



Hybrid modelling the Venus-solar wind interaction: ion escape rates

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In this poster, the escape rates of the Venusian atmospheric ion populations and their dependence on the upstream solar wind conditions are studied numerically using a global hybrid plasma simulation code, i.e: a code with particle ions and massless fluid electrons. Venus has no significant intrinsic magnetic field and thus the solar wind comes in close contact with the planet's dense atmosphere. As the magnetised solar wind flows against the atmosphere, the interaction between the two plasmas causes planetary ion escape. The escape rates are affected by the upstream parameters. In the simulation, the planet's upper atmosphere is composed of hydrogen and oxygen ions and both species have thermal and hot populations. Planetary neutral corona sources are ionised using the photoionisation rates corresponding to the minimum solar EUV conditions.