

## The OASI Sky Condition Survey 2014/15

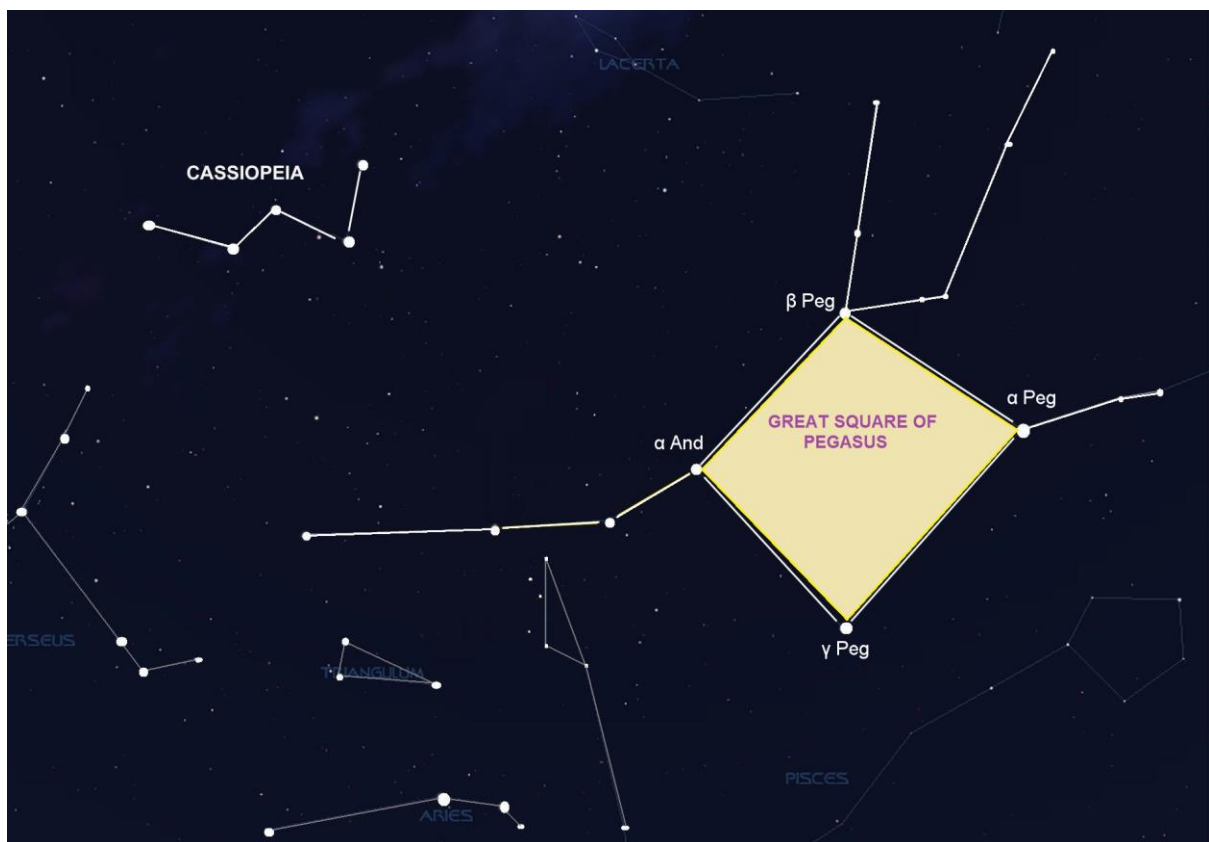
After the success of last year's project to estimate the speed of light using Rømer's method, the committee has now decided on the society's winter 2014-15 project. It has been chosen to be easy for all members to take part and requires no equipment.

The constellation of Pegasus is the 7<sup>th</sup> largest in the sky, covering 1,121 square degrees. During autumn it is a dominant feature for naked eye observers. The most prominent part of the constellation is the famous *Great Square of Pegasus* defined by four reasonably bright stars between 2<sup>nd</sup> and 3<sup>rd</sup> magnitude.

The four stars marking the corners of the square are (clockwise from NW):

- Scheat ( $\beta$  Peg) - mag. 2.4
- Markab ( $\alpha$  Peg) - mag. 2.5
- Algenib ( $\gamma$  Peg) - mag. 2.8
- Alpheratz ( $\alpha$  And) - mag. 2.1

Note that Alpheratz ( $\alpha$  And), the brightest of the four, formally lies in neighbouring Andromeda, however it is generally accepted as being part of both constellations.



## **Inside the Square**

The square of Pegasus is large and the four corner stars easily identifiable. The square contains few easily visible, naked eye stars, but many on the fringe of naked eye visibility. Consequently, counting the number of stars visible inside the square is an excellent measure of how dark / good is the night sky.

## **The OASI winter project**

We ask members of OASI to count, without using visual aids, the stars visible inside the square (not including the four defining the corners) and record the results on the form below. Observations can be made from as many sites within the East Suffolk area and as often as you wish. The more observations are reported, the more comprehensive will be the information that we can deduce about the state of the night sky, so please undertake as many counts as you can.

The results will be collated to form a database and map of viewing conditions around Ipswich this winter. This information will provide us with valuable information to plan future events, form an important snapshot of present conditions for historical records and give us important evidence to help combat light pollution.

If you are unsure where to find the great square, Bill Barton will be hosting *Mark 1 eyeball* observing sessions during Newbourne Observing Group meetings in the 2014-15 winter season, so come along and he will point you in the right direction!

To provide results that are consistent, please be honest in what you see, give your eyes time to become dark adapted before counting stars and, most importantly, don't use telescopes, binoculars or other visual aids!

Paul Whiting will collate the results. Please email him your reports:

[treasurer@oasi.org.uk](mailto:treasurer@oasi.org.uk)

## Theoretical visibility of stars within the square of Pegasus

Limiting Magnitude	Number of naked eye stars visible in the square	Seeing
6.5	35	Exceptional
6.25	21	Excellent
6	13	Superb
5.75	9	Very good
5.5	7	Good
5.25	5	Above Average
5	4	Average
4.75	3	Below Average
4.5	1	Poor
$\leq 4.00$	0	Very Poor

## Observing report form

Email completed forms to Paul Whiting via [treasurer@oasi.org.uk](mailto:treasurer@oasi.org.uk).

Town/Village	
Street	
Date	
Time	
Number of stars seen	
General conditions report	
Name	

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