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## Near Surface Mechanical and Thermal Surface Properties of 67P Churyumov Gerasimenko

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The MUPUS thermal probe did not fully penetrate the near-surface layers of comet nucleus 67P/Churyumov-Gerasimenko. This is interpreted as implying a local mechanical strength of about 10 MPa, revised upward from previous estimates. The cooling of the probe's thermal sensors after deployment suggests a surface layer of about 10cm thickness with a small thermal conductivity. The recording of the MUPUS thermal mapper of infrared radiation from the insolated field of view at the landing site have been used to derive the thermal inertia of the surface material. The thermal conductivity derived from the thermal inertia is consistent with the inferred thermal conductivity of the dust layer. High strength of the material underlying thick, low conducting dust indicates fine granularity of the material, the grain sizes of the orders of ten microns, or smaller.