

Let's take part in 2 Global Initiatives that look at light pollution: "Globe at Night" & "Earth Hour".

## Globe at Night

### Introduction

Globe at Night is a world-wide science campaign to observe and record the magnitude of visible stars as a means of measuring light pollution in a given location.

#### Step 1 – Find the longitude and latitude

of the site of your observation. Use [www.streetmaps.co.za](http://www.streetmaps.co.za) to find your address or exact location or Google Earth or [www.itouchmap.com/latlong.html](http://www.itouchmap.com/latlong.html) or your GPS if you happen to have one.

#### Step 2 – Find Orion (a prominent constellation) in the western sky

Go outside an hour after sunset, about 20:30 – 22:00 local time, on any day between **9 and 18 February 2015**. Orion looks very much like a person. You should be able to spot Orion's Belt, which is made of three bright stars in a straight line. One of Orion's legs is represented by the bright star Rigel, one of the brightest stars in the night sky and his two shoulders are made of the stars Bellatrix and Betelgeuse. You can see Betelgeuse's reddish colour without a telescope. Allow your eyes to get used to the dark for about 20 minutes before you make your observation. Compare what (how many stars of Orion and his surrounds) you see to the different charts given on the reverse side of this page. To preserve your night vision use a red light while writing down your observation. (You can make a cheap red light by covering a flashlight with a brown paper bag or red cellophane; secure the bag with a rubber band.)

#### Step 3 – Record your observation

Decide which of the magnitude charts on the pack of this page is closest to your observation. Mark it clearly and complete all the other information asked for.

#### Step 4 – Report your observation

at <http://www.globeatnight.org/webapp/> Or bring this sheet with you on **21 February** so that you can do it at Sci-Enza.

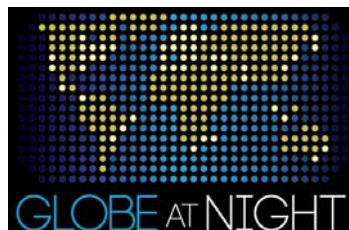
## Take part in Earth hour on Saturday 28 March 2015

Switch off your light for 1 hour on Saturday 28 March from 20:30 till 21:30. Think of something YOU can do to get your friends, family and/or community involved in Earth Hour.

For more information go the Earth Hour web site: [www.earthhour.org/](http://www.earthhour.org/)

**DO IT!** Then tell us about it on 30 March 2015. If you can, take a photo (cityscape or landscape) of the area at about 20:15, again at 20:45 and a last one at 21:30.

Upload your photos onto your blog.



Date: \_\_\_\_\_ February 2015

Observation Time: \_\_\_\_:\_\_\_\_ PM local time (HH:MM)

Name: \_\_\_\_\_



Comments on location: (e.g. There is a street light within 50 m that is shielded from my view.)  
\_\_\_\_\_

Latitude (in deg/min/sec or decimal degrees):	Longitude (in deg/min/sec or decimal degrees):
____ deg ____ min ____ sec or _____ _____ decimal degrees (South)	____ deg ____ min ____ sec or _____ _____ decimal degrees (East)

Country: South Africa

Weather conditions: \_\_\_\_\_

Find Orion by going outside an hour after sunset (about 7-10pm local time). Match your night time sky to one of our magnitude charts:



Magnitude 1



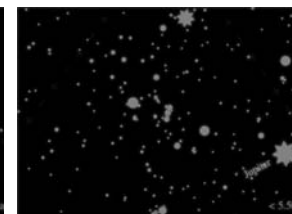
Magnitude 2



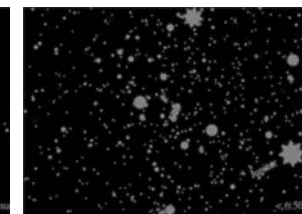
Magnitude 3



Magnitude 4



Magnitude 5



Magnitude 6