

## COMETARY BODY PRO-AM COLLABORATIONS WITH THE FAULKES TELESCOPES, AND THE BENEFIT TO EDUCATION, SCIENCE AND OUTREACH AWARENESS.

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**Introduction:** The Faulkes Telescope Project is an educational and research arm of the Las Cumbres Observatory Global Telescope Network (LCOGT). It has two 2-metre robotic telescopes, located at Haleakala on Maui (FT North) and Siding Spring in Australia (FT South). It is planned for these telescopes to be complemented by a research network of multiple 1-metre telescopes, along with an educational network of multiple 0.4-metre telescopes, providing 24-hour coverage of both northern and southern hemispheres. The telescope network is unique in that it provides school students with access to research grade instrumentation in the United Kingdom and several other countries across Europe as well as in Hawaii. Over the past few years, amateur astronomers have increasingly been working with schools suggesting projects which have provided valuable scientific input to professional astronomers. A key success from this has been the observations and results from observations of cometary bodies.

We present several of the key results and observations where professional astronomers have cited and used this data obtained with the Faulkes Telescope, notably

- Observations and results from the global campaign on Comet 103P; Ref.[1]
- Observations of the fragmentation of Comet 168P; Ref.[2]
- Observations relating to the evolution of Comet C/2012 S1; Ref.[3]

**Background:** Since their operational status commenced in 2004, the 2-metre f/10 Faulkes Telescopes have provided schools across the United Kingdom, and several European countries, along with institutes in Hawaii, with up to 1500 hours of observing time during school hours, dedicated to education and public outreach. The key remit is the engagement of school students in taking part in real scientific research projects. Increasingly, the Faulkes Telescope team has worked with high-end amateur astronomers who have developed programs to support these educational and outreach aims, primarily focusing on solar system bod-

ies. With the ability to run themed observing sessions lasting several bodies for anomalous behaviour such as outbursts, or to examine the evolution of the coma/dust output, Ref.[1]. In working with schools, on specific targeted projects, public awareness of the Faulkes Telescopes has increased significantly via press coverage, and we aim to demonstrate the beneficial effects of this for students and public outreach in astronomy.

### Figures:

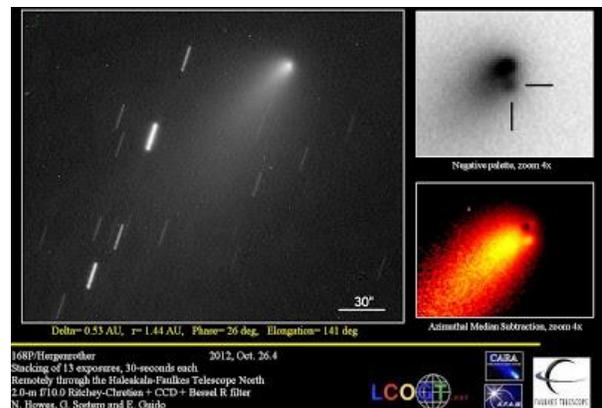


Figure 1: Observation of the fragmentation in Comet 168P.

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**References:** [1] Meech K.J, A'Hearn, M.F et.al.: EPOXI 103P/Hartley 2 observations from a worldwide campaign, *Astrophys. J. Lett.*, Vol. 734, pp. L1-L19, 2011.

[2] Howes, N., Sostero, G. and Guido, E.: Splitting event in comet 168P/Hergenrother, Website [Access ref. 2013-5-06]  
<http://remanzacco.blogspot.co.uk/2012/10/splitting-event-in-comet.html>

[3] Sungrazing Comets: The NASA Comet ISON Observing Campaign, Website [Access ref. 2013-5-06]

<http://sungrazer.nrl.navy.mil/index.php?p=ison>