



International Dark Sky Park Annular Report – 2015 Zselic Starry Sky Park

The primary event of this year was the opening of the visitor center called “Zselici Csillagpark (Zselic Park of Stars)” in the center of the Park at the end of May.



The new visitor center in the Zselic Starry Sky Park

The visitor center is operated by the local forestry (www.sefag.hu).

An English leaflet of the center can be found here:

http://zseliccsillagpark.hu/wp-content/uploads/2015/07/Zselic_ParkofStars.pdf.pdf

The visitor center plays a fundamental role in the interpretation programs of the Park. The public observatory is equipped with a 40 cm reflector, and a digital planetarium with a 8m diameter dome helps the public outreach activities of the Park. Other attractions of the visitor center are exhibition of meteorites, the local fauna, astro- and nightscape photos, a footpath with interpretation tables and objects. These include a daytime star watching site: a small windowless (dark) building with a dome. Tiny holes on the dome displays the starry sky at new years eve.

The author of this report developed a full dome film for the planetarium, titled “The destiny of cosmic light”. This film summarizes the effects of light pollution and also provide some information of the history of dark sky park, insect vision etc. A second film will be finished during the fall with the title “Seasons in the dark sky park”. A trailer of this film can be watched at this link:

<https://www.youtube.com/watch?v=zY27VluzmsM>

The latest news about the visitor center that it won “The most innovative eco-touristic institution of the year in Hungary” prize in September.

The number of visitors in the Zselic Starry Sky Park has been significantly increased since opening of the visitor center.

Lighting

The only changes of lighting inside the park are related to the visitor center. 13 new lamps have been installed at the parking lot and the walking path. These are fully shielded fixtures with 2700K 7W LEDs (about 600 lumen each). However, these lights are used only occasionally – even during the night time programs they are switched off...

There is a slight threat of night time quality due to lighting reconstructions in neighboring cities where sodium lamps are replaced with white LEDs. We continuously monitoring the situation and providing recommendations for the designers of the reconstructions. Therefore we do not expect any degradation of sky quality.

Sky Quality

There are 2 permanent SQM-LE devices at the boundary of the park – inside a village (Bárdudvarnok) and also at a suburb location representing the sky quality of the park. This devices have been working since 2011, unfortunately there was a break in measurements during this year due to renovation projects and internet connection problems. The SQM devices were restarted at the end of August and now they are sending data to the Globe at Night Sky Monitoring Network. Data for the years 2012-2014 were summarized in the 2014 report. Preliminary inspection of the recent data indicates that there were no detectable changes in sky quality compared to the previous years.

We are monitoring the sky quality by DSLR cameras regularly, as well. The images we obtained do not present any degradation of sky quality.



Typical DSLR based luminance maps of the night sky (with our standard color scale)

Conservation and Research

We continue our research program in the Kiatebal Pál Doctoral School of Environmental Science at the University of West Hungary. The main program is the measurements and modelling sky quality and the effect of lighting reconstruction. Some of our results were presented at the 2nd LPTMM conference in Canada this year.

Arts and Culture

We presented talks at cultural festivals: Bárdudvarnok Cultural Week and at the Art Camp of Zselickislak.

In these events there are programs related to the dark sky park every year, we continued this tradition in 2015 as well.

Outreach

The new visitor center in the Park opened new possibilities in outreach, the number of registered visitors increased by a ten-fold. Besides the visitor center, the Duna-Dráva National Park Directorates and the Hungarian Astronomical Association organize star watching walks. Altogether there were 14 such event up to the date of this report. In addition there were 15 observing nights with telescopes at the visitor center. In addition to the events inside the Park we had several talks and outreach programs in Kaposvár and other neighboring cities. The number of visitors at the different events related to the Park is above 10000 for the first 9 month of the year.

Community and Media Relations

The opening of the visitor center had a wide appearance in the nationwide media. In addition, related to the International Year of Light 2015 we had several articles in leading Hungarian magazines of general public outreach, ecology and geography.

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Zoltán Kolláth



Perseid meteors photographed this year from the Zselic Starry Sky Park