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# Plume-like structure near the Martian wave

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Solar wind induced escape is one of the effective mechanisms responsible for Mars dehydration. Observations made the ASPERA-3 experiment on the Mars-Express spacecraft have found a localized spatial structure near the wake boundary stretched in the tailward direction and characterized by large fluxes of the magnetosheath-like electrons and planetary ions. The characteristic energy of planetary ions increases with the altitude and varies in the range of 100 eV-few keV. The formation of the structure is closely related with the effective penetration of the magnetosheath electrons into the induced magnetosphere near the terminator region. Extraction of planetary ions and their transport to the tail within this structure can be the most important mechanism for ion scavenging. Possible models of such penetration and ion extraction are discussed.