



Trace gas measurements by ACS MIR onboard ExoMars/TGO

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The ExoMars Trace Gas Orbiter (TGO) is a joint ESA-Roscosmos mission to Mars that was launched in March 2016. The nominal science phase with regular measurement could only start 2 years later, that is in late spring 2018. The Atmospheric Chemistry Suite (ACS) is a set of three spectrometers (NIR, MIR, and TIRVIM), capable of sounding Mars' atmosphere in nadir and solar occultation modes. The design of the middle infrared (MIR) channel was optimized to overachieve the primary science goal of the TGO mission by accomplishing the most sensitive measurements ever of the trace gases present in the Martian atmosphere. The high aperture of the spectrometer, the ultra-high spectral resolution, and a fast onboard frame processing ensure quality meeting the highest standards. Besides methane survey, ACS MIR is capable of investigating many other minor species: CH₂O, HCl, HO₂, and others. Preliminary results and status of this work will be presented in the talk.