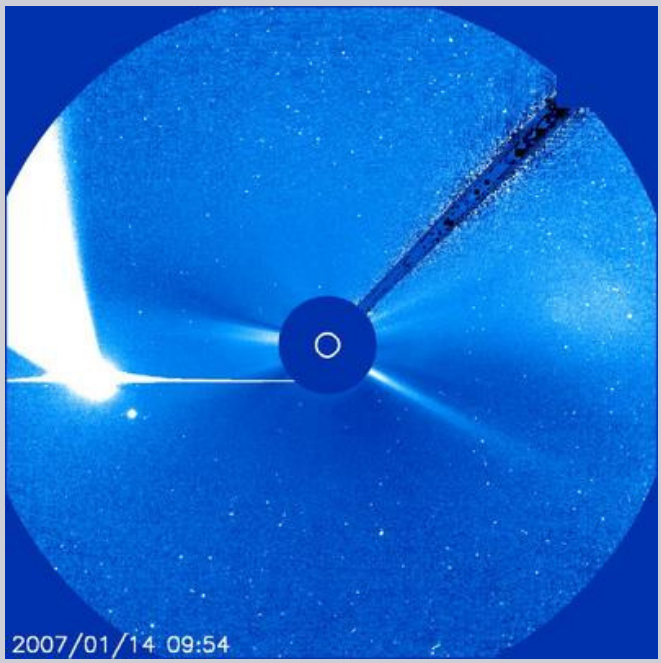
# Hotshot

## *BRIGHTEST COMET IN OVER FORTY YEARS*

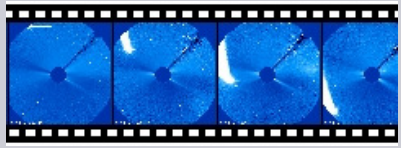
Comet McNaught (C/2006 P1) has not only become the brightest comet SOHO has ever seen, but even the brightest comet observed in over forty years! The comet swung by the sun on Jan 12th - 15th, and is now emerging into the skies of the southern hemisphere. During its close encounter with our mother star, comet McNaught became a naked-eye object in broad daylight. It was discovered on August 7th, 2006 by the hugely successful comet discoverer Rob McNaught (Siding Spring Survey). At time of discovery, the comet was a very faint object, but the predicted perihelion distance (closest distance to the sun) of just 0.17 AU indicated already that the object had the potential to become very bright.

As you are probably aware, the LASCO instrument on-board SOHO has the ability to watch comets as they get extremely close to the Sun. Fortunately for us, comet McNaught has passed right through the LASCO C3 field of view! We do not know exactly the peak brightness of the comet yet, but it is definitely brighter than -3 mag! It is thus much brighter than comet NEAT or comet 96P/Machholz. In other words, comet McNaught is by far the brightest and most spectacular comet SOHO has ever seen!

Comet McNaught




Large JPEG Image / High-Res TIFF Image (4.8 MB)



Quicktime Movies: Large / Medium / Small
MPEG Movies: Large / Medium / Small

The comet appeared in the field of view of SOHO's coronagraph LASCO C3 at around 02:00 UT (05:00 EDT) on January 12th. It passed its perihelion around 19:00 UT on January 12th, and exited C3's field of view at roughly 03:00UT on January 16th.

Since LASCO was built to observe the faint solar corona, its exposure times are not tuned to handle objects as bright as this extraordinary comet. In fact, comet McNaught is so bright that it saturates the CCD camera so that "bleeding" occurs along pixel rows. There is a bright horizontal streak on either side of the comet's head, because the charge leaks easier along the direction in which the CCD image is read out by the associated electronics.

The lower the magnitude number, the brighter the object. The brightest stars in the sky are categorized as zero or first magnitude. Negative magnitudes are reserved for the most brilliant objects: the brightest star is Sirius (-1.4); the full Moon is -12.7; the Sun is -26.7.

**Related Links**

- LASCO Color Filter Observations
- ESA Web Story
- SOHO Comets' Web Page Comet observations with SOHO and STEREO
- Comets Movies Movies of the most beautiful comets observed by SOHO
- The LASCO Instrument Details about SOHO's LASCO coronograph
- Comet McNaught - a First Light Present for STEREO
- Comet McNaught Photo Gallery Nice photographs of the comet
- 3D Orbital Diagram (Java Applet)
- The ICQ Comet Information Website from International Comet Quarterly
- Comet NEAT SOHO hotshot with images and movies
- Comet 96/P Machholz SOHO hotshot with images and movies
- Space Watch Story on Comet McNaught
- Sky Maps and Magnitude Graphs for Comet McNaught
- Information about Comets from Wikipedia
- Information about Comets from space.com



SOHO is a project of international cooperation between esa and NASA