

ACTIVITY MAPPING THE NIGHT SKY

LOCATION MERIDIAN BUILDING



GALLERY MERIDIAN///

The Meridian Building contains many telescopes, but only four remain in their original positions. Facing the Meridian Building from the courtyard means that you are looking at the oldest on the right (the mural quadrants) and newest on the left – the Airy Transit Circle.

These instruments could be used to take measurements of stars in the night sky. Walk through the Meridian Building inside and see if you can learn a little about these special instruments by answering the following questions.

How are the instruments aligned?///

East-West

North-South

Northeast-Southwest

In which directions can these telescopes move?///

Up-Down

Left-Right

Both

What two properties could you measure using such telescopes?///

1.

(HINT: Each of the telescopes has another instrument nearby to help measure this property)

2.

(HINT: The previous question leaves you with only one property to measure using the scales on every telescope)

These instruments could be used to map the night sky. If the instruments could only move in one set of directions how can you map the whole sky?///

(HINT: See the "star trails" picture)



As you move from oldest to newest telescope in this building what two improvements can you see in the way they are mounted? ///

1.

2.

As well as mapping stars in the night sky, astronomers at the Royal Observatory Greenwich took daily observations of the Sun at noon. The famous Greenwich Time Ball (on top of Flamsteed House) drops at 1pm every day.

If the Sun passes over the Airy Transit Circle at local noon, how far will the Sun have appeared to move in the sky when the ball is dropped? ///

Degrees

