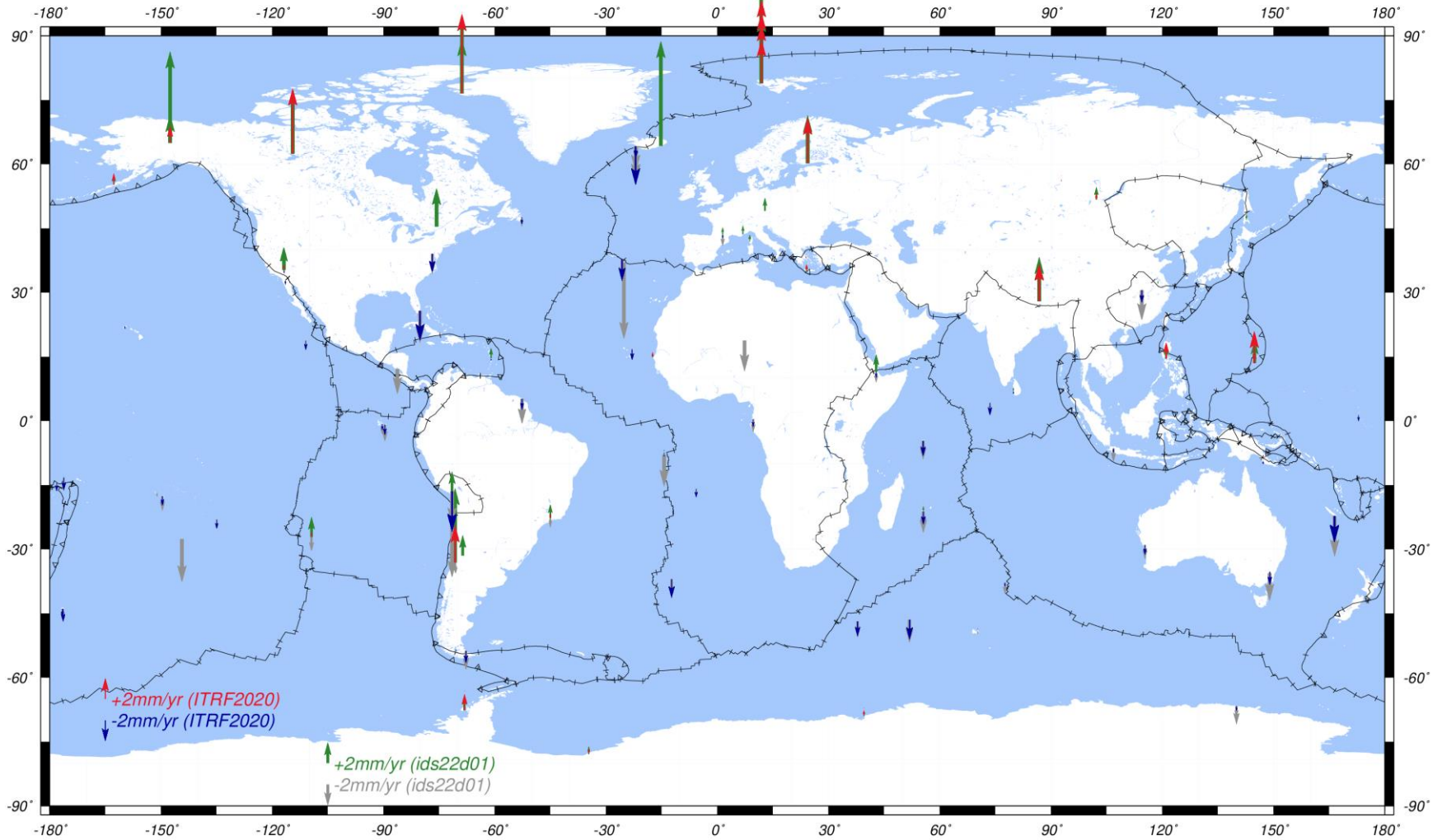
ids22d01 vs ITRF2020 – Horizontal velocities

Velocities with formal errors smaller than 2.5 mm/yr.



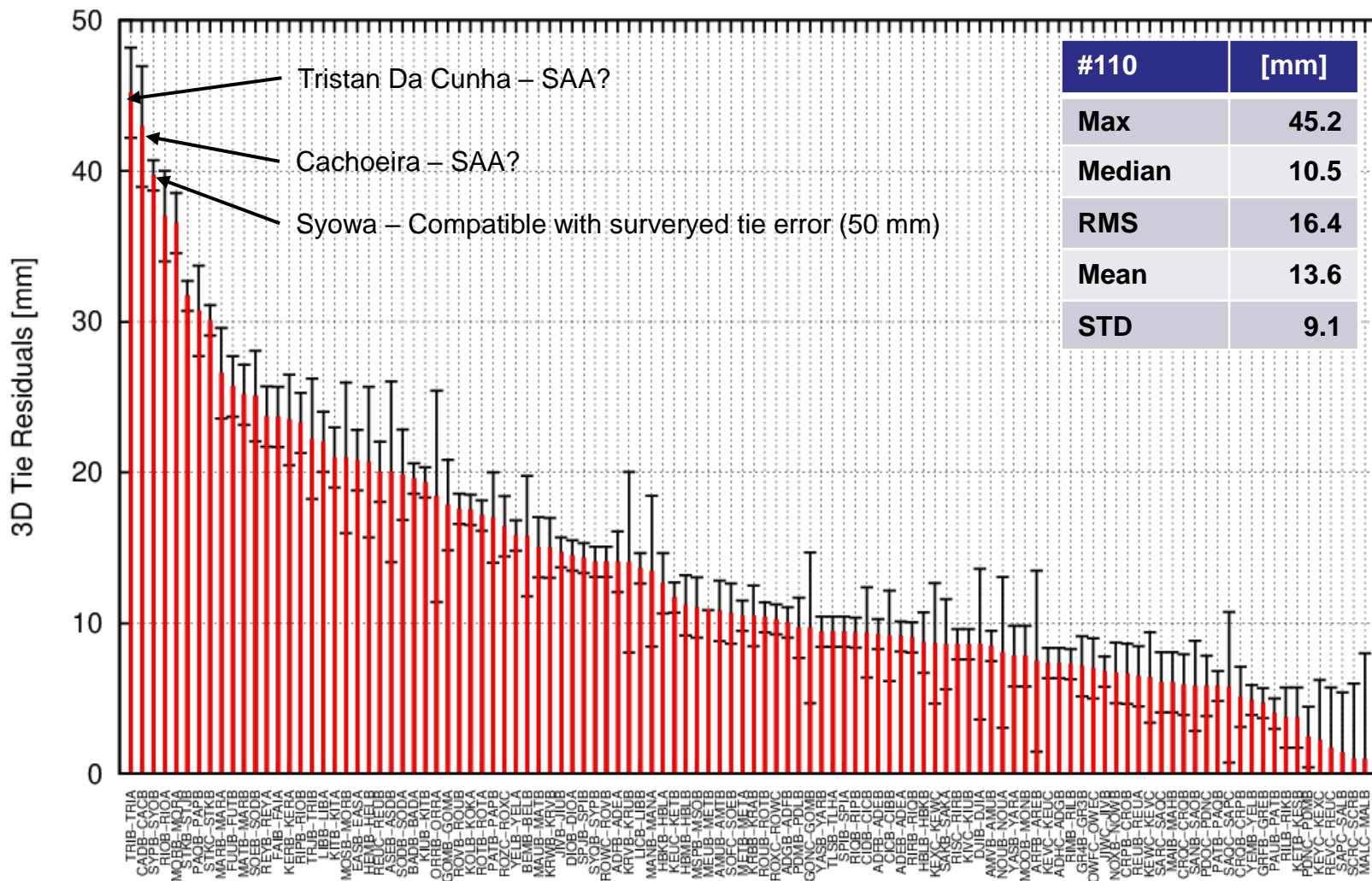
ids22d01 vs ITRF2020 – Vertical velocities

Velocities with formal errors smaller than 2.5 mm/yr.



ids22d01 vs IGN DORIS-to-DORIS ties

Coordinate differences estimated at the date of the surveyed ties





<http://ids-doris.org>

ids22d01 vs IGN DORIS-to-GNSS ties

Coordinate differences estimated at date of the surveyed ties.
GNSS positions are estimated from ITRF2020 with PSD corrections.

