

TWAN: The World at Night

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Abstract. The World at Night (TWAN) is a global program to produce, collect, and present stunning photographs and time-lapse videos of the world's most beautiful and historic sites against the night-time backdrop of stars, planets, and celestial events. TWAN is a bridge between art, science and humanity to bring the message of peace, concealed in the sky. Organised by "Astronomers Without Borders", the project consist of world's best night sky photographers in over countries and coordinators, regional event organisers, and consultants. TWAN was also designated as a Special Project of the International Year of Astronomy 2009. While the project's global exhibitions and educational events peaked during IYA2009, TWAN is planned for long term in several phases and will continue to create and exhibit images in the next years.

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1. Introduction

Hovering in the Texas twilight, Venus dazzles viewers just hours after it has been seen by skygazers in Iran. Above the Vatican's domes, the familiar stars of Ursa Major circle the North pole just as they do above the spires of a Buddhist temple in China. Above Arizona's Grand Canyon, the magnificent arch of the Milky Way is seen on the same night it graces the sky above the Himalaya in Nepal. We all live under the same peaceful sky, and the familiar views they provide create a bond between us.

Initiated in 2007, *The World at Night* (TWAN, www.twanight.org) project is creating a collection of nighttime images and time-lapse videos of the world's landmarks against the night sky. There is more than beauty captured in these images –each image also reveals a story. The similarity of the night sky above diverse cultural and historic landmarks demonstrates that humanity is one family living on a small planet amidst the vast ocean of the Universe. The author had entertained the idea of creating TWAN for years but finally accepted the challenge with TWAN as a project of *Astronomers Without Borders* (AWB, www.astronomerswithoutborders.org), a USA-based non-profit organisation which promotes peaceful relations and understanding worldwide through a common interest in astronomy (Simmons 2008)†.

2. Aims and deliverables

TWAN represents night sky as a roof that brings all nations in one room (Simmons & Tafreshi 2008a,b,c) but the project also aims for various astronomy communication and popularisation efforts:

† see also M. Simmons' contribution to this volume on page 438 (eds).



Figure 1. The logo of TWAN.



Figure 2. An exhibition by TWAN at the Dehli Planetarium, India.

(a) To better connect people with astronomy using beautiful and educative images with familiar landmarks of daylife. The “*Earth and sky*” photographs resonate with viewers on an instinctive level. And they spark the imagination. Familiar landmarks provide a context viewers relate to, even among city dwellers who have never gazed in wonder at the Milky Way. TWAN images also show that the night sky can be enjoyed with nothing more than the unaided eye. Meanwhile some important principles of astronomy and sky gazing are easily described through these images. The artistic images are aimed to be a public gateway to astronomy, and science in general.

(b) To display the universality of astronomy. Since there is no border in the sky there shouldn't be any border between astronomers and sky enthusiasts world-wide. This is simply described by the main slogan of TWAN: *One People, One Sky*;

(c) To connect culture with astronomy through the time. Many TWAN images feature UNESCO World Heritage Sites or astronomically important locations;

(d) To aware public of dark skies importance and the increasing problem of light pollution. For this purpose TWAN is collaboration with *International Dark Sky Association* and *IYA2009 Dark Sky Awareness* project;

(e) To introduce astronomy destinations around the globe and to display the best observing locations of the planet; where the cutting-edge professional observations are being made.

The project presents material through the website, media, publishers, TWAN global exhibitions, night sky photography workshops, educational lectures, TWAN large screen shows, and through production of TWAN film and multi-language books (see reports and TWAN global exhibitions and educational events at www.twanight.org/new/TWAN/news_page.asp).



Figure 3. Moonrise in India, Greece, USA and Iran. © B.A. Tafreshi, A. Ayiomamitis, S. Seip and O. Zakarian (TWAN).

3. Challenges

TWAN photographs are being taken by some of the best night sky landscape astrophotographers around the world who are involved with the project. Careful planning and a keen eye honed by years of experience go into each unique image.

Selection and priority listing of potential sites is a challenge itself. UNESCO World Heritage Sites are given priority but thousands more regional and local landmarks would must be considered. Eclipses, conjunctions and celestial surprises like bright comets each bring new opportunities for unique scenes at TWAN locations. Geographic location, altitude, local topography, light pollution and many more factors must be considered in preparing for a photo session. Because photographers must travel to remote sites they can still be thwarted by unpredictable problems with accessibility, government restrictions, political conditions and more. And there is always the weather ready to ruin an otherwise perfect session. There are no rules for capturing these scenes; each is unique and only a practiced eye can find the best balance of starlight and foreground illumination. Light may come from twilight, moonlight (which varies with the Moon's phase and altitude in the sky) or artificial lighting. With too little light on foreground objects, stars float unanchored above a featureless silhouette. Too much light might cause an ancient structure's reflected glare to wash out the faint glimmer of the stars above it. No two situations are alike, and even careful planning must be augmented by trial and error. All the while, the sky's motion and changes in lighting transform the scene.

The apparent motions of the sky are often captured in TWAN images as well. A single night's work reveals streaks left by stars as the Earth's rotation spins the sky above us. The motion of planets is captured with exposures on different nights, revealing their dance through the sky as they orbit the Sun. Time-lapse photography –multiple images

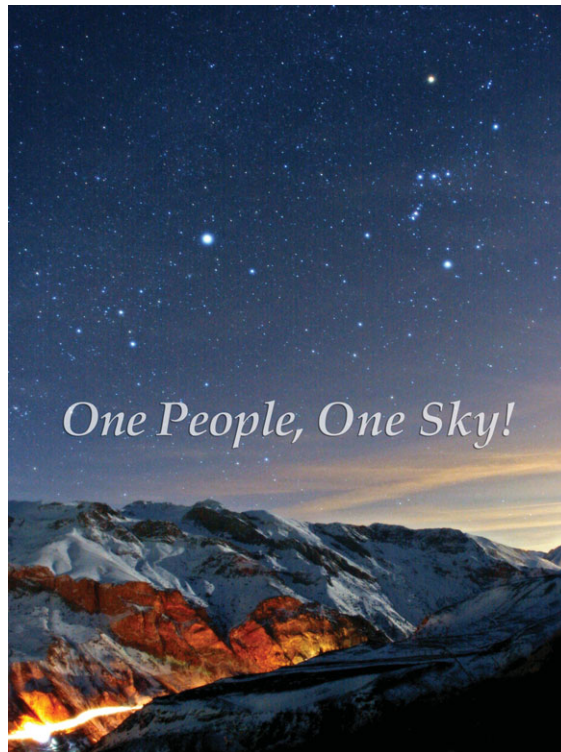


Figure 4. TWAN’s motto “*One people, one sky*” over the Albor Mountains (Iran).

recorded throughout the night and strung together– creates mesmerising videos of cosmic motion.

The greatest challenge for TWAN in coordinating image creation in bizarre locations and exhibitions world-wide is financial sources. TWAN has begun without sponsorship through the volunteer time of the organizing team and photographers, but future advancement will require financial support, which will be sought from for-profit corporations and not-for-profit foundations. The United Nations Alliance of Civilizations and UNESCO are two major organizations which are approached by TWAN. National, regional and local tourism organisations associated with designated TWAN sites will be approached for travel support for photographer visits to those sites. Major corporate sponsorship is also being sought, including with Canon and Nikon, manufacturers of professional digital photographic equipment.

References

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