

GOP Analysis center report

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GOP IDS analysis center – recent activities

- **Routine processing**
 - Data until end of 2015 processed
- **Software upgrade Bernese 5.0 -> Bernese 5.2**
- **Implementation of DORIS RINEX data processing**
- **Development of advanced data post processing analysis tools**
- **LOD estimation campaign with data 2003.0 – 2016.0**
- **Improvements in processing automation**

Unfortunately not current time capacity for other important issues like ITRF validation

Software upgrade Bernese 5.0 -> Bernese 5.2

- **11 years of independent development of the official Bernese and “DORIS” Bernese**
- **“manual” merging of Bernese 5.2. and “DORIS” version of Bernese 5.0**
- **More than 1500 software modules, hundreds of them modified in both versions**
- **Current state: several rounds of merged version testing, still fixing some bugs**

Implementation of DORIS RINEX data processing

- **So far implemented reading routines, onboard clock estimation tools**
- **To be continued after finishing upgrade v 5.0 -> v 5.2 (implementation directly into 5.2)**
- **Original plan was to finish the DORIS RINEX implementation in late 2015/early 2016, now more realistic estimate is late 2016.**

LOD estimation campaign with data

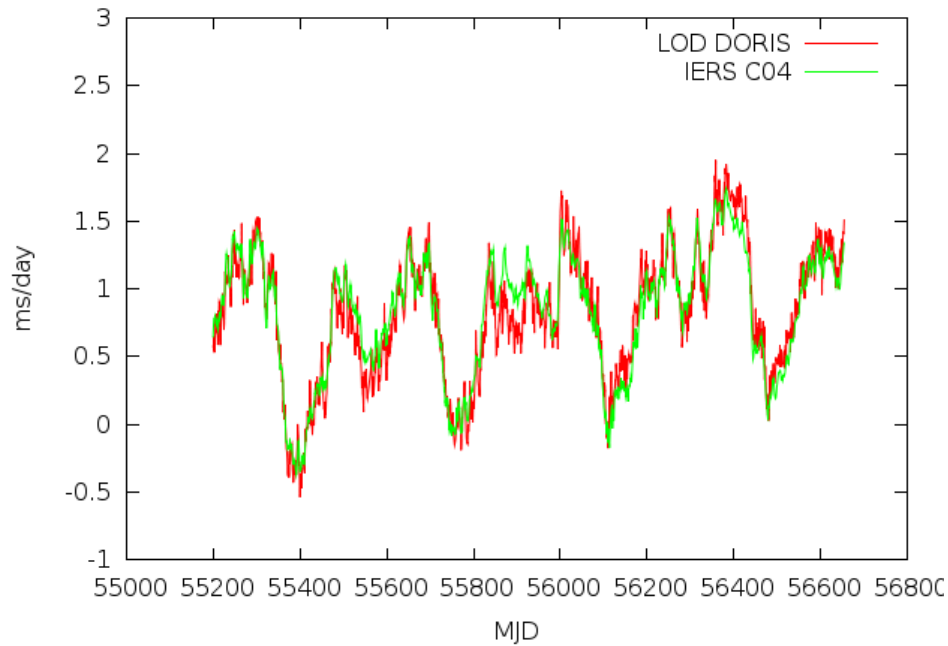
- **Cross track harmonics not adjusted (see presentation from AWG in Toulouse, 2015)**
- **Planned data span 2003.0-2016.0**
- **Presented results from 2010.0-2014.0**

Mean and RMS w.r.t. IERS C04 model

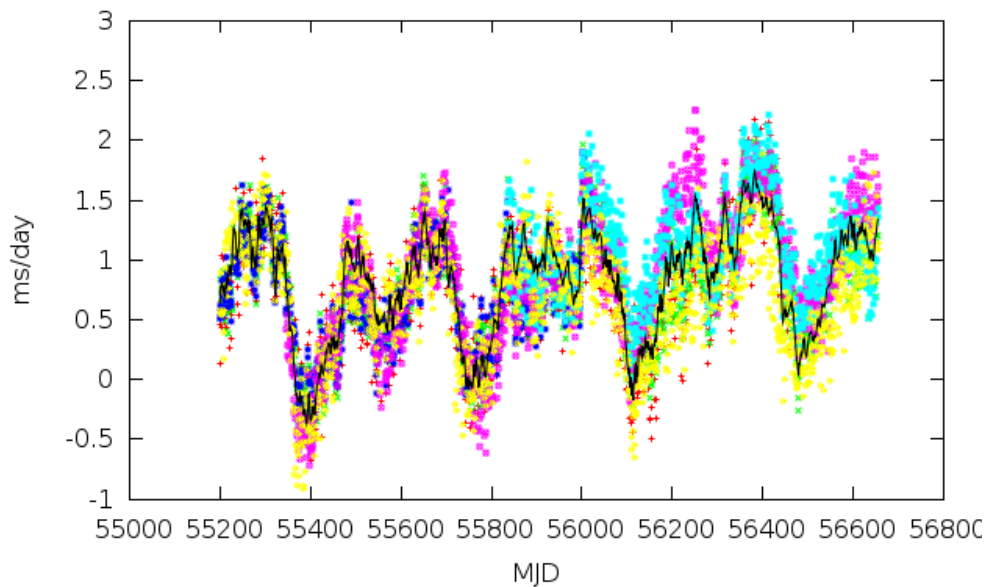
Year	Mean (ms/day)	RMS (ms/day)
All	-0.009	0.145
2010	-0.054	0.119
2011	-0.090	0.146
2012	0.051	0.129
2013	0.077	0.111

Satellite	Mean (ms/day)	RMS (ms/day)
All	-0.009	0.145
Jason-2	-0.144	0.278
Cryosat	0.047	0.294
SPOT-4	-0.067	0.268
SPOT-5	-0.036	0.211
Envisat	-0.071	0.217
HY-2A	0.154	0.282

LOD - comparison of estimated values and IERS CO4 model



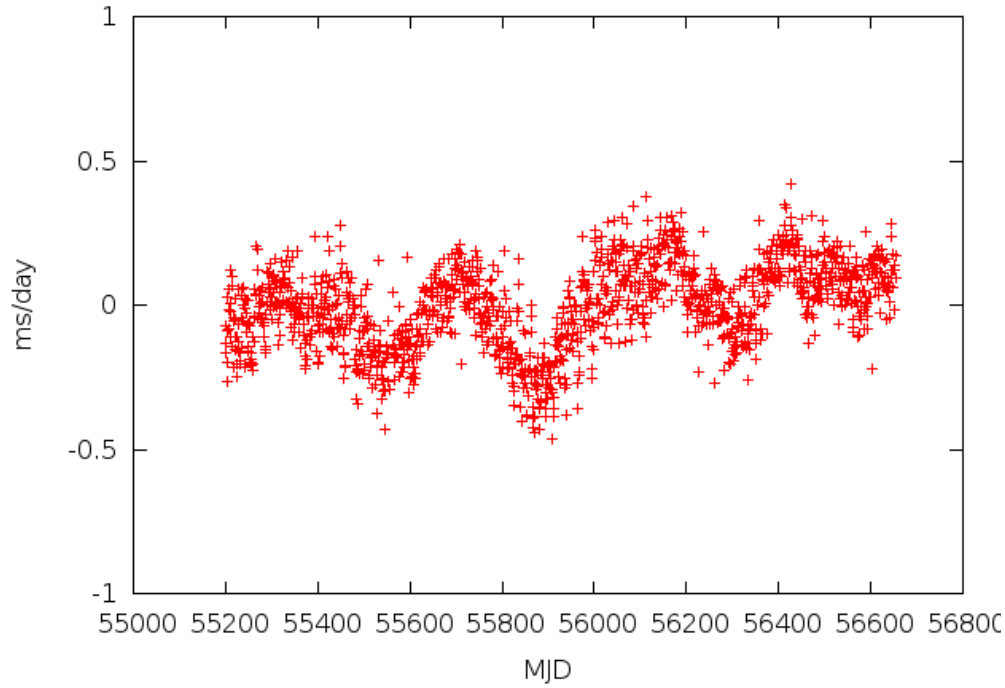
Multi-satellite solution



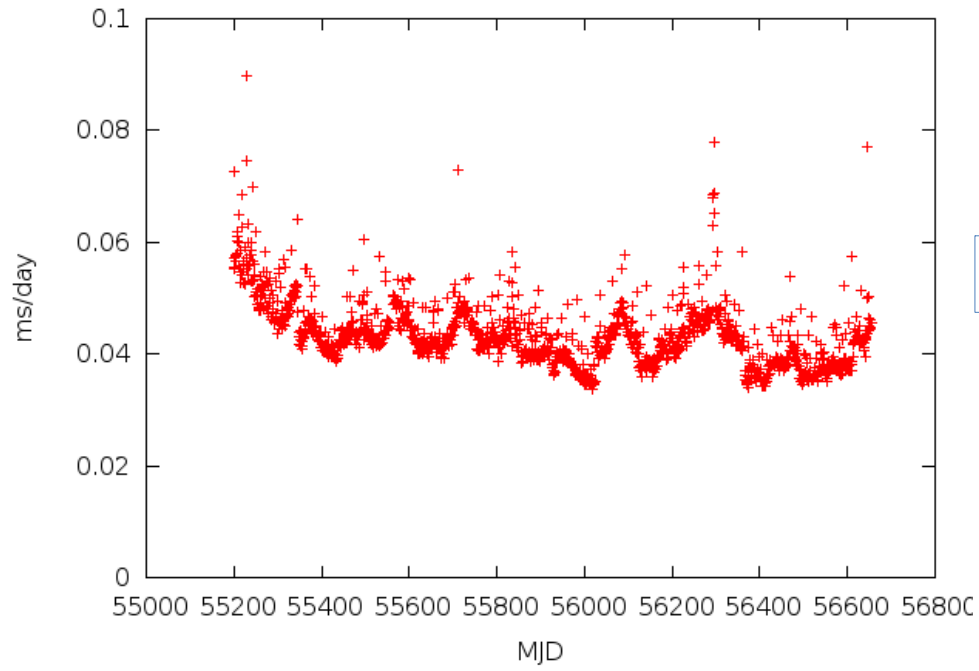
Single-satellite solutions

- SPOT-4 +
- SPOT-5 x
- Envisat .
- Cryosat *
- HY-2A .
- Jason-2 .
- IERS CO4 —

differences between estimated values and IERS CO4 model



Estimated LOD w.r.t. IERS C04



Formal Errors of the estimated LOD

Thanks for the attention