2003 Mars report: Results from cooperative observation networks

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This is a report on Mars in the 2003 apparition, by two cooperative observation networks: Nishiharima Astronomical Observatory Mars Cooperative Observation (NHAO-MCO) and Association of Lunar and Planetary Observers of Japan (ALPO-Japan).

The 2003 apparition of Mars had brought a ``Mars Fever'' for all over the world as well as scientific societies.

For this apparition, observations from professional-amateur collaborating observational networks (pro-ama networks, hereafter) started already at the end of 2002, and yet, their reports have been continuing, at least by this time of writing this article (the end of January, 2004).

Recently appeared WebCams, such as ``ToUcam'' of Phillips, have made a revolution for imaging observations. By using one, and by using appropriate softwares, ALL the observers (professional, amateur, public observations, etc.) can obtain images with amazingly high-resolution such that professional observatories with not large-appartured telescopes and old-fashioned systems cannot absolutely win. However, these new-fashioned data (from amateurs) have not been adopted professional works, just archived. This work of us is an attempt to break this situation as well as a scientific work.

Events to be attracted in this observational period are, as expected, dust storms. Because dust storms change the atmospheric temperature structure dramatically, and also can be used as simple tracers of winds, close studies of their activities are very important. In this apparition, reported are ; three regional storms; changes of regolith distribution (i.e., change of albedo features) due to the 2001 global dust storm; some interesting phenomena on the receding south polar cap; cloud activities, etc. Although we have detected such events that we could not do because of the lack of observing ability and equipment, we can roughly conclude the 2003 apparition is ``calm'' compared to the preceding apparitions.