

ROSETTA OBSERVES OUTBURSTS WITH CLIFF COLLAPSE ON COMET 67P

The value of continuous monitoring of an active comet was proven as the Rosetta mission captured the first unambiguous link between a cometary outburst and a cliff face collapse on Comet 67P/Churyumov–Gerasimenko.

- Outbursts are seen frequently on comets, and despite various hypothesized triggering mechanisms, their causes were poorly understood. Though several outbursts on Comet 67P were observed by Rosetta and were attributed to landslides, a definitive observation remained elusive.
- Combined observations by the OSIRIS Narrow Angle Camera (NAC) and Rosetta Navigation Camera in September 2014 and again on July 2015 of the Aswan escarpment on Comet 67P showed a cliff on the verge of collapse, a large plume of dust that could be traced to that same region, and five days later a fresh, sharp cliff edge.
- In addition to providing clear evidence for this outburst formation mechanism, this collapse also provided scientists the opportunity to study a pristine exposure of the comet's interior – which is nearly six times brighter than the overall surface of the comet.

Pajola et al., 2017 *Nature Astronomy*

