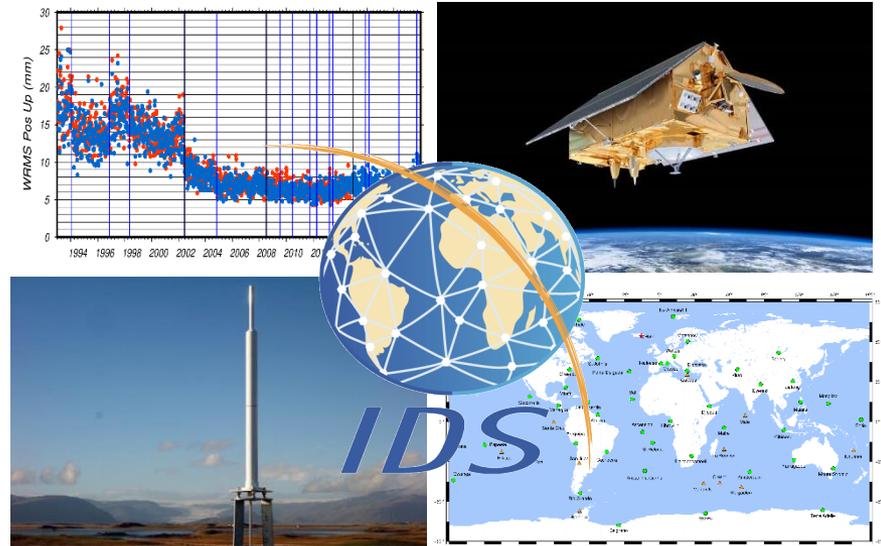
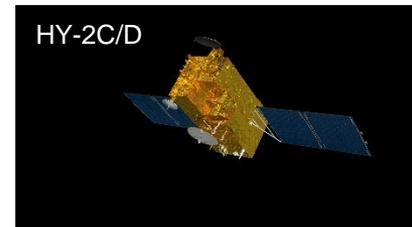
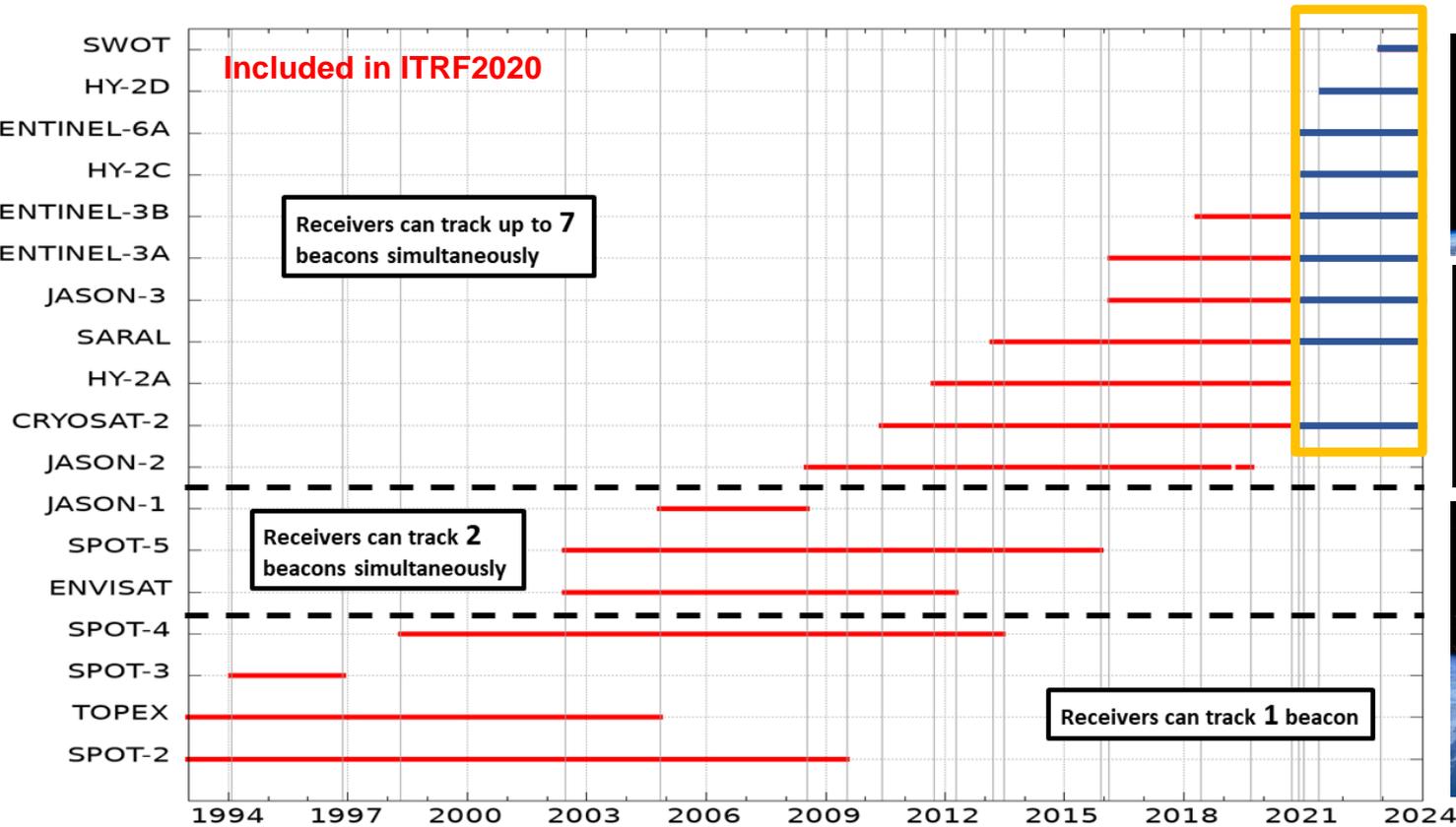


# IDS Contribution to first update of the ITRF2020

Guilhem Moreaux (CLS), Frank Lemoine (NASA),  
 Hugues Capdeville (CLS), Petr Štěpánek (GOP),  
 Michiel Otten (ESA), Samuel Nahmani (IGN),  
 Arnaud Pollet (IGN) and Patrick Schreiner (GFZ)



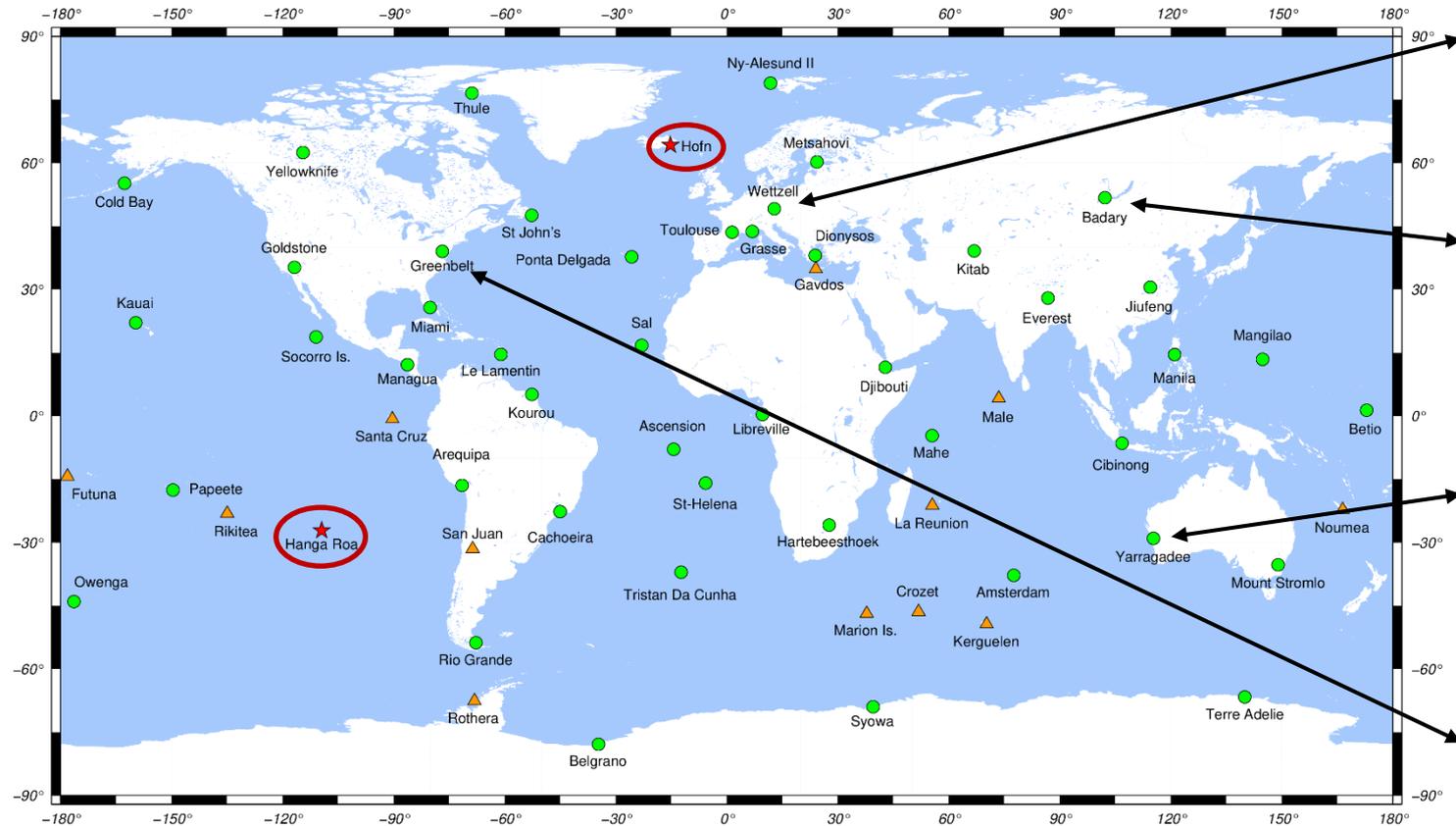
# The DORIS Constellation



**There are a total of 9 DORIS missions operating since 2021.0, including 4 new ones.**



# The 2021-2024 IDS Station Network



Contains 68 stations @60 sites including 4 four-technique sites.

Since *ITRF2020*:

- **2 new sites** (*Hanga Roa, Easter Isand and Höfn, Iceland*).
- **14 new stations** (*incl. back to Gavdos*).



# The IDS contribution to the first ITRF2020 update is based on 6 solutions from 6 different software packages.

AC / AAC	Software	Series number	Solution Type	EOPs	HY-2C/D	Sentinel-6A
ESA	NAPEOS	16	NEQ	offset+rate+LOD	No	Yes
GOP	BERNESE	70	COV	offset+rate	Yes	Yes
GRG	GINS-DYNAMO	54	COV	offset	Yes	Yes
GSC	GEODYN	55	NEQ	offset	No	Yes
<i>IGN</i>	<i>GIPSY-X</i>	<i>16</i>	<i>NEQ</i>	<i>offset</i>	<i>No</i>	<i>Yes</i>
<i>GFZ</i>	<i>EPOS-OC</i>	<i>00</i>	<i>COV</i>	<i>offset+LOD</i>	<i>No</i>	<i>Yes</i>
<b>IDS</b>	<b>CATREF</b>	<b>22</b>	<b>COV</b>	<b>Motion</b>	<b>Yes</b>	<b>Yes</b>

New since ITRF2020 processing

SWOT DORIS data are not yet part of the IDS AC/AAC solutions.

ITRF2020 Processing Standards applied

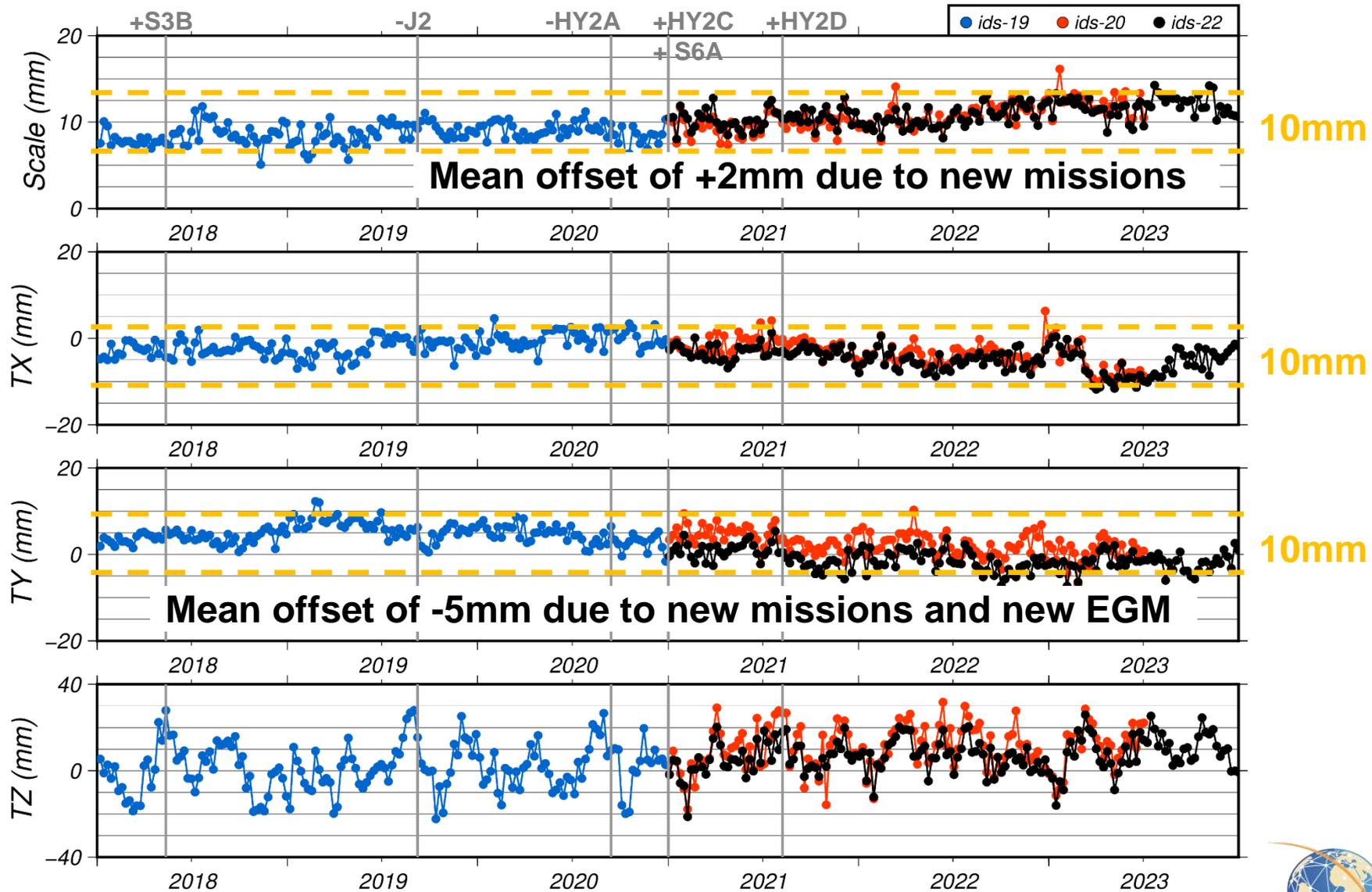
+ New Time-Variable models for Earth gravity

+ South Atlantic Anomaly mitigation strategies for HY-2A for GRG



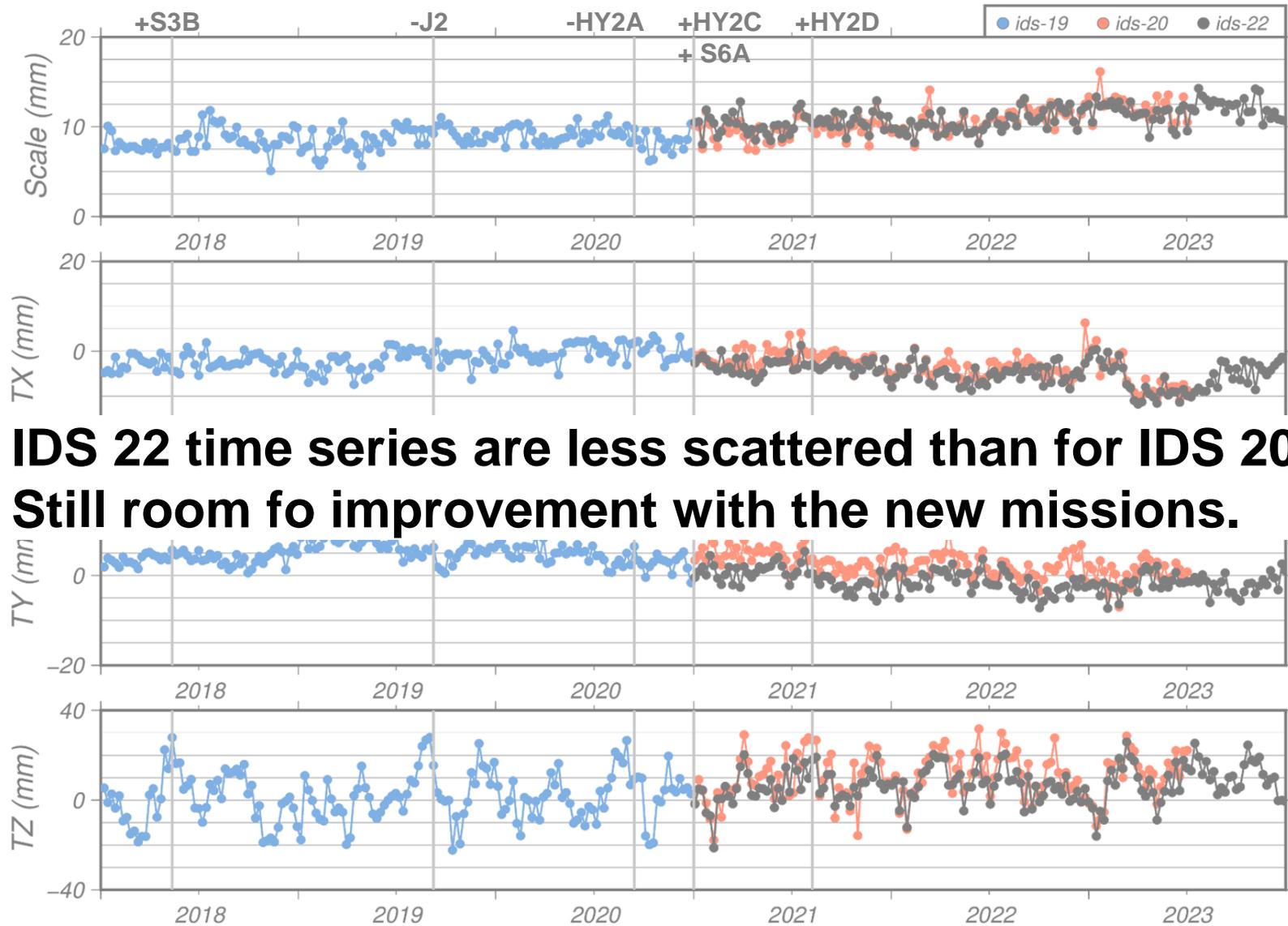
# Origin and scale wrt DPOD2020 v2.1

ids 19 (ITRF2020) – ids 20 (extension) – ids 22 (Update)



# Origin and scale wrt DPOD2020 v2.1

ids 19 (ITRF2020) – ids 20 (extension) – ids 22 (Update)

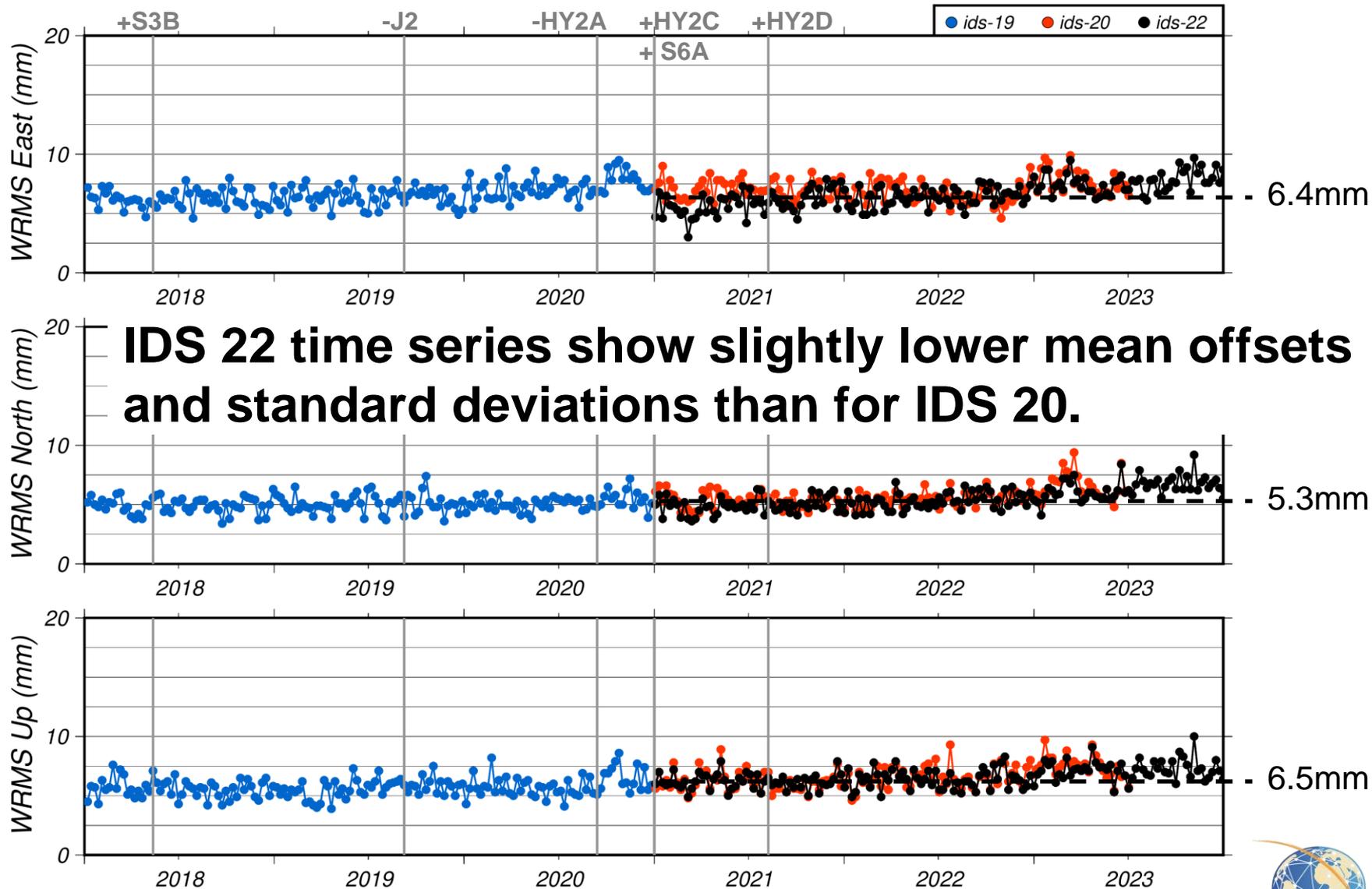


**IDS 22 time series are less scattered than for IDS 20. Still room for improvement with the new missions.**



# Station Position WRMS wrt DPOD2020 v2.1

ids 19 (ITRF2020) – ids 20 (extension) – ids 22 (Update)





# The IDS contribution to the first ITRF2020 update

- Is based on 6 AC contributions from 2021.0 to 2024.0.
- Makes use of 8 DORIS missions including 3 new ones.
- Includes positions of 68 stations @60 sites.
- Performs better than the extension of the IDS contribution to the ITRF2020 in terms of both Helmert parameters and station positioning.
- Is available for download from CDDIS and IGN (ids 22) since March 8<sup>th</sup>.

