

# The great cometary show

January 19 2007

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'Old tails' from Comet McNaught

ESO Press Photo 05b/07 (19 January 2007)

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The extended tail of Comet McNaught, seen from Paranal, observed in the evening of Jan. 18, 2007, when the comet was setting behind the Pacific Ocean. The planet Venus is visible in the lower right of the image. Credit: ESO

Comet McNaught, the Great Comet of 2007, is no more visible for observers in the Northern Hemisphere. It does put an impressive show in the South, however, and observers in Chile, in particular at the Paranal Observatory, were able to capture amazing images, including a display reminiscent of an aurora!

Comet C/2006 P1 was discovered in August 2006 by Robert McNaught on images taken by D. M. Burton with the 0.5-m Uppsala Schmidt

telescope in the course of the Siding Spring Survey (Australia). It is one of 29 comets discovered by this telescope since early 2004 in a project to systematically search the southern skies for asteroids, or comets, that can pass close to the Earth. At that time, the comet was only a very faint, barely diffuse object, about 50 000 times fainter than what the unaided eye can see.

However, as the comet came closer to the Sun, it brightened rapidly, in such a way as to become easily visible with the unaided eye in early January 2007, becoming brighter than Comet Hale-Bopp and Comet West, thereby earning its title of Great Comet of 2007. It even became the brightest comet in more than 40 years.

Comet McNaught had its closest approach to the Sun on 12 January, being well inside the orbit of Mercury, with a minimum distance of only 17% the mean Earth-Sun distance. On January 13, it reached its maximum brightness when it was possibly brighter than Venus.

In early January, it was visible in the northern hemisphere but after passing the Sun, it only became visible from the southern hemisphere, entering the constellation Microscopium (The Microscope) on 18 January.

Astronomers in ESO's observatories in Chile are thus optimally placed to enjoy the show and certainly do not want to miss it. The comet displays a vivid coma and a lovely, sweeping tail.

As the night deepens, and the comet had set, it revealed a sweeping fan that gives onlookers the impression they are witnessing an aurora, albeit the phenomenon is completely different. The structure in the tail is probably the fingerprint of past bursts of activity of the comet, releasing small dust particles whose paths are deflected by the solar light.

The comet is now heading further south and should still be nicely visible for southern observers for several days.

Source: European Southern Observatory

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