



Deep Impact

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The excavation of a crater by Deep Impact provided the first experimental insight into the interior structure of a cometary nucleus. The flyby, by virtue of the highest spatial resolution and the best near-IR spectroscopy to date, also yielded a comparable number of new insights. Key results include a very high porosity for the nucleus, a low strength at spatial scales from $<1\text{m}$ to $>100\text{m}$, the first detection of ice on the surface of a cometary nucleus coupled with the demonstration that the bulk of the outgassing is coming from subsurface ice rather than the exposed ice, a very low thermal inertia, estimates of the depth at which various ices occur, pronounced chemical and spatial heterogeneity in the outgassing, and constraints on the sizes and composition of the refractory particles. This talk will provide an overview, with appropriate details, of these results.