



The Mercury Transit 2016: educational activities from CESAR

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A transit of Mercury in front of the solar disk as seen from Earth is a rare astronomical event which occurs only about every 13-14 times per century. Although its historic scientific importance, e.g. to measure the distances in the solar system, has diminished since humanity roams our solar system with robotic spacecrafts, a Mercury Transit remains a spectacular astronomical event that is used very effectively to engage general public and students to Science and Space in general.

The educational project CESAR (Cooperation through Education in Science and Astronomy Research) , working upon previous experience (Venus transit 2012, live Sun transmissions ..), prepared a dual observation of the transit from two separate locations: the CESAR Solar Observatory at ESAC (European Space Astronomy Center), Madrid, Spain, and a twin portable telescope set-up in Cerro Paranal, Chile, achieving a ground baseline parallax of $\sim 10.000\text{km}$.

CESAR organized an educational and outreach event in collaboration with several Spanish schools/universities, the ESA Education and Communications offices, the Teide observatory and the ESA projects Bepi Colombo and Solar Orbiter. The driving activity was a continuous 10h interactive Google hangout that connected students in Spain (Ciudad de las Artes y las Ciencias, CAC in Valencia), students in observatories in Chile, the remote observing teams, and scientists at ESAC. Live images were transmitted via a specific web in two bands (h-alpha and visible). Experts in the fields of Solar and Planetary Physics gave presentations related to the Sun and Mercury. Questions and answers sessions were performed so that world-wide audience could interact with the scientists and engineers.

In this paper we explain how this public educational and outreach event was created, what activities it comprised, and the follow up activities.