Observations of Mars during the great opposition in 2003

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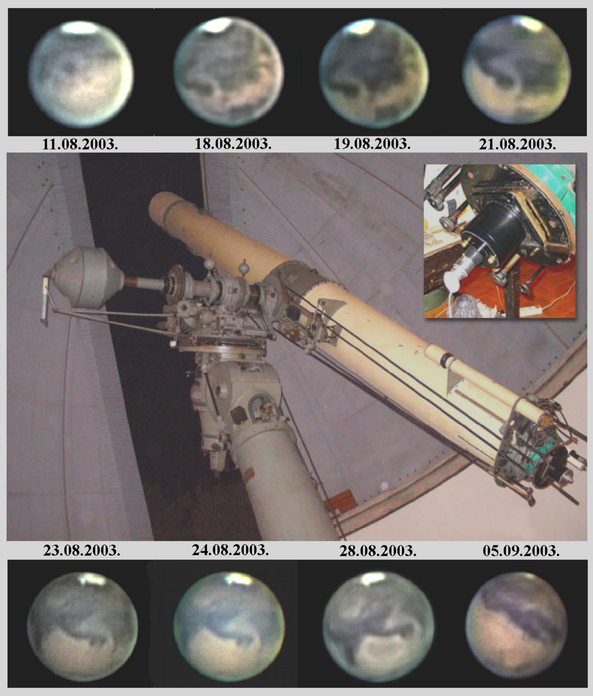
This article presents the results of the planet Mars imaging during the great perihelion opposition in 2003. Imaging was performed from several locations in Serbia (Bački Petrovac, Bačko Gradište, Belgrade Astronomical Observatory, Petnica Science Center Valjevo and Novi Sad), as well as from Astronomical Observatory Rimavska Sobota, Slovakia. The observations are from the period between June 16th and October 24th 2003. Various telescopes and imaging cameras have been used to accomplish this task.

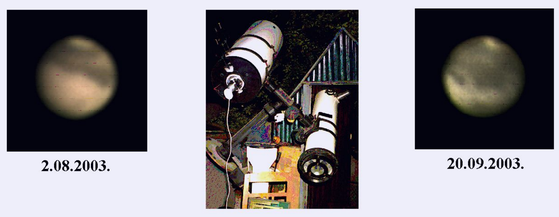
The recession of Martian South Polar Cap is analyzed in relation to areocentric longitude of the Sun. The best images were sent to the Mars Watch 2003 Internet site.

Astronomical Observatory Belgrade



Carl Zeiss refractor
D = 65 cm, F = 10,5 m
Philips ToUCam Pro CCD webcam

Bački Petrovac



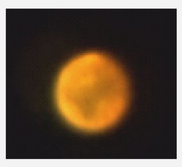
Cassegrain reflector
250/3740 mm
Philips ToUCam Pro CCD webcam

Bačko Gradište

Celestron C8 200/2000 mm
Epson PC 300Z digital camera

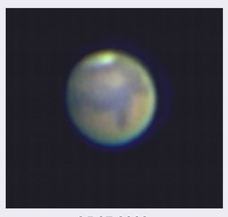
AS ADNOS Novi Sad

Tasco 20C refractor 108/1600 mm
Sony DSC 850C digital camera



SC Petnica

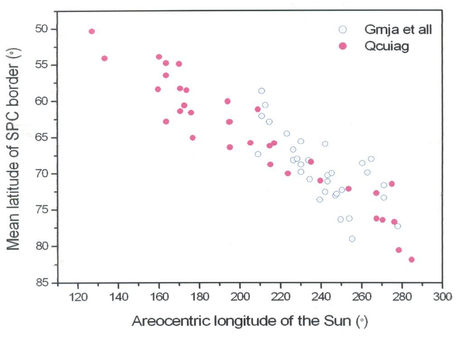
Meade 178ED/APO-EMC 178/1600 mm
Philips ToUCam Pro CCD webcam

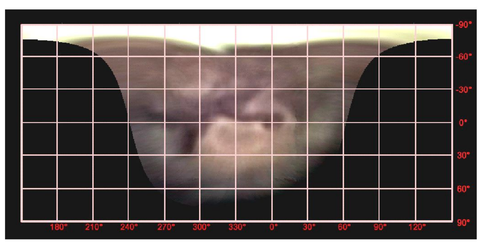


We analysed the recession of Martian South Polar Cap (SPC) in relation to areocentric longitude of the Sun (L_s). In order to have a longer observation period, apart from our data, we also include the data taken from QCUIAG group. From our data we have come to the conclusion that the change in the latitude of the SPC is 0.16 for a degree of areocentric longitude of the Sun.

For the purpose of recording and digital processing of the images the following software have been used: Registax V.2, K3CCDTools, Iris, Maxim DL, StellaImage Trial, Xn Wiev.

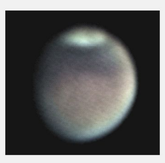
Measuring of the Mars South Polar Cap has been carried out by the StellaImage Trial programe using theplanetary cartography tools. Several points have been mesured on the edge of the SPC and taken the average value.

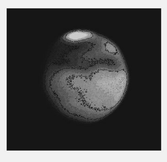




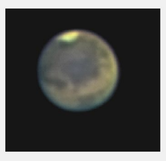
The image represents the change of the mean latitude of SPC border during our observation period complemented by the data taken from QCUIAG group.

AO Rimavska Sobota (Slovakia)





Coude 150/2250 mm
Refractor 160/2450 mm
Cass. reflector 350/4200 mm
Philips ToUCam Pro CCD webcam
QuickCam 4000 pro webcam
SoftHard Technology, Ltd CCD



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