



Martian water ice clouds: two Martian years of SPICAM UV nadir measurements.

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Martian water ice clouds were observed by SPICAM UV (200-310 nm) spectrometer onboard Mars Express. The two Martian year (MY 27 and MY 28) nadir measurements allowed to build detailed maps of water ice cloud optical thickness spatial and temporal distributions. The following features were observed. Fine ice hazes with optical thicknesses $\tau=0.1-0.3$ appeared frequently in the equatorial region during the northern spring. The north polar hood ($\tau=0.1-0.35$) retreated during this period. The Aphelion Cloud Belt started to develop in the end of the northern spring at solar longitude $L_s=70^\circ$ and decayed after $L_s=150^\circ$ exhibiting cloud optical thicknesses $\tau=0.3-0.8$. The growth of the north polar hood and the retreat of the south polar hood ($\tau=0.1-0.35$) were observed in the end of the northern summer and the beginning of the northern fall. Only fine ice hazes remained in the equatorial region in the same period. The last hazes and orographic clouds in the equatorial region before the beginning of the dust storm season were observed in the vicinity and over Arsia Mons volcano in the early northern fall ($L_s=200-230^\circ$). The hazes in the low latitudes appeared again only in the late northern winter. The beginning of the north polar hood retreat was observed in the same period.