

Research about the total eclipse of the moon~Mystery of the turquoise fringe~

Kenichiro Nishi¹, *Aoi Yonemori¹, *Airi Shimohigoshi¹

1.Kagoshimagyokuryu High School

We compared a picture of the turquoise fringe (TF) from a total lunar eclipse which was taken on October 8,2014 with another picture from April 4,2015 in terms of difference between color and width.

We thought the reason for different was appearance because of the location of the earth's shadow which passed the moon.aerosol which occur when sunlight passed the ozone layer.

We measured the maximum and the minimum width of TF.Then we did image processing .As a result,we discovered the difference in width.

Comparing them numericall,the value fell drastically after the end of the eclipse repeating similar movements.

We think that the cause of the discovery of the TF is the switchover from a film camera to a digital camera.

Also we calculated the distance to the moon.Making use of a picture of the moon and Uranus which we took on October 8 the year before last.