# Light Pollution Around the World: Southern Africa

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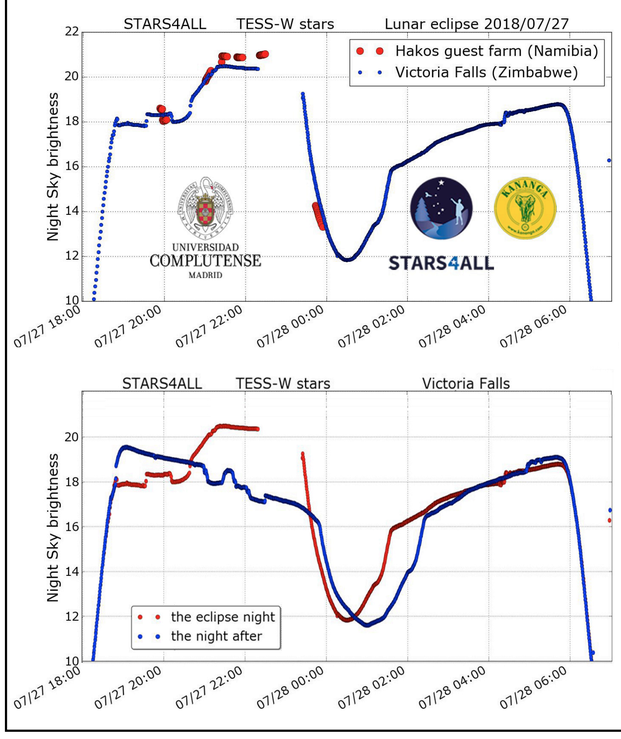
LPTMM Conference 2019: Light Pollution: Theory, Modelling and Measurements

## Southern African Adventures. Measuring Night Sky Brightness with TESS photometers

- Most of the data in this poster was obtained by Jorge Astorquia, an adventurer guide, who volunteered to obtain night sky brightness measures using a TESS-W photometer during one of his travels in southern Africa.
- Variations of the brightness of the sky along the night have been recorded in 18 remote locations around 4 countries during 24 different nights getting remarkably dark results.
- Some STARS4ALL TESS-W photometers are sending data every night since they were set up as fixed stations between July and October 2018 at Cape Town (South Africa), Victoria Falls (Zimbabwe), Kasane (Botswana), and Etosha National Park, H.E.S.S. observatory and Hakos Astrofarm in Namibia.

## Moon eclipse 2018/07/27



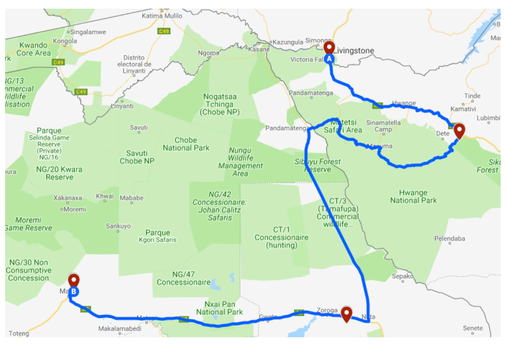


(Up) Milky Way, Moon and Mars during the eclipse.

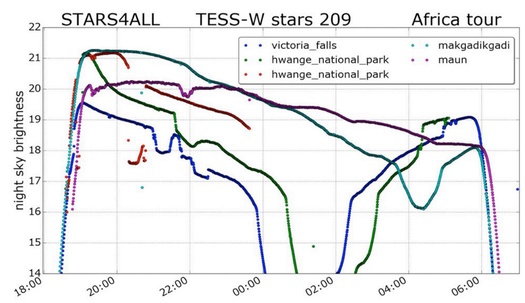
(Left) Comparison of the curve for the eclipse night (red) and the next night (blue). The bumps correspond to the Moon crossing the meridian.

Both Jaime Izquierdo and Miquel Serra, who recorded the eclipse from Hakos guest farm at Namibia, reported the Milky Way to look like it had been 'switched on' at around 22h during the lunar eclipse.

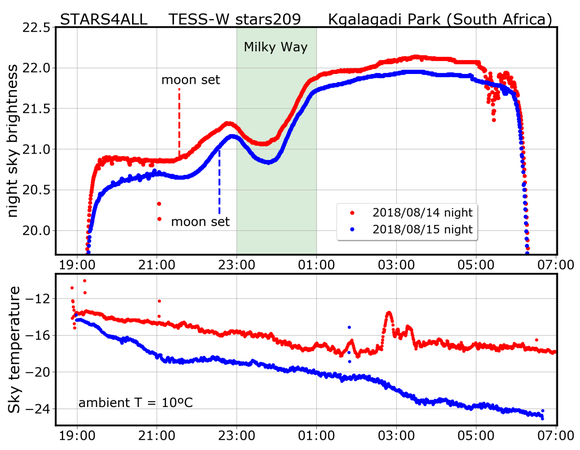
## Lost River Route

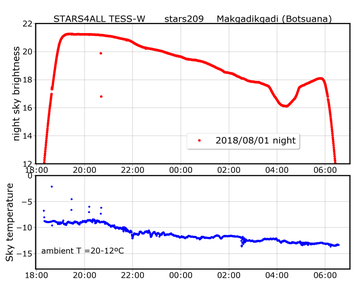


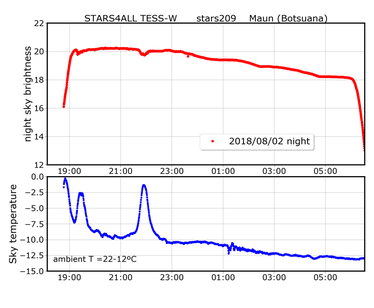

Several NSB curves obtained from 2018/07/27 and 2018/08/02 showing increasing darkest skies

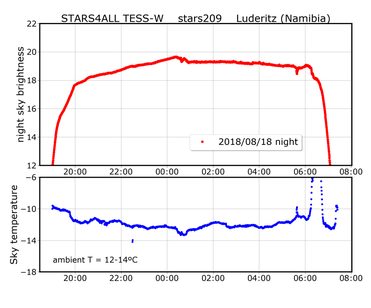


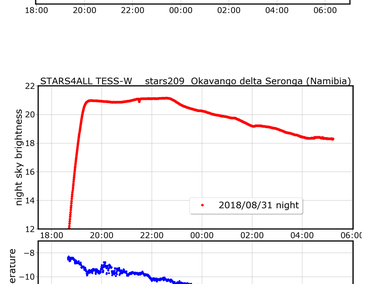

## Great Okavango Delta Route

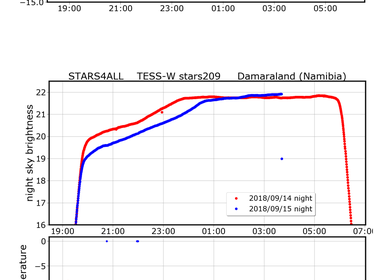



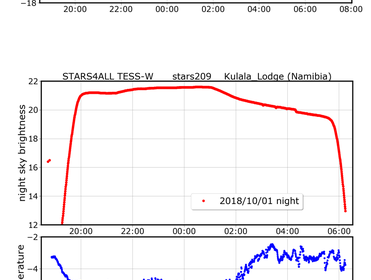



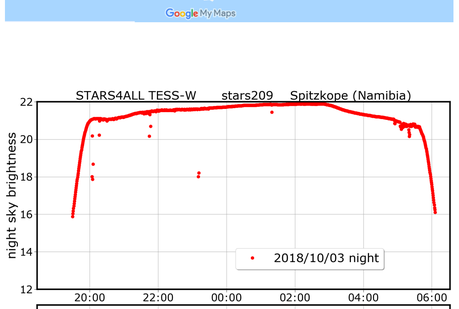



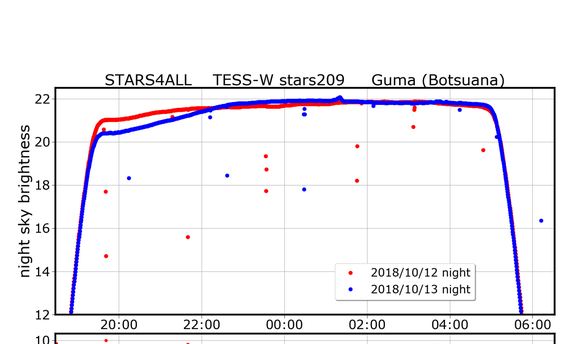



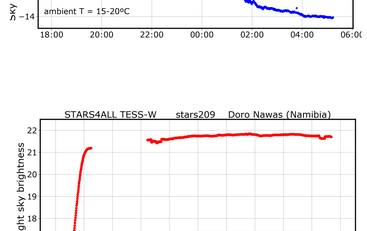



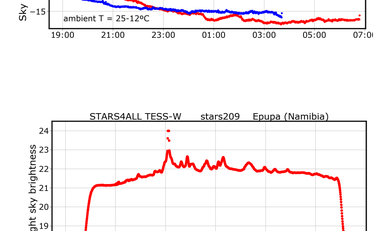



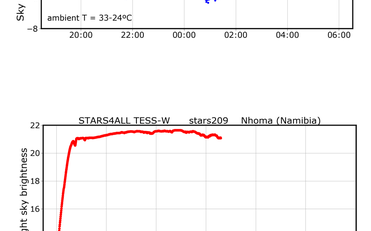



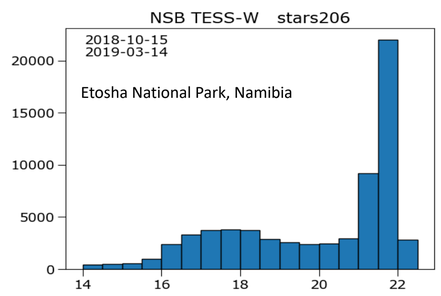



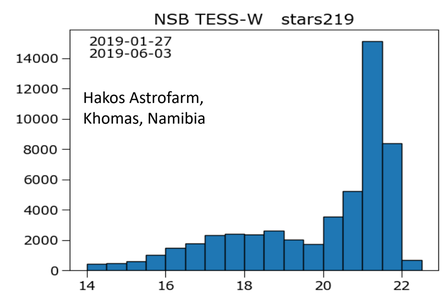



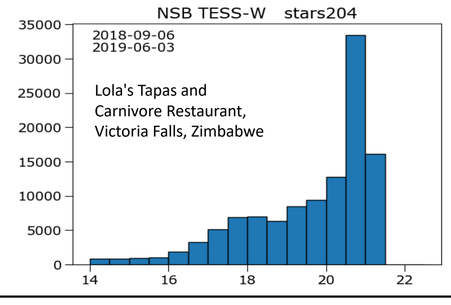




## STARS4ALL NSB fixed monitor stations



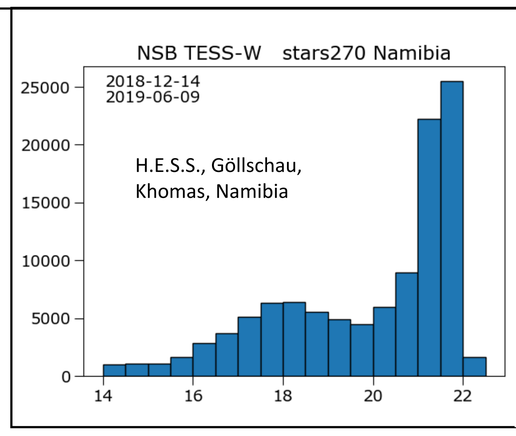



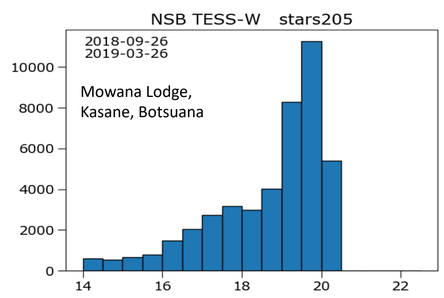



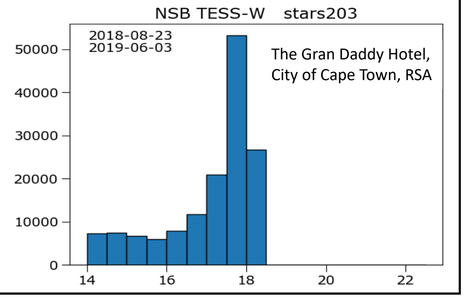

Night Sky Brightness histograms for the 6 fixed monitor stations operating in southern Africa.

The sky registered at Namibia stations: stars 206 (Etosha National Park), stars 219 (Hakos AstroFarm) & stars 270 (H.E.S.S. observatory) is very dark.

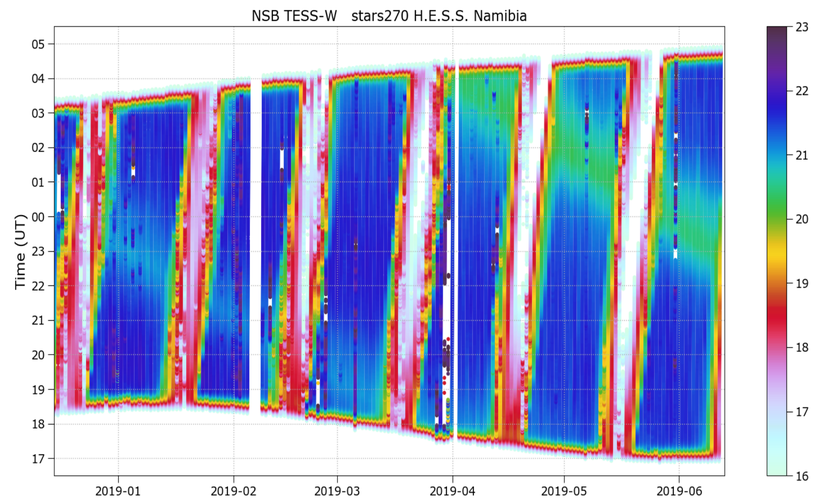
Note the brightness of the sky at City of Cape Town (stars 203)


## Example of pristine skies




It is possible to follow the Milky Way position in the sky along the seasons at **H**igh **E**nergy **S**tereoscopic **S**ystem (H.E.S.S. observatory) in Namibia.

This work was funded by the EU project STARS4ALL (H2020-688135).

We are developing our research thanks to ACTION https://actionproject.eu/ (H2020-824603).

European Commission | Horizon 2020 European Union funding for Research & Innovation