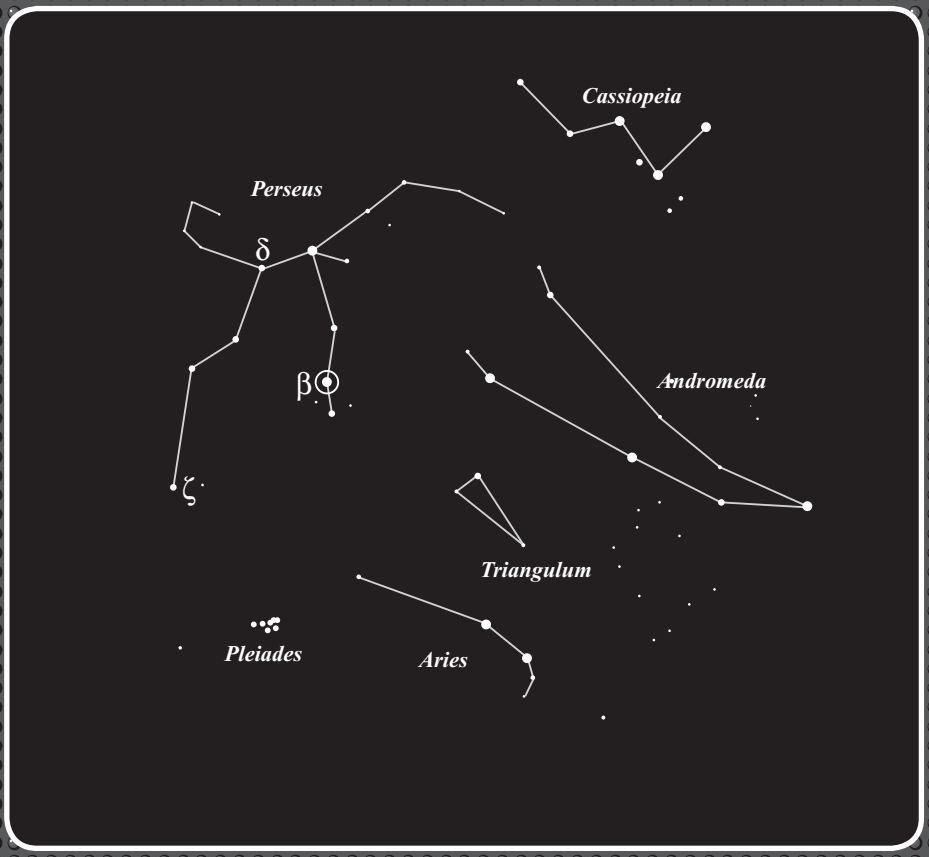
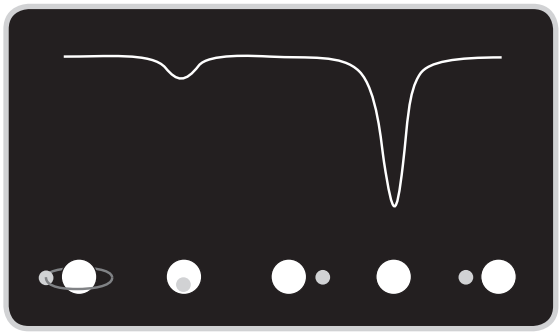
PRACTICAL OBSERVING

β Perseii- *an eclipsing binary system*



DATE:	
TIME	MAG

OBSERVATION



Algol varies between mag 2.3 at maximum and mag 3.5 at minimum. The reason for this is that the system consists of two stars of differing luminosities orbiting each other closely.

When the faint star passes behind the brighter one there is a small dip in brightness. When the small star passes in front of the bright one there is a large dip. This process is extremely regular and gives rise to a characteristic light curve with two minima.

This observation is to determine the time of the primary minimum.

Algol's light changes fastest halfway on descent and halfway on ascent of the curve, or at about mag 2.9. The two comparison stars used are ζ (mag 2.91) and δ (mag 3.10).

Record Algol's brightness in five steps:

A - brighter than ζ
B - same as ζ
C - between ζ and δ
D - same as δ
E - fainter than δ

Algol takes about 4.5 hours to fade - you need to start observing some 2.5 hours prior to the predicted time of minimum. The results should be plotted to give curves for descending and ascending brightness. The midway point will be the time or epoch of Algol's minimum. Compare this with prediction.

Geocentric times of minima may be found from the BAA variable star handbook or at http://www.aavso.org/algolmin.stm

Special note - Observe at 3 minute intervals during the critical period of 30minutes. Low power binoculars should be used with the stellar image slightly out of focus to give a disk.The fade and rise can be observed on separate days, but observe at the same altitude for constant conditions.

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