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## Faulkes Telescope Project<sup>[2]</sup>

This project facilitates access to remote telescopes, allowing\* schools to capture images of the sky. It was started in 2000 with the telescopes now owned and operated by the Las Cumbres Observatory Global Telescope Network (LCOGT)<sup>[3]</sup>.

## The observation network

Currently the observation network consists of two telescopes: one in Hawaii and one in Australia.



Figure 1 – Locations of the telescopes of the current network.

These telescopes (Figure 2) have a primary mirror diameter of 2 meters, capture images using a 10.5" CCD with 4096x4096 pixels, and can use various filters.



Figure 2 – One of the project's telescope.

## Faulkes Telescope at School

In June 2011 I had the chance to participate in one of the Galileo Teacher Training Program (GTTP)<sup>[4]</sup> sessions (Comenius program Contract No 2011-1-PT1-COM02-07945) where this project was presented. On January 25th, 2012 I performed the first observation with students and since that day we\*\* try to make monthly observation sessions.



Figure 3 – Students during an observation session.

## The sessions

Each observation session is prepared in advance with a virtual planetarium that allows foreseeing the sky in place and time of the scheduled session.

In each session the team take over, in real time\*\*\*, one of the network telescopes from a computer connected to the internet. Instructions are given to the telescope, forcing it to move towards the desired object (Figure 4), where the exposure time and filters are defined to obtain the image.

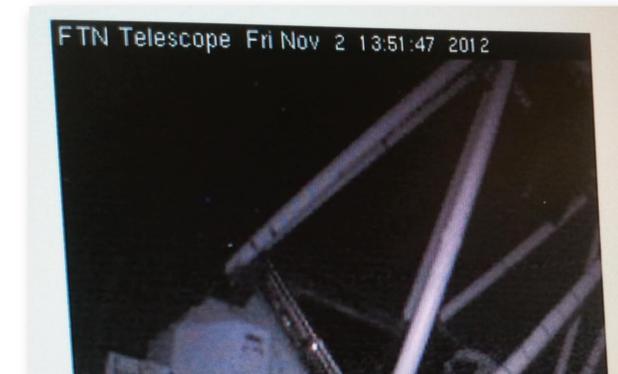


Figure 4 – Webcam image of the northern telescope (Hawaii).

## images obtained



Figure 5 – M5  
Date: 25/01/2012, 14h49  
Exposure: 30 s each filter (RGB)  
Authors: Filip Sova, Inês Moreira, Joaquim Ventosa, Miguel Neta



Figure 6 – M51  
Date: 15/02/2012, 13h16  
Exposure: 120 s each filter (RGB)  
Author: Joaquim Ventosa



Figure 7 – M16  
Date: 17/05/2012, 10h26  
Exposure: 250 s each filter (RGB)  
Author: Miguel Neta



Figure 8 – M27  
Date: 23/07/2012, 11h16  
Exposure: 60 s each filter (RGB)  
Author: Miguel Neta



Figure 9 – NGC2440  
Date: 06/11/2013, 15h19  
Exposure: 10 s each filter (RGB)  
Author: João Duarte

\* Teachers can access this telescopes after their participation in Faulkes Telescope Project workshops.  
\*\* I made observation sessions in two schools: Escola Secundária de Loulé<sup>[5]</sup> and Agrupamento de Escolas Dr<sup>a</sup> Laura Ayres.  
\*\*\* In the near future the process of obtaining images will be different from today.

Figures 1 and 2 have been provided by the Faulkes Telescope Project team.  
Figures 3 and 4 are photographs of the observation sessions.  
Figures 5 to 9 were obtained with the Faulkes Telescope North (Hawaii) and Faulkes Telescope South (Australia).

[1] <http://www.esla.edu.pt>  
[2] <http://www.faulkes-telescope.com>  
[3] <http://lcogt.net>  
[4] <http://www.galileoteachers.org>  
[5] <https://www.es-loule.edu.pt>