



ExoMars TGO status

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From MEX to ExoMars w/s, ESAC Feb 2018

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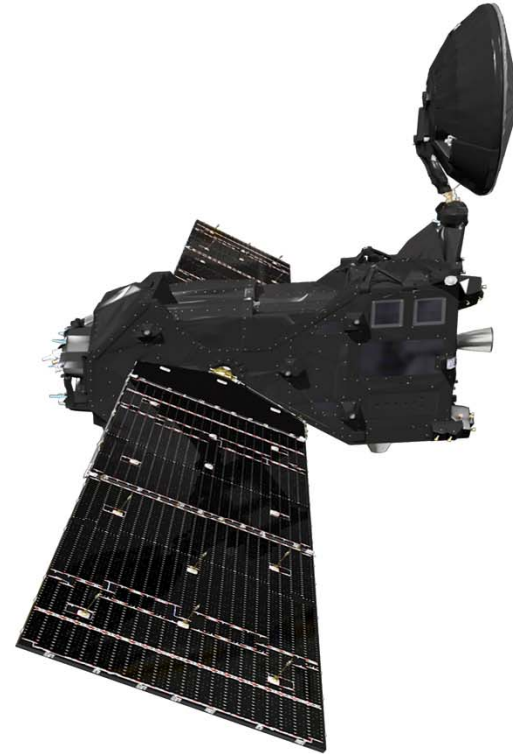


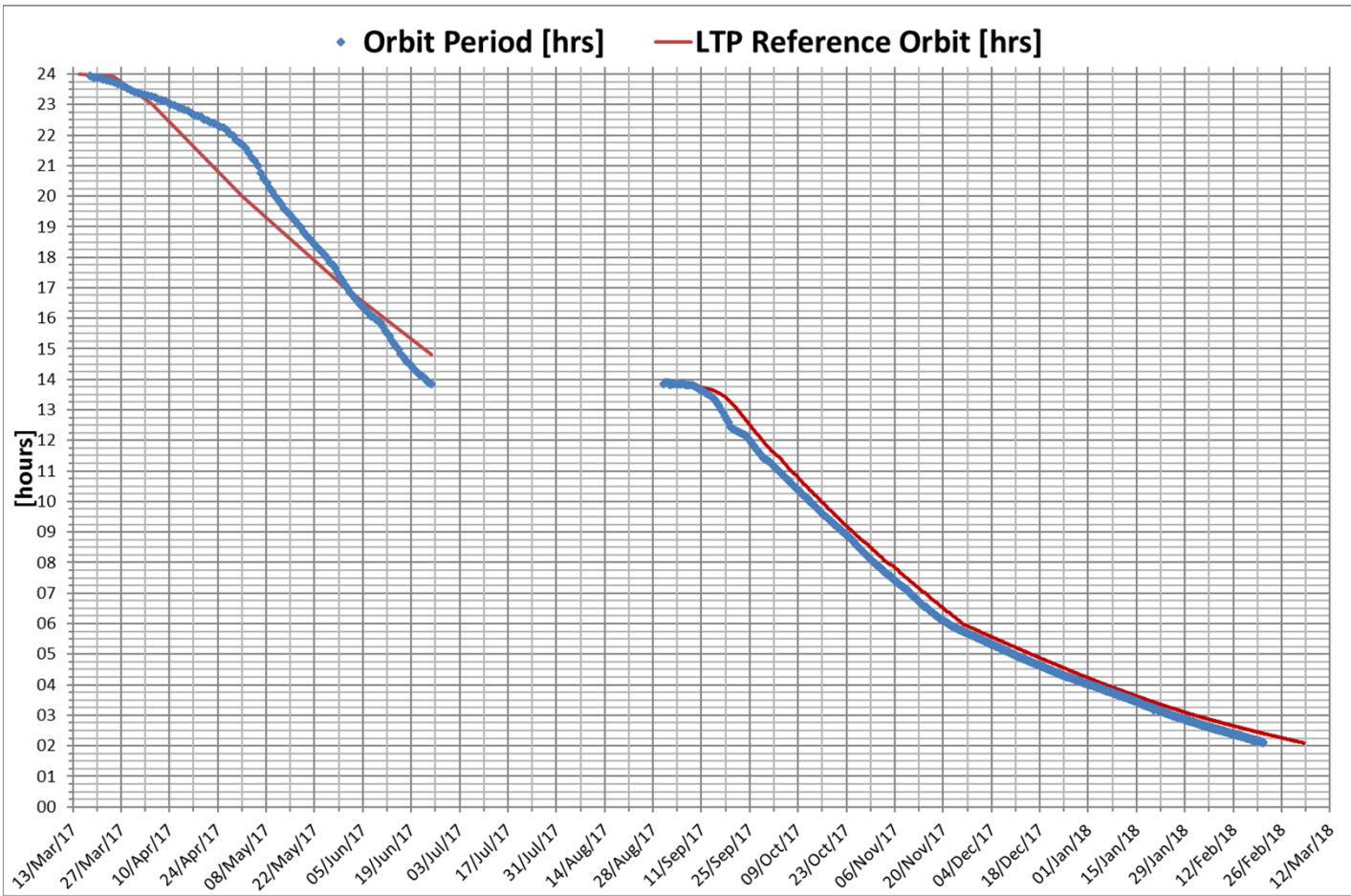
European Space Agency

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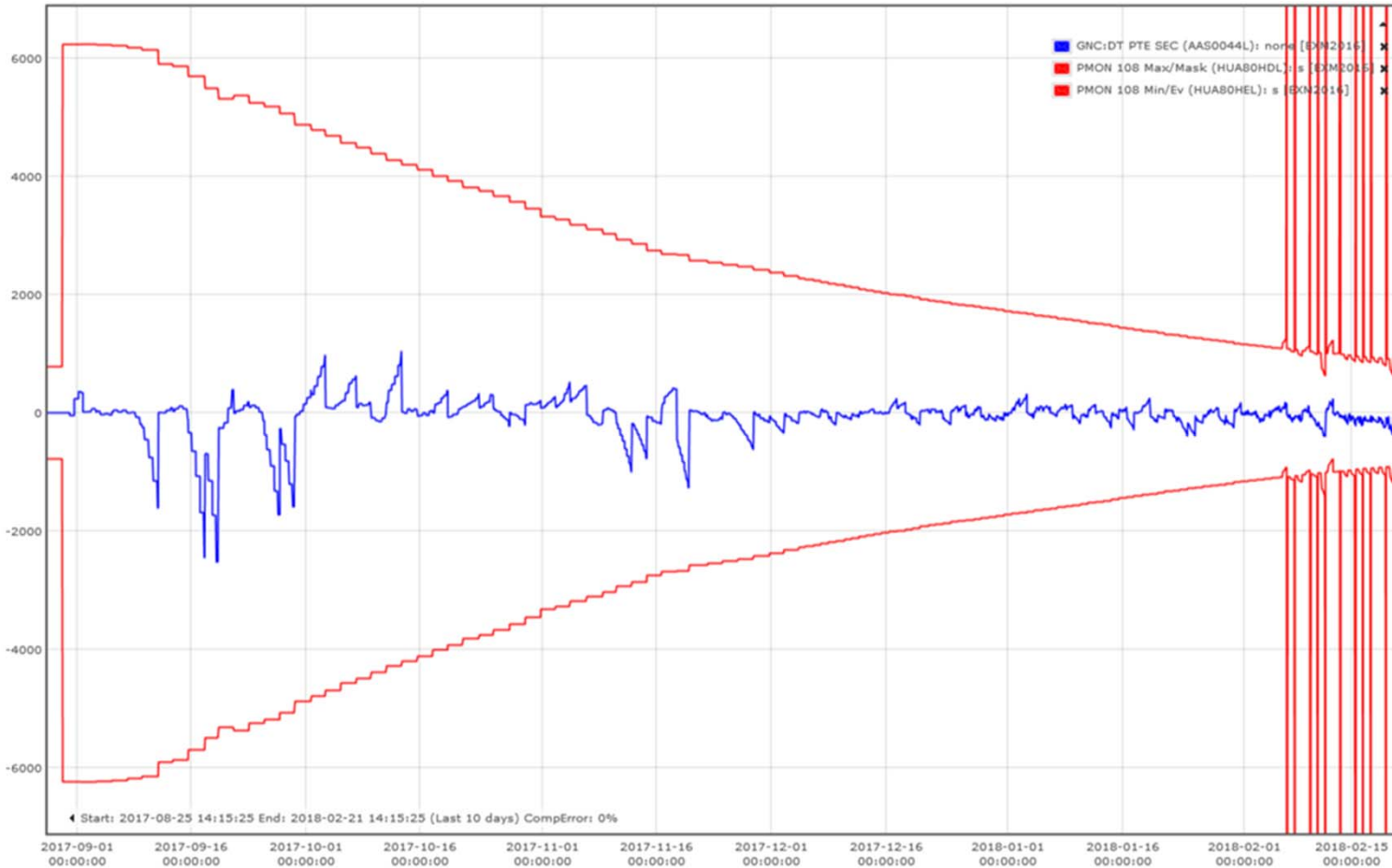


- TGO aerobraking has worked superbly and is now finished.
- The spacecraft status is excellent.
- The SGS Nominal Science Operations Readiness Review was concluded successfully yesterday with a board meeting in ESAC. (The meeting finished in a record time of one hour, probably a new record.)





Evolution of orbital period for **planned** vs **actual** aerobraking



The Pericenter prediction error has to be kept smaller than $1/8$ of the orbital period to avoid a safe mode. Therefore the aerobraking will have to stop at an orbital period of about 2h5m which corresponds to 1000km pc alt.

End of aerobraking



- An apocentre manoeuvre to increase the pericenter altitude out of the aerobraking domain to 200km altitude was performed on 20 Feb.
- End of aerobraking was planned for 21 Feb, when orbital period would be 2h 5 min, corresponding to a 110x1000 km orbit.
- A near pass of MRO during the crossing of the two orbits would have required an avoidance manoeuvre to take place on 21 Feb. In order to avoid this manoeuvre the aerobraking was terminated one day earlier than planned, at an apocentre altitude of 1049 km, 2h 7 min period.
- The final semi-circular 400 km orbit will be achieved by using the attitude control thrusters in several steps during the coming weeks.



S/C and instrument commissioning phase



- Up to 10Mar Post Aerobraking configurations. S/C and ground segment configurations for commissioning and routine science operations
- 10-23 March Payload Engineering activities (e.g. s/w updates) and initial Tests + Electra switch ON
- 24 March-20 April Acquisition of routine science and relay orbit through manoeuvres. S/C Attitude NADIR pointing. Payload Commissioning (Payload Ops planned by SOC)
- 21st April Start of MTP1 → Start of Science Pointings (defined by FDyn) and Relay Demo Passes
- 11th August Start of MTP5 → Start of Science Pointings (defined by SOC)

Sooooo,
Very soooooon we will get the
first data !

