



SLR Station Riga Status Report

Poster A27

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Hardware Upgrades since 2016

- Remote controlled filter selection. (3 interference + 2 Neutral)
- New longer telescope power and data cable .
- Sky clarity sensor Aurora Cloud Sensor III + rain/snow alarm.
- A new calibrated backup meteorological station Vaisala PTU300
- A Raspberry PI based temperature monitoring system at the SLR laser and electronic rooms. (poster B15)
- New 3 local network reference points built and installed.

In development

- Computer controlled divergence unit.
- An upgraded detector enclosure for optical, thermal and EM protection of the receiver chain.
- Selection and procurement of a high sensitivity CCD to replace the old image intensifier and TV camera assembly in the visual tracking channel.
- Improved signal processing electronics.

Notable Points of 2017-2018

- First observation of a SNET satellite (SNET-4 2018-04-12 21:57 UTC).
- Strong participation on the spinning satellites debris program (Adeos-2, OICETS, Topex).
- Permanent monitoring of the hourly clarity values (simultaneous clarity with Metsähovi, Finland and independently for both SLR stations).
- Experimental campaign for simultaneous observation of Galileo and Glonass Satellites with the Ventspils International Radio Astronomy Centre (VIRAC) in Irbene, Latvia.
- Hosted the October 2017 ILRS Technical Workshop "Improving ILRS Performance to Meet Future GGOS Requirements".



Vaisala PTU300

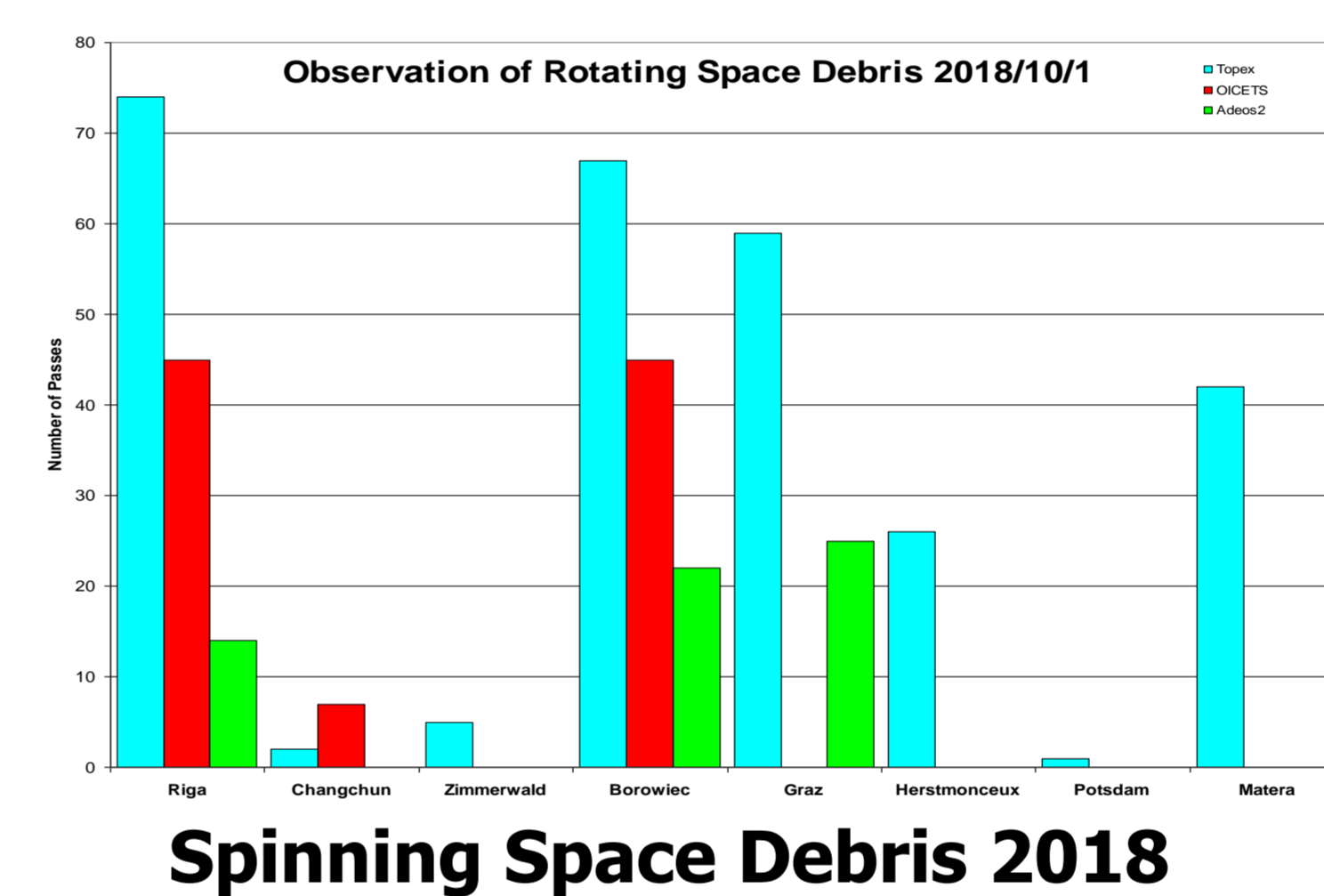
Aurora Cloud Sensor III

Filter Selector & Rain alarm

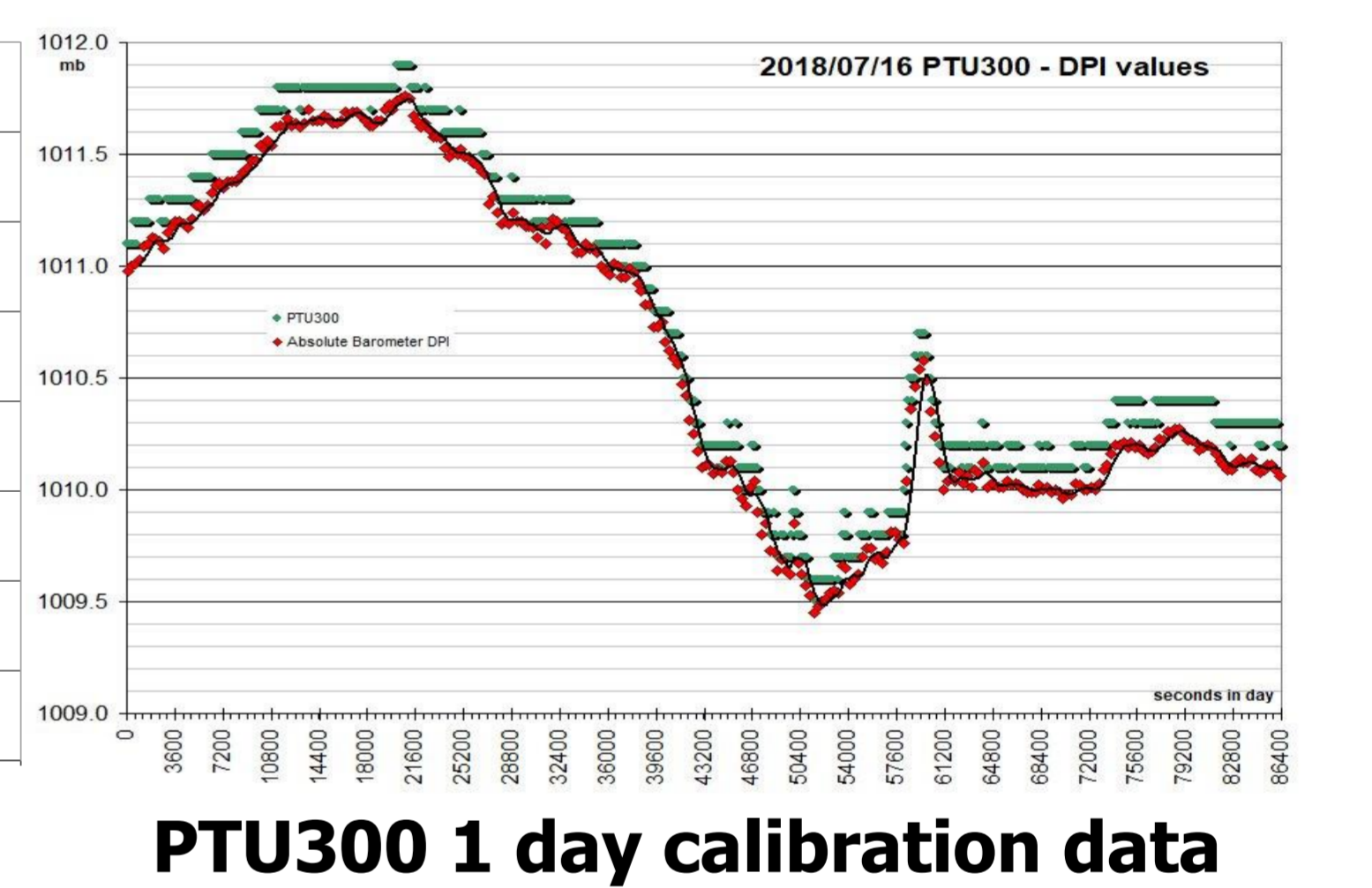


Prototyping the divergence unit

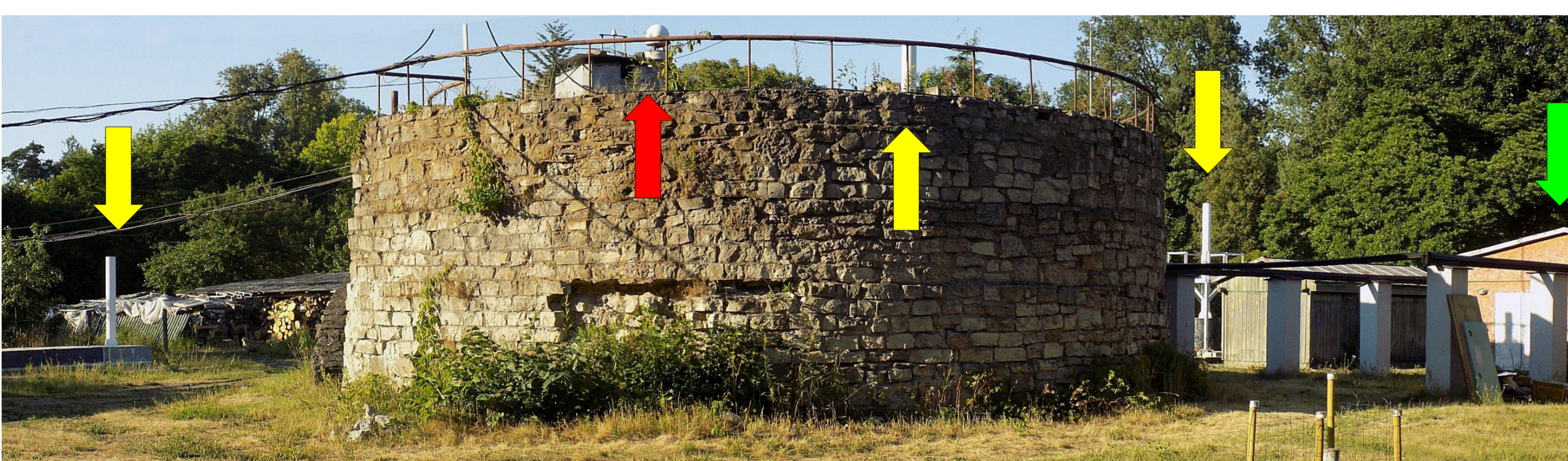
The new detector enclosure frame



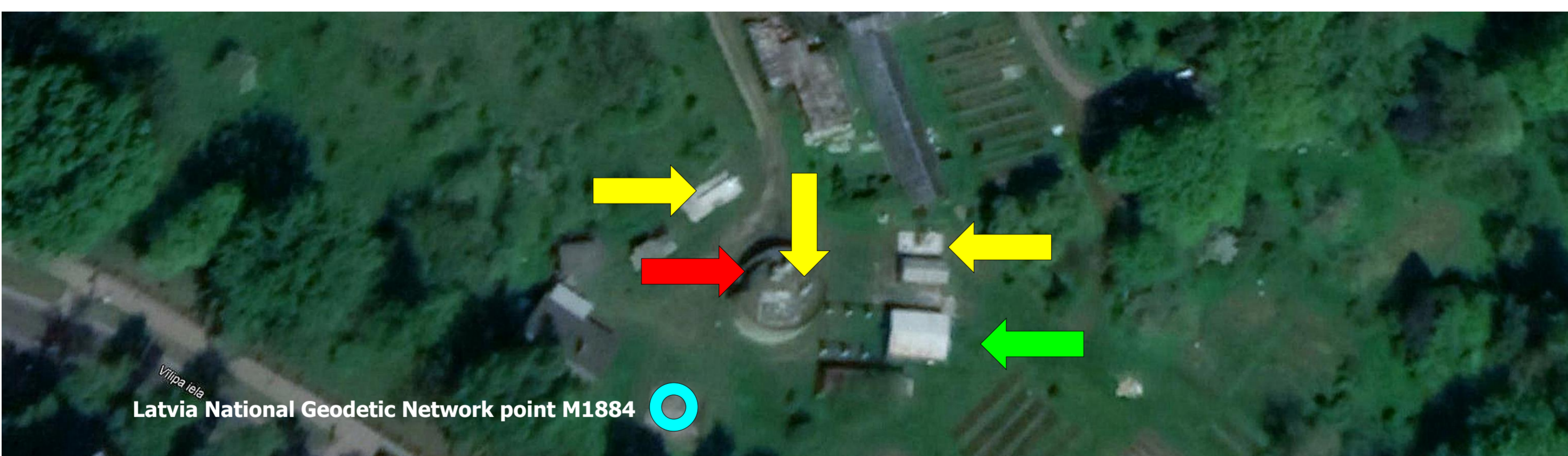
Spinning Space Debris 2018



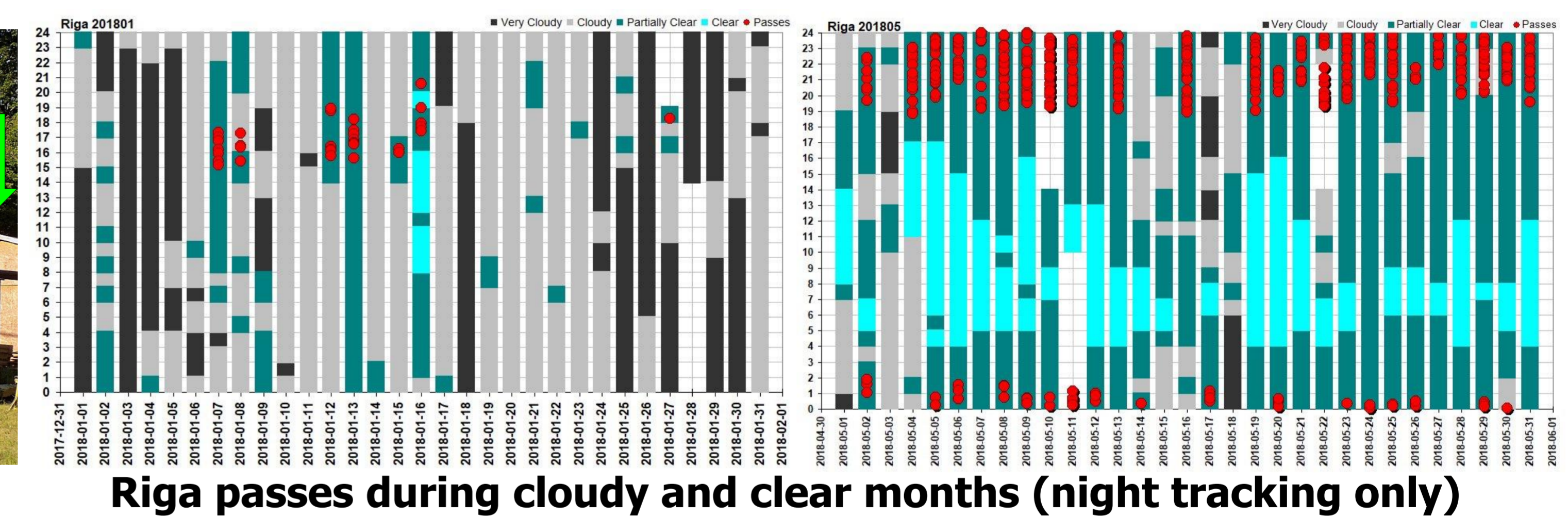
PTU300 1 day calibration data



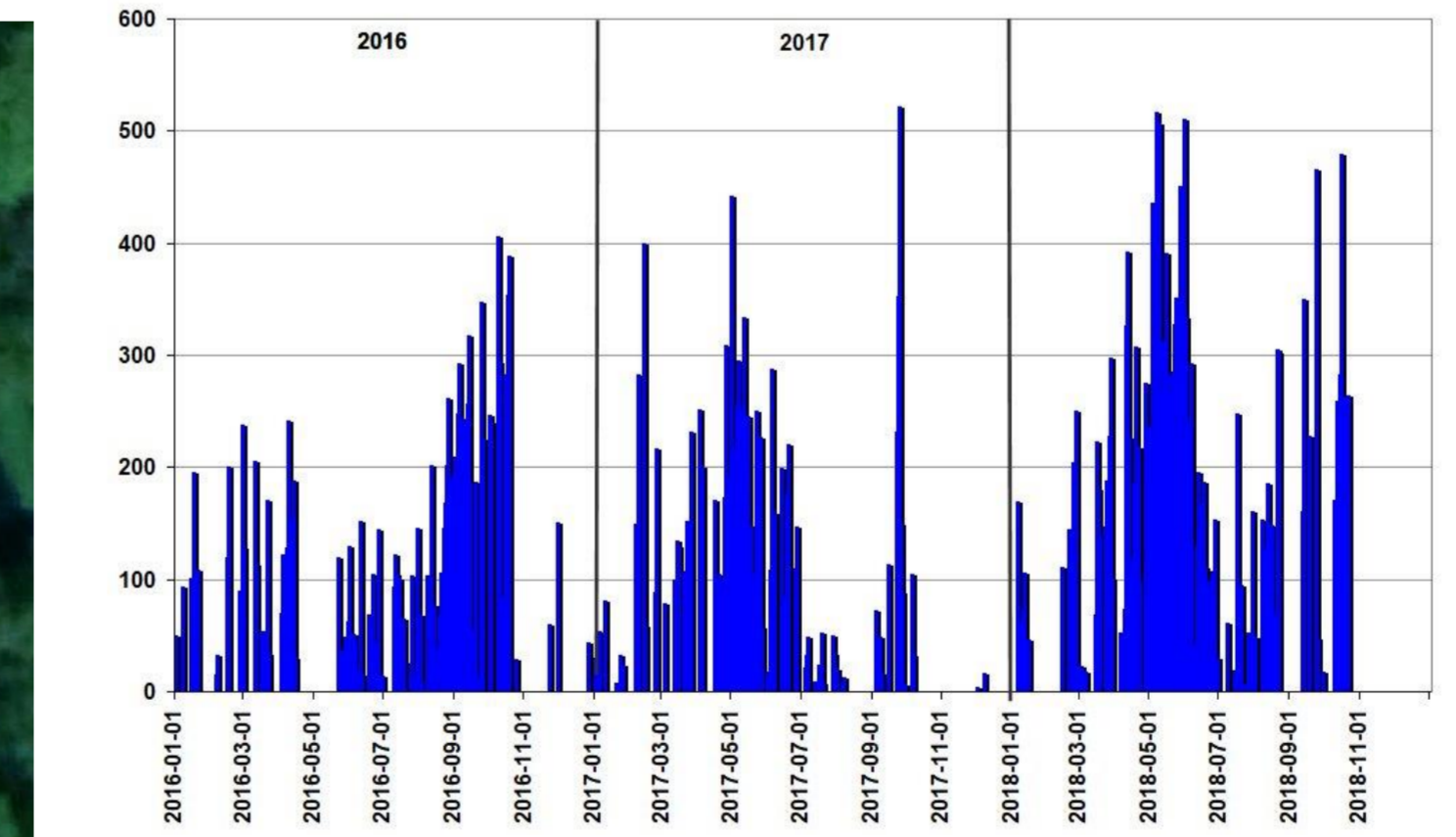
New Local Network Reference Points (yellow), GPS (red) SLR (green)



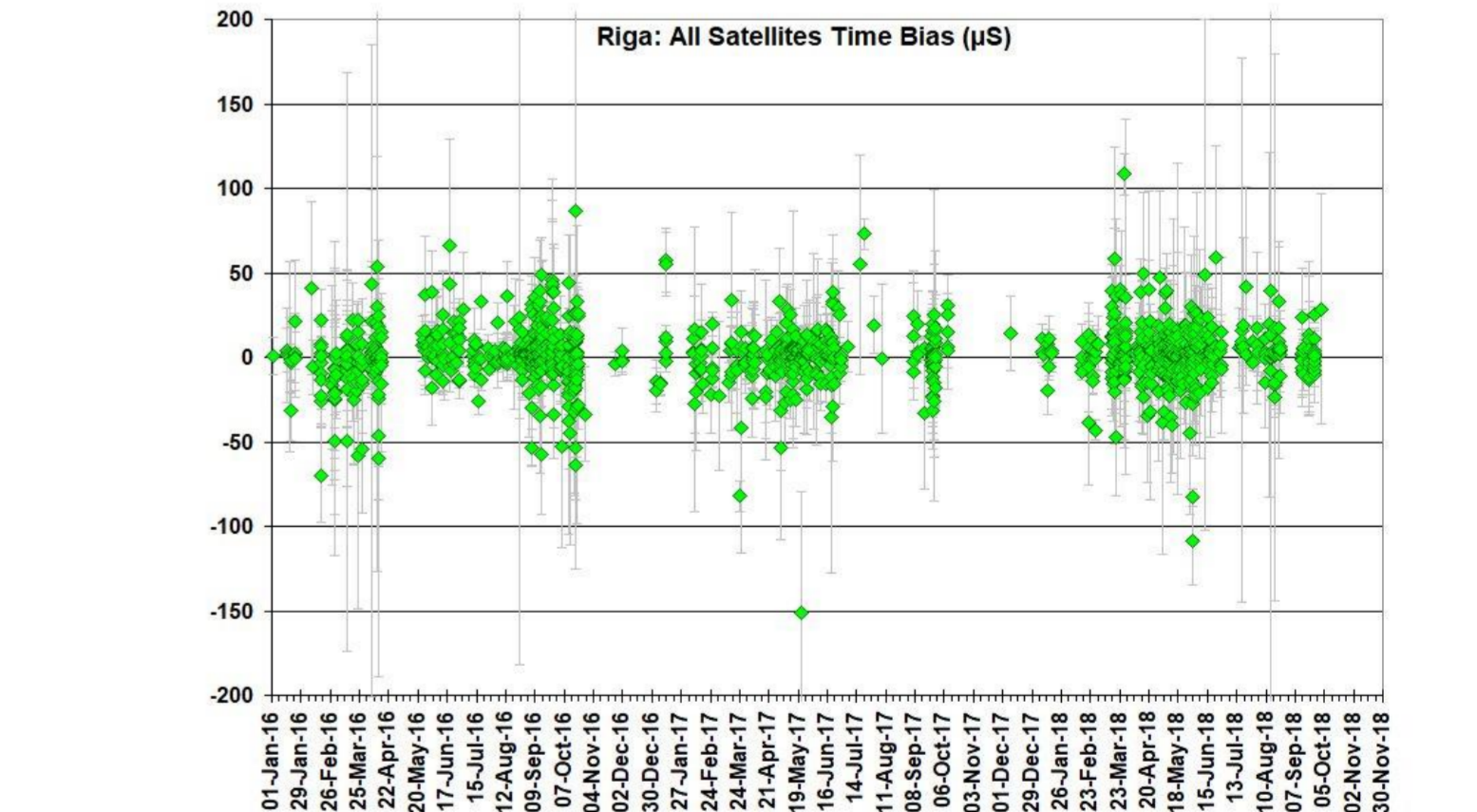
Latvia National Geodetic Network point M1884



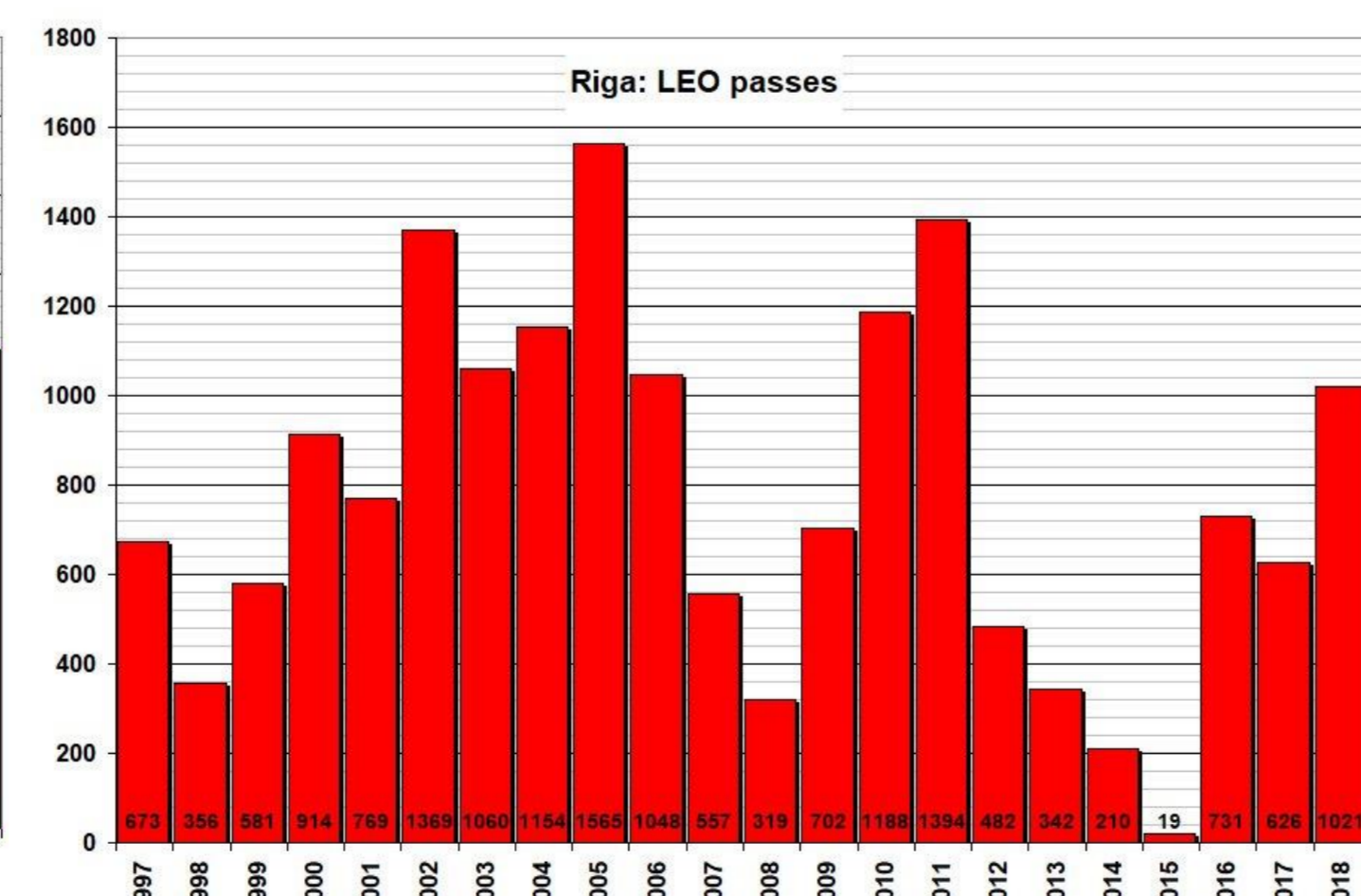
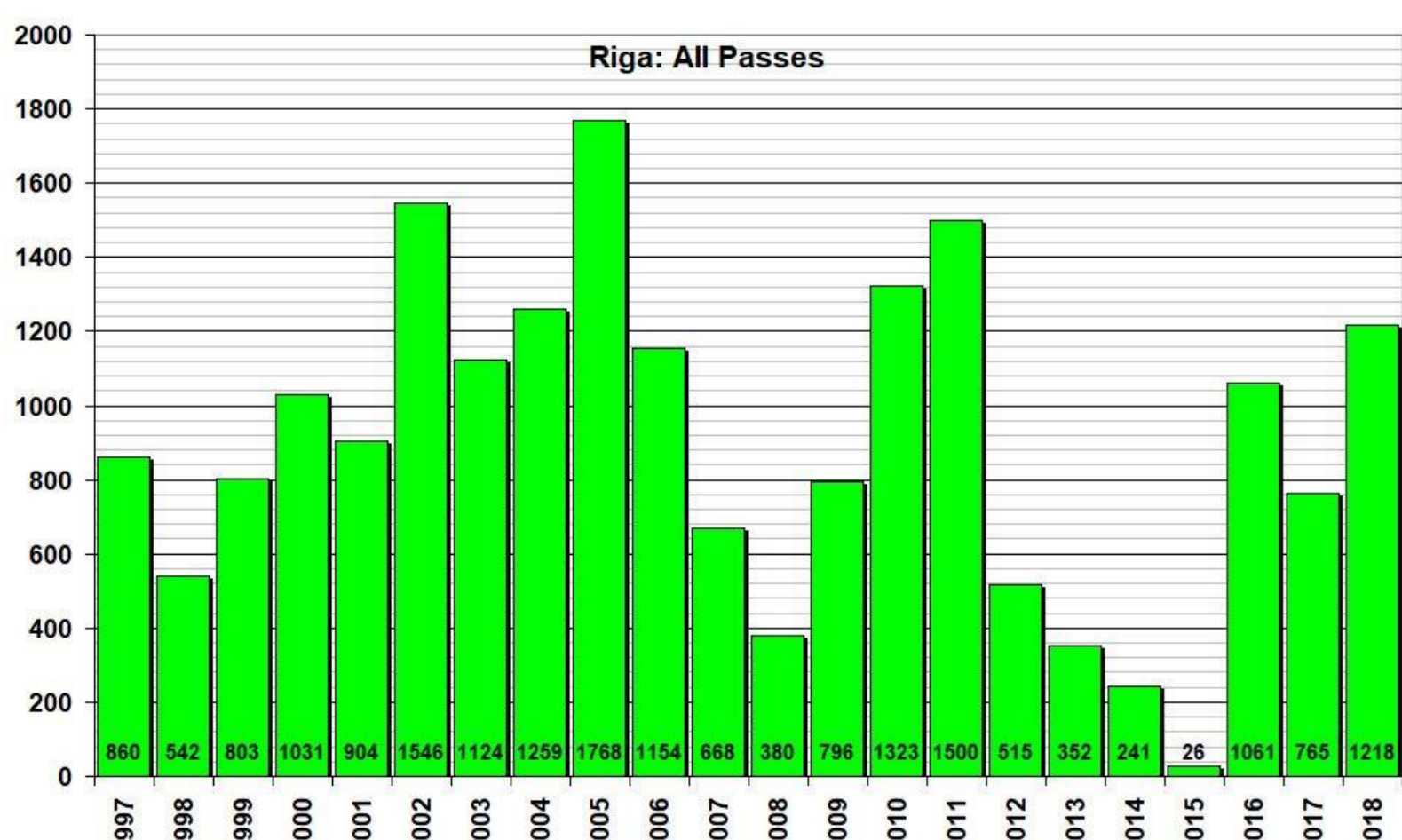
Riga passes during cloudy and clear months (night tracking only)



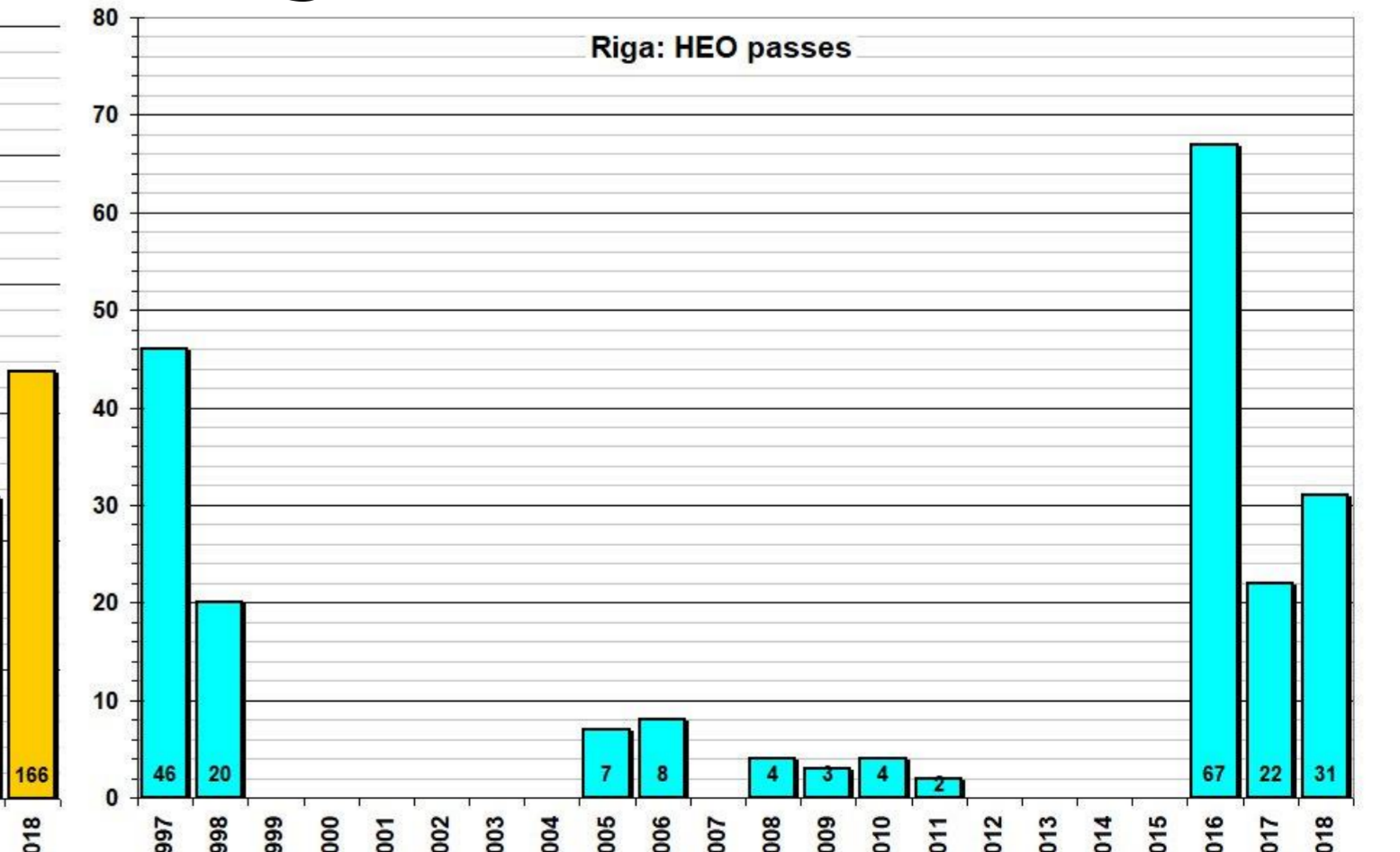
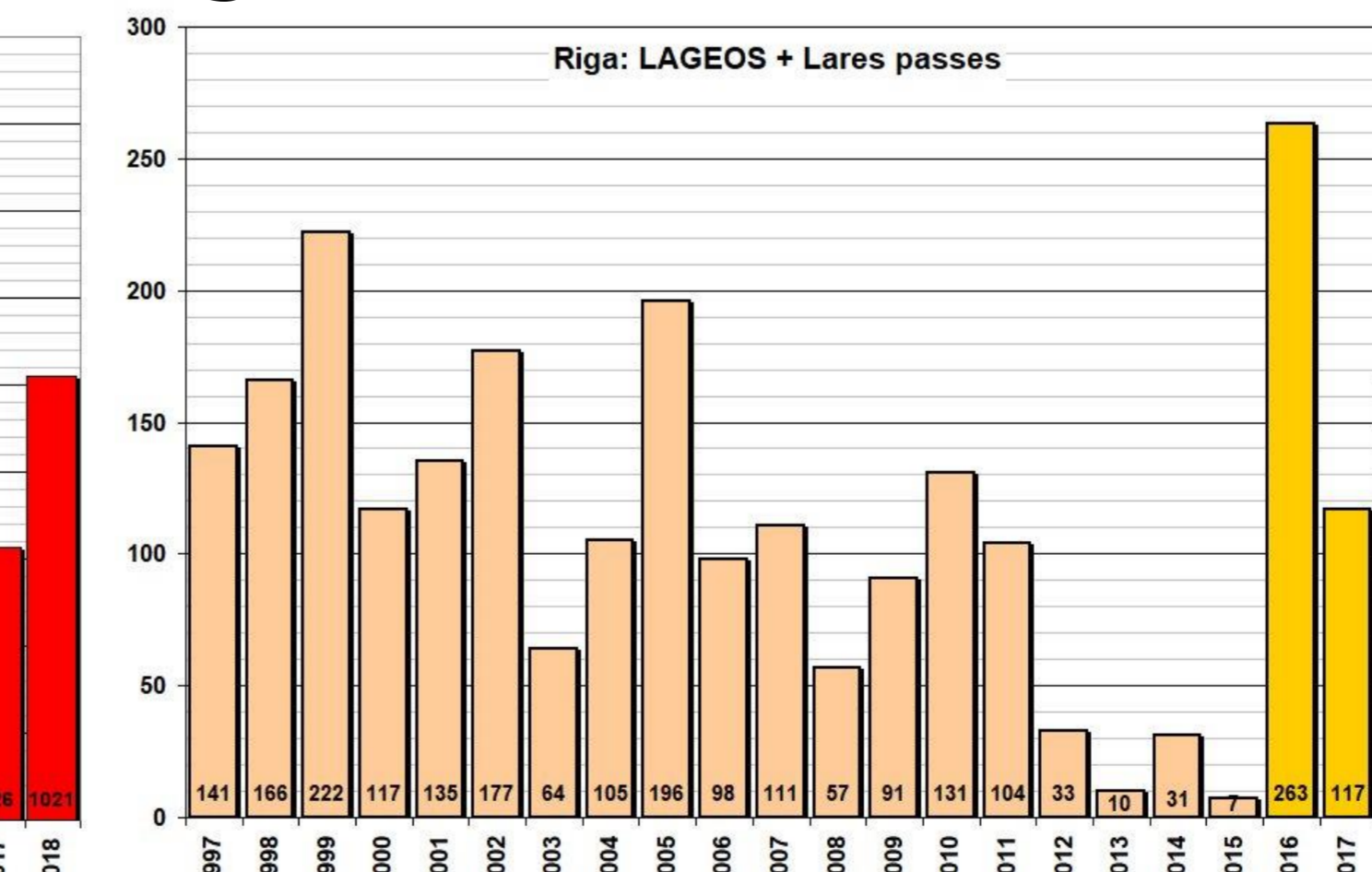
Riga Normal Points 2016 – 2018



Riga Time Bias 2016 – 2018



Riga Passes 1997 – 2018 (2018/10/22) – Space Debris passes not included



Acknowledgements:

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