

Analysis of cometary dust: A means for understanding the structure of comet nuclei?

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Cometary dust has and will be analysed by in-situ and remote instruments in the vicinity of comets. The dust originates from various locations and different times from the surface of the nucleus and is modified to some extent during the passage in space. These particles represent a constituent of the cometary material. The analysis of the chemistry and mineralogy of this cometary debris should allow setting limits on the tensile strength and morphology of the cometary grains. We will discuss various grain models based on the present knowledge and theories of cometary dust composition and the resulting microscopic and macroscopic tensile strength of cometary surface material.