



## Dark Skies Awareness During Global Astronomy Month

C. E. Walker (chair) and the GAM DSA Working Group  
National Optical Astronomy Observatory, Tucson Arizona, USA, (cwalker@noao.edu / Fax: +01-520-3188451)

### Abstract

In 2009, the U.N.-sanctioned International Year of Astronomy (IYA) brought about an unprecedented number of opportunities for people to experience the beauty of the night sky and grasp its wonders. One of its 12 global cornerstone projects was Dark Skies Awareness (DSA). As part of the legacy of IYA2009, much of DSA became the program for Global Astronomy Month 2010 and 2011. The goal of DSA during both IYA2009 and subsequently of GAM was to raise awareness of the value of dark skies and the importance of its preservation through new technology (e.g., websites, podcasts, social networking); educational materials (e.g., downloadable homeowners guides, brochures, posters and activities); the arts (e.g., a photo contest); events (e.g., International Dark Sky Week, World Night in Defense of Starlight); Dark Skies Reserves and Places (e.g., Starlight Reserves, International Dark Sky Places, One Star at a Time) and citizen science programs (e.g., GLOBE at Night). Presented here are the programs that have continued for GAM as part of the legacy of IYA2009.

### 1. Introduction

One of the main "take-away" messages from Global Astronomy Month (GAM) is why we should preserve our dark night skies. Even if people live in cities with too many bright lights, everyone can make a difference. With half of the world's population now living in cities, many people have never experienced the wonderment of a pristinely dark sky and maybe never will. "Light pollution" is obscuring people's long-standing natural heritage to view stars. Poorly-aimed and unshielded outdoor lights are the cause of most of the light pollution. They waste more than \$2 billion (17 billion kilowatt-hours) of energy in the United States each year, for example. Under an unpolluted sky we ought to see more than a couple thousand stars, yet we see less than a hundred from many cities.

Several dark skies events and activities are being held worldwide on behalf of GAM to promote public awareness on how to save energy and save our night sky. The events range from things you can do in a few minutes, like the audio podcasts, things you can do in a day for adults and for kids, things you can do over a week's time, a campaign measuring light pollution, a photo contest and poetry on the importance of maintaining dark skies, a conference on light pollution and a year-round program to conserve places to observe a dark night sky.

### 2. GLOBE at Night

The GLOBE at Night program is a 2-week international citizen-science campaign to raise public awareness of the impact of light pollution by encouraging everyone everywhere to measure local levels of night sky brightness and contribute observations online to a world map. Action can speak louder than words. The act of measuring night sky brightness often shows people how serious light pollution has become. For the first time this year, there were 2 GLOBE at Night campaigns (one at the end of February and the other at the end of March). The latter campaign overlapped with the first week of GAM. 70% of the 66,000 GaN measurements were contributed in the last 3 of the 6 years of the campaign from more than 115 countries. Visit [www.globeatnight.org](http://www.globeatnight.org) for more information.

### 3. International Dark Sky Week

The first week of April celebrates International Dark Sky Week (IDSW). It's a great time to host a neighborhood star party and introduce the idea of preserving a dark night sky to one's community. A poster child example is the community of Harmony, Florida with their Dark Sky Festival on April 9. The main goal of IDSW is to raise awareness of the value of maintaining dark skies. Another goal of IDSW is to encourage efficient use of outdoor lighting. That is,

lighting that lights where you need it, when you need it, and for amount of time it's needed. Suggestions are offered on how to get started on minimizing light pollution by lighting responsibly and maximizing the IDSW experience. See [www.darksky.org/IDSW](http://www.darksky.org/IDSW).

#### 4. World Night in Defense of the Starlight

World Night in Defense of the Starlight happens on April 20 every year to remind us of the need to preserve our right to view a dark night sky full of stars and to take steps to prevent its disappearance. The World Night in Defense of the Starlight is promoted annually as part of our cultural, scientific and environmental heritage. Activities can include switching-off lights at night to recover the stars and save energy. Organize artistic competitions, exhibitions, media campaigns, or conferences on the beauty of the night sky. Create artistic materials like videos, music, books, stories, photographs or paintings on the beauty of the night sky. Identifying and possibly protect dark skies oases. Visit an astronomical observatory. Or organize a star party. For more information, visit [www.starlight2007.net/TheWorldNight2011.html](http://www.starlight2007.net/TheWorldNight2011.html).

#### 5. Dark Skies Rangers

During April, kids pick which activities to do to become Dark Skies Rangers. They can do energy saving kinds of things, especially to help make the sky darker at night. Turning off outdoor lights at the curfew time is the easiest. They can figure out how much energy is saved if they replace an outdoor light with a Compact Fluorescent Light (CFL) by using a "Home Outdoor Lighting Audit" worksheet. They can ask older family members to change out an outdoor light for a more efficient bulb and perhaps shield the bulb to direct the light downward. They can build a "Magnitude Reader" and use it when observing the night sky to find out how light polluted their sky is. They can form an astronomy club at school and help their teachers host a star party. They can write to their city council on behalf of saving dark skies and saving energy. Or they can create art, photos, music, poetry or stories on the importance of maintaining dark skies. For their efforts, a certificate and the poster, "Our Globe at Night", can be downloaded from [www.astronomerswithoutborders.org/programs/all-programs/554-dark-skies-rangers.html](http://www.astronomerswithoutborders.org/programs/all-programs/554-dark-skies-rangers.html).

#### 6. Earth and Sky Photo Contest

From April 1 until Earth Day, April 22, an on-line "Earth and Sky" photo contest is open for submission by photography enthusiasts from around the world. The contest theme, "Dark Skies Importance," has two categories: "Beauty of the Night Sky" and "Against the Lights." Photos submitted to the contest address either category, either to stress how important and amazing the starry sky is or to stress how bad the problem of light pollution has become. Both categories illustrate how light pollution affects our lives. 240 images from 30 countries were submitted to the 2011 contest. To view the images of the 10 winners of this year's competition, see [www.twanight.org/newTWAN/news.asp?newsID=6065](http://www.twanight.org/newTWAN/news.asp?newsID=6065). The winning images (e.g., Figure 1) caught the front page attention of National Geographic, MSNBC and Astronomy Picture of the Day during the week of May 16, 2011.



Figure 1: "A Starry Night of Iceland" by Stephane Vetter.

#### 7. One Star at a Time

Available year-round, the One Star at a Time program is a worldwide effort to create accessible public spaces to view a starry night sky. The program uses night sky conservation to unite people across the planet. One Star engages the average citizen, individually or in groups, to cherish and protect the night sky through personal pledges, registration of public stargazing areas, and information sharing. For more information, visit [www.onestar-awb.org/](http://www.onestar-awb.org/).

#### 8. Conclusion

The GAM DSA program was presented here in hope word will spread to increase participation in various ways to redress a disappearing natural heritage – our dark night sky.