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Blog

Measuring Sky Darkness

Posted by admin on January 6, 2013

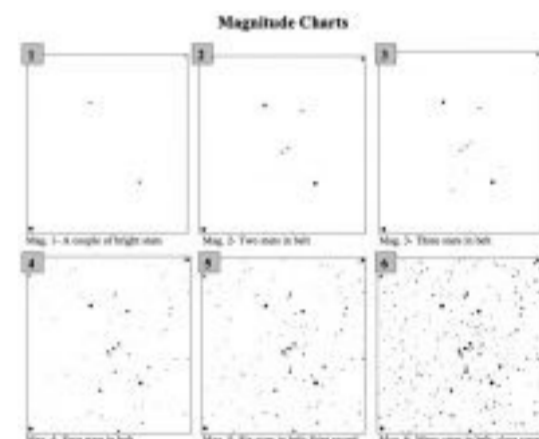


Individuals and students can help measure the quality of the night sky during one of five [GLOBE at Night](#) (GaN) sessions in 2013. In the first opportunities, January 3-12 and again January 31-February 9, observers are asked to look at the constellation Orion, compare your backyard view to one of six star charts, and share your results online. It's a simple way to raise awareness about the value of the night sky while enjoying a moment under the stars.

In 2009, over 3,4000 students from one Indiana school district excelled in gathering observations in parallel with GaN. A team of student leaders for [Let There Be Night](#) then made a 3D map from 35,000 LEGO blocks to convey their local results.

Participating in Globe at Night is simple. Look at the constellation Orion the Hunter, with its three belt stars prominent in the southern winter sky.

Then compare your backyard view with six star charts of Orion. Each chart corresponds to a different limiting magnitude, or brightness level. For example, if you see only a few stars of Orion from a light-polluted site, you'd pick Chart 1; if you see oodles of stars in a pristine night sky, you'd pick Chart 6. Last, you simply send your observations to a global database, where you can compare worldwide results from this and past years.



The 2013 GaN campaign dates, which occur when there is no moon interference to affect the results, are:

- January 3 - 12,
- January 31 - February 9
- March 3 - 12
- March 31 - April 9
- April 29 - May 8

The [Let There Be Night](#) program conducted by Penn-Harris-Madison (PHM) school district allowed one community to measure how much of the night sky has already been lost. Each person's observation was plotted on a map of the school district using LEGO blocks, with the block colors correlating to the observed magnitude. On the map, a site with a perfect sky would have a stack of six blocks (red-orange-yellow-green-blue-black) topped by black. Blocks removed for magnitudes less than six represent night sky that has already been lost.



Across St. Joseph County, the average sky magnitude was 3.5, down from an ideal 6.0, resulting in a debris pile of black, blue, and green LEGO blocks.

Details about Let There Be Night are at <http://lettherebenight.com/>.

Meanwhile, from the folks at Globe at Night is this summary of the GaN program:

GLOBE at Night is a worldwide, hands-on science and education program to encourage citizen-scientists worldwide to record the brightness of their night sky. During five select sets of dates in 2013, children and adults match the appearance of a constellation (Orion or Leo in the northern hemisphere, and Orion and Crux in the southern hemisphere) with seven star charts of progressively fainter stars (www.globeatnight.org/observe_magnitude_orion.html). Participants then submit their choice of star chart at www.globeatnight.org/webapp/ with their date, time and location. This can be done by computer (after the measurement) or by smart phone or pad (during the measurement). From these data an interactive map of all worldwide observations is created

(www.globeatnight.org/map/). Over the past 7 years of 10-day campaigns, people in 115 countries have contributed over 83,000 measurements, making GLOBE at Night the most successful, light pollution citizen-science campaign to date (www.globeatnight.org/analyze.html). The GLOBE at Night website is easy to use, comprehensive, and holds an abundance of background information (www.globeatnight.org/learn.html and www.globeatnight.org/observe.html). Guides, activities, one-page flyers and postcards advertising the campaign are available at www.globeatnight.org/pdf/. Through GLOBE at Night, students, teachers, parents and community members are amassing a data set from which they can explore the nature of light pollution locally and across the globe. There are 5 GLOBE at Night campaigns in 2013: January 3 - 12, January 31 - February 9, March 3 - 12, March 31 - April 9, and April 29 - May 8. Make a difference and join the GLOBE at Night campaign. Listen to a fun skit on GLOBE at Night in a 7-minute audio podcast at <http://365daysofastronomy.org/2012/12/17/december-17th-the-dark-skies-crusader-retires-globe-at-night-returns/>.

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Posted by Linda Marks on Jan 7th, 2013

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In 2009, over 3,4000 students from one Indiana school district excelled in gathering observations in parallel with GaN.

Help! Houston, we have a comma problem! (it's likely that it was 34,000 students, right? What an effort that was!!!)

See ya soon!

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