Probing Mars' atmosphere with ExoMars Mars Climate Sounder

Conference or Workshop Item

Probing Mars' Atmosphere with ExoMars Mars Climate Sounder

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The 2016 Mars Trace Gas Mission will carry with it the ExoMars Mars Climate Sounder instrument, a development of the very successful Mars Climate Sounder instrument already in orbit about Mars on NASA's Mars Reconnaissance Orbiter spacecraft[1,2]. EMCS will continue the monitoring of Mars global temperature/pressure/aerosol field, and will also be able to measure the vertical profile of water vapour across the planet from 0 – 50 km. Key components of EMCS will be provided by Oxford, Reading and Cardiff Universities and the observations will be partly reduced by the instrument team at Oxford. The physical properties retrieved from these observations will be assimilated into Global Circulation Models at Oxford and at The Open University to provide a much clearer picture of the dynamics and transport processes in Mars' atmosphere.

[1] McCleese et al. (2007) J. Geophys. Res., 112, E05S06, doi:10.1029/2006JE002790.

[2] McCleese et al. (2009) Nature Geoscience, **1**, 745-749.