

solar orbiter

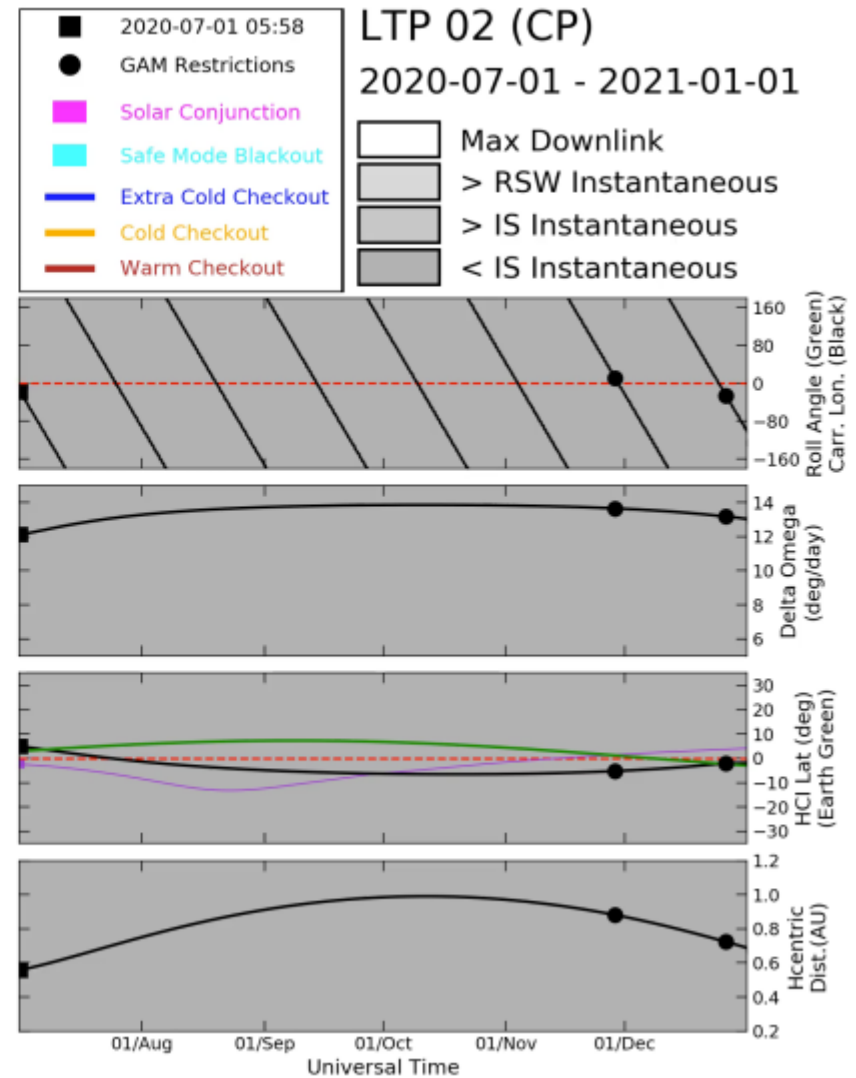
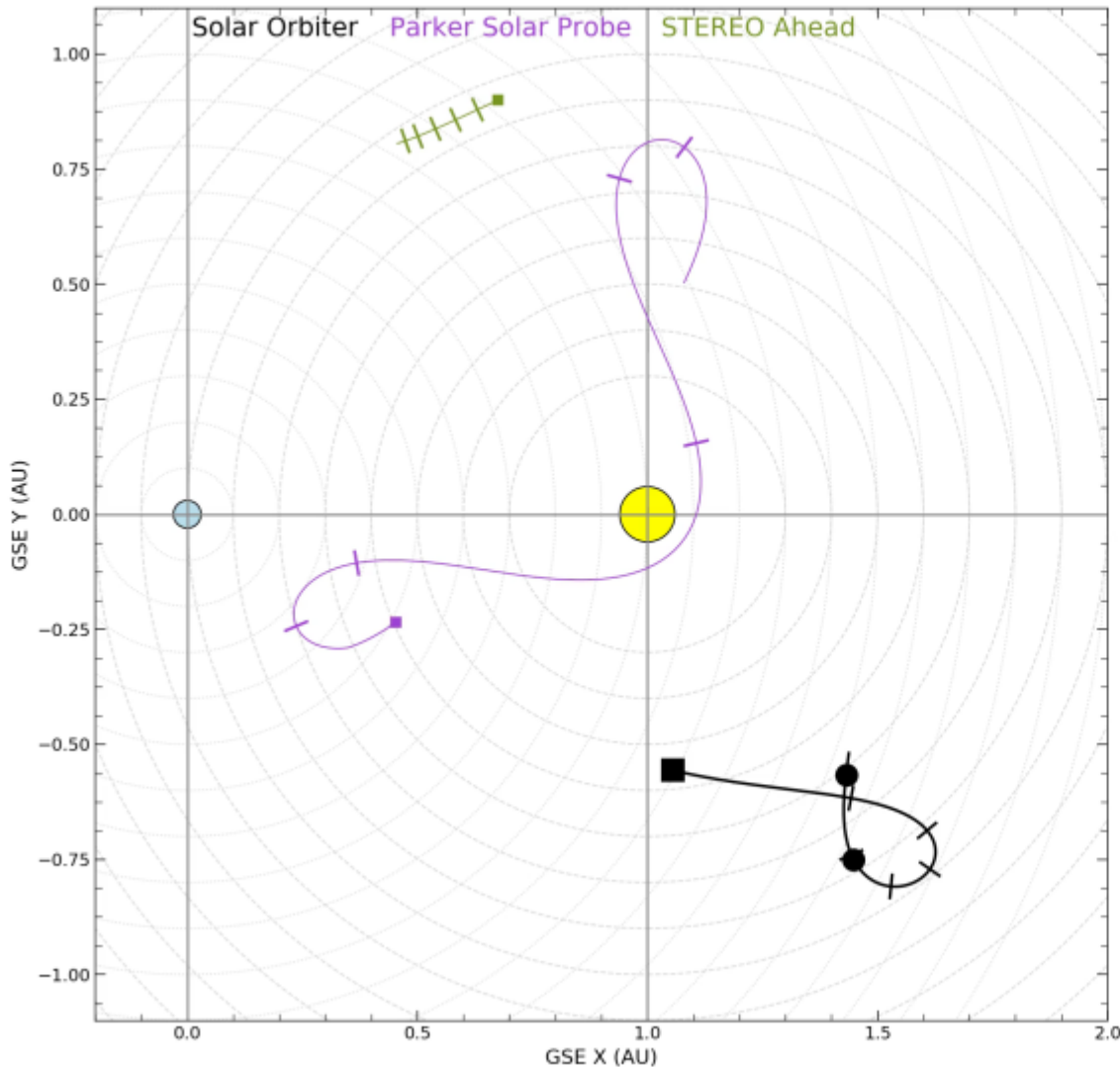


RPW cruise phase operations (LTP02&03)

September 4, 2020

Virtual RPW consortium meeting #2

LTP02 (July 1st – December 31st 2020)



LTP02 operations



- ❑ LTP02 starting close to perihelion, but now we are back at > 0.8 AU.
- ❑ RPW operates nearly continuously, returning good data, with a few outages due to external causes.
 - Some minor glitches happened in the first month, but were mostly fixed.
- ❑ Much more TM than the nominal 5 kbps available to RPW.
- ❑ Various high rate modes are being run, with:
 - More frequent LFR snapshots (sometimes down to 100s instead of 5 minutes).
 - More BURST mode (with 256 Hz continuous waveform)
 - More TDS triggered snapshots (sometimes 12 or even 24 dumps per day)
- ❑ RPW BURST mode is coordinated with MAG and SWA
 - Scheduled during EMC quiet periods, at least 10 minutes per day, sometimes much more.

LTP02 operations



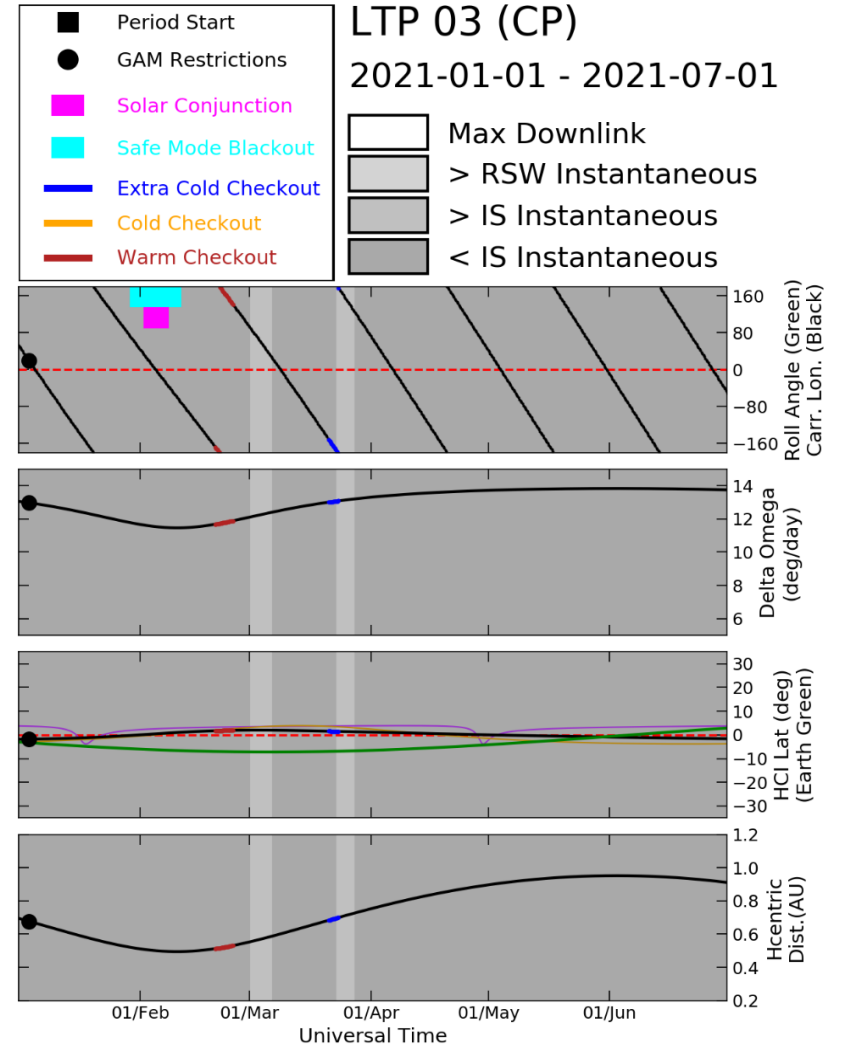
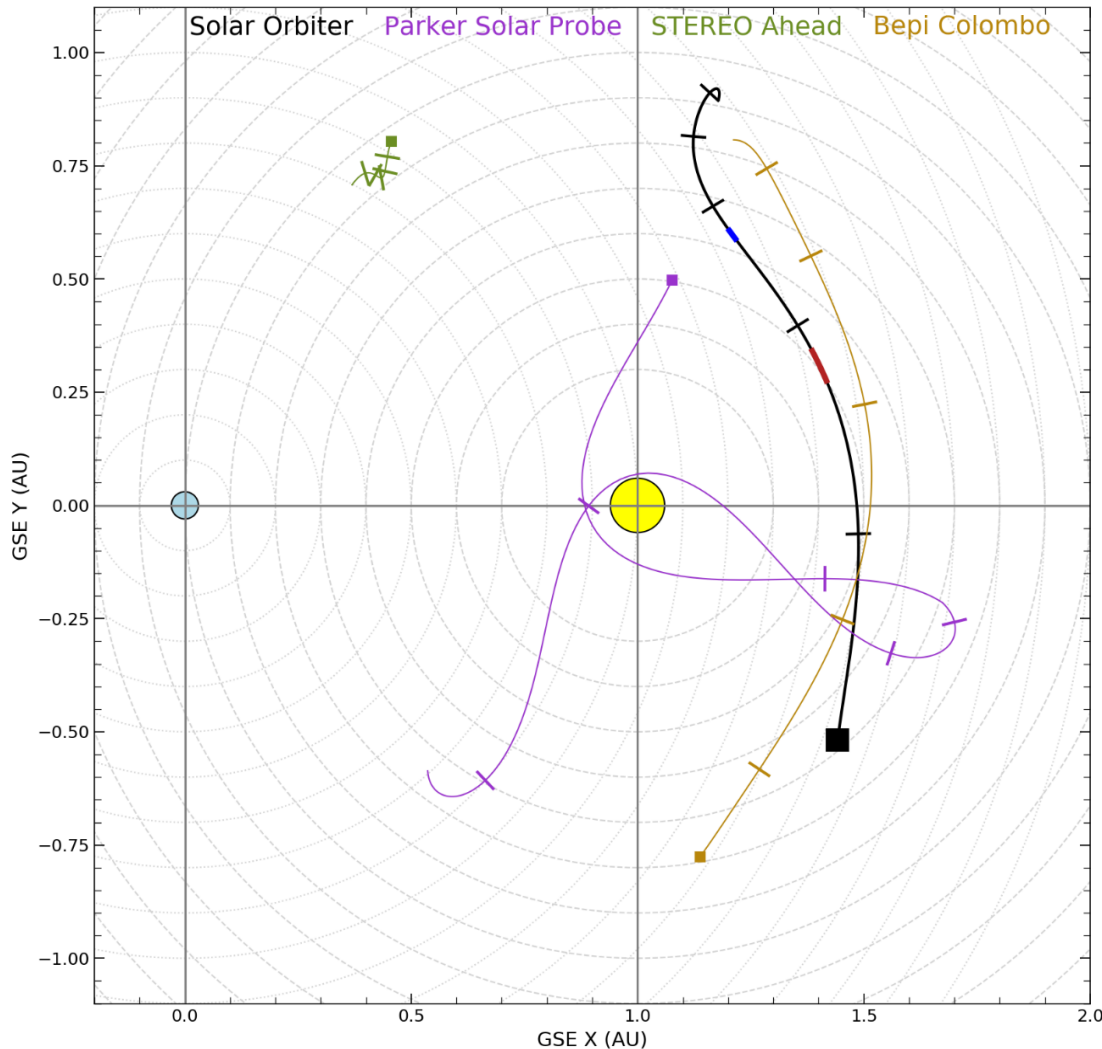
- ❑ Other SOLO instruments:
 - MAG operational throughout with lots of BURST mode
 - EPD operational
 - SWA is operational, but with frequent outages due to operational/software issues. HIS sensor mostly off.

- ❑ RPW usually configured in SBM detection mode
 - Selective downlink not available in cruise. Detection is on, but data is discarded on board.
 - Not many triggers received during cruise so far (threshold is slowly being decreased). Work in progress.

- ❑ PSP alignment at the end of September (with SOLO being close to 1 AU)
 - Normal RPW operations, possibly with more BURST mode

- ❑ Venus flyby in late December 2020
 - We might be on...
 - Any ideas for special operation ?

LTP03 (January 1st – June 30th 2021)



LTP03 operations

- ❑ Next week at SOWG we will do long term planning for LTP03. This will be used to prepare TM corridor.
- ❑ Again, there is more TM than previously planned.
 - No low TM mode needed, we will always have at least the NOMINAL rate
 - Currently 3 weeks of high rate operations are planned close to the perihelion (0.5 AU).
 - Closer to the Sun -> more dynamic/interesting data
- ❑ **Note:** as before, we should be planning the actual instrument operation on a short term (~2 weeks ahead), where we specify the instrument mode and can do pretty much anything reasonable as long as we stay in the TM corridor and provide the data expected by other instrument teams.
- ❑ Ideas are welcome.