



Comet 67P/Churyumov-Gerasimenko observed with ESO-WFI

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In April 2004, we have performed deep imaging (13 hours integration time) of the dust trail of comet 67P/Churyumov-Gerasimenko with the Wield Field Imager at the MPG 2.2m telescope at ESO, La Silla. The comet was at the time of our observations at a heliocentric distance of 4.66 AU and at a geocentric distance of 3.68 AU. No coma has been detected around the nucleus, but over the whole width of the image (ca. 40 arcmin), a line-like structure along the projected orbit of the comet is visible. We assume that it consists mainly of dust particles larger than 100 μm ejected near perihelion 2002, but also during previous perihelion passages. We present a method to simulate images of a cometary dust trail, tail or neckline structure. Based on the observed activity of 67P near perihelion we have modelled the density of dust grains of various sizes at the observing time. We compare the model results to the observation. From differences or similarities we infer on the constraining parameters, especially on the size distribution of big particles ejected near perihelion.