

## Mars 2007-2008: Report from a Cooperative Observation Network

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We have reported Mars phenomena observed in the 2003 and 2005-2006 apparitions by the professional-amateur cooperation networks (Nakakushi et al., 2004 and 2005, on PASJ; Nakakushi et al., 2006, in the JpGU Meeting 2006). Here we report the results in the 2007-2008 apparition.

In this apparition, Mars got the largest angular diameter, 15.9 arcsec, on December 19, 2007; the opposition was on December 24, 2007, which was around the northern vernal equinox on Mars. The first observation was on January 24, 2004, which showed the albedo features with the diameter as small as 4.1 arcsec. That suggests both the instrumentational and technical excellence of amateur observers. We accumulated more than 2500 data at the end of November 2007, and observations are underway (at least, at the submission of this abstract).

In general, the comparatively small angular diameter of Mars and the bad weather condition on Earth prevent us from as good observations as the previous two apparitions. However, non-Japanese observers, those in U.S.A. in particular, successfully observed the dust storm in the rainy season in Japan, when the members in Japan could not observe anything. That revealed an advantage of an international observation network.

The dust storm observed on June 23, 2007. In the next day, the storm developed in great dimensions, and had 10 cores, in the southern hemisphere. Finally it wrapped the entire planet. Although the great dust storm in 2001 had suspended in a long period, the great storm in this apparition subsided comparatively early and the Mars surface had been visible in early August. Besides, many reports on the polar cap(s) and the polar hood(s) have been accumulated.

We report the latest results, and also discuss the requirements to extend our activity as a long enduring project in the future.