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67P/Churyumov-Gerasimenko: the dust coma as seen through Rosetta/OSIRIS

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OSIRIS, the Optical, Spectroscopic, and Infrared Remote Imaging System onboard Rosetta, is imaging the nucleus and the coma of 67/Churyumov-Gerasimenko since the beginning of post-hibernation operations in March 2014. We focus here on dust studies performed with OSIRIS. Images obtained in different filters in the visible wavelength range are used to study the unresolved coma, investigating its diurnal and seasonal variations and providing insights into the dust composition. Individual grains are characterized in terms of color, size, distance, light curves, orbits. Images acquired spanning the phase angle range 0-165 deg are used to determine the dust phase function in different colors and to investigate the intimate nature of cometary dust particles by solving the inverse scattering problem.