

ASTROPHYSICS WITH DR STACEY HABERGHAM-MAWSON

TALKING POINTS

- 1) Why is the Liverpool Telescope not in Liverpool, UK? (See *What is the Liverpool Telescope?*)
- 2) Why does the Liverpool Telescope have a weather station attached to it? (See *What is the Liverpool Telescope?*)
- 3) The Liverpool Telescope is available for professional astronomers and young people like you. What observations can the professional astronomers make that we cannot make? (See *What can be observed through the telescope?*)
- 4) Why are FITS files better for looking at the observations from the telescope than normal image files such as jpeg? (See *What can I do with the image that I have obtained from the telescope?*)
- 5) What sorts of measurements and information can you get from these FITS files? (See *What happens after the telescope has received instructions?*)
- 6) What astronomical object would you be most interested in observing using the Liverpool Telescope? And what measurements would you like to take?
- 7) Do you understand how telescopes work? If you do, tell your friend about it (see *How do telescopes work?*)
- 8) What is astrophysics? What is the difference between astrophysics and astronomy? (See *About astrophysics* and visit: www.physlink.com/Education/AskExperts/ae296.cfm)

ACTIVITIES YOU CAN DO AT SCHOOL OR COLLEGE

THE NATIONAL SCHOOLS' OBSERVATORY WEBSITE HAS LOADS OF FUN ACTIVITIES. HERE ARE SOME HIGHLIGHTS.

1. BE THE ASTRONOMER YOU WANT TO BE

Sign up to the NSO and have a go at using the Liverpool Telescope. www.schoolsobservatory.org/register

2. SUNSPOT DETECTIVE

Using sunspot data, help the European Space Agency to solve the following problem (suitable for age 14-18):

In 2001 the European Space Agency (ESA) temporarily lost track of 300 low-altitude satellites. This coincided with a period of intense solar activity, signified by the presence of sunspots and associated flares. Using the information given on the NSO website, can you predict when the next period of high solar activity will occur?

www.schoolsobservatory.org/discover/activities/sunspots_workshop

3. LUNAR MOUNTAINS ACTIVITY

Using algebra and images of the Moon, you can calculate the height of a lunar mountain by measuring the length of its shadow (suitable for age 11-16)

www.schoolsobservatory.org/discover/activities/lunar_mountains

4. HUNTING FOR ASTEROIDS ACTIVITY

Using images from the telescope help to find asteroids near the Earth and check that they aren't going to come too close (suitable for age 7-14)!

www.schoolsobservatory.org/discover/activities/hunting_for_asteroids