



Mass, Density and Internal Nucleus Structure of 67P/Churyumov-Gerasimenko

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The bulk properties of a body like mass, volume (size and shape), and particularly the density, must be known for a description of its internal structure. The radio science experiment RSI on the Rosetta spacecraft derived the mass of comet 67P/Churyumov-Gerasimenko at various distances between 100 km and 30 km and together with the current best estimate of the volume determined the bulk density of the nucleus. A model of the internal structure is derived from this information. The comet nucleus appears to be a body of low mass, low density and high porosity with approximately four times more dust than ice by mass and 1.5 times more dust than ice by volume.