

# Unaided Observation Task

## A4

Estimate a Celestial Property Using Drawings of a  
Suitable Event

# Task description

## **A4 Estimate a celestial property using drawings of a suitable event**

Use naked-eye drawings or measurements of a celestial event such as a comet or eclipse to determine a celestial property such as the relative size of the Earth and Moon

May 2020 is a good time to attempt this as there is a good opportunity to observe a comet

<https://www.skyatnightmagazine.com/advance/skills/comet-c-2020-f8-swan-visible-how-to-see-it/>

The task itself could be relatively straightforward as long as you have a suitable event to observe

Alternatively you could try the Aided Observation version B4 which is the same thing, but using a camera or telescope to make your observations

# Planning your observation:

Research the event you will try to observe (the previous website tells you all you need to know)

Download the Observation Planning Workbook from the Observation Planning and Workbooks folder on the website

Fill in all the details in this booklet to help you plan your observation

Download the Unaided Observation Recording Form from the same folder and use it to record all your astronomical and other observations during your observing session

# What to observe:

For the comet observation, you should aim to sketch the location of the comet on a star chart on more than one occasion

The star chart can be a home made one you sketched yourself or printed off from a suitable website e.g.

<https://astronomynow.com/uk-sky-chart/>

You should also try to sketch what the comet looks like and any changes in its appearance if you manage to observe it more than once

# Analysis of your observation task:

Download the Analysis and Observation Workbook from the website and complete each section to guide you through your analysis

You could try to measure the comet's angular speed across the sky by using its celestial coordinates to measure changes in its angular position between different observations

You could document changes in its appearance as its distance from the Sun changes and discuss whether these agree with what you know about the structure and behaviour of comets

Keep all your work and submit a copy to your teacher as evidence of your observational work for the GCSE Astronomy Practical Endorsement