



Simulations of Mars' upper atmosphere - influence of varying EUV flux

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Throughout their evolution, planetary atmospheres are strongly influenced by the radiation and particle emissions from their host star. The Sun's radiation in the extreme ultraviolet (EUV) part of the solar spectrum was higher in the past, and thus, the planetary atmospheres are exposed to varying external conditions. We present simulations of the upper atmosphere of Mars and its response to varying solar EUV radiation. We simulate the atmosphere with the so-called Kompot Code, a hydrodynamic atmosphere code already tested for Earth and Venus. We compare our simulation results, i.e. profiles of neutral and ion species, and profiles of temperatures, with existing models for today's and early Mars. Finally, we compare our results with MAVEN observations.