Spinning to Bits

- Extraordinary Hubble Space Telescope images of disintegrating comet 332P/Ikeya-Murakami reveal a cloud of fragments expanding away from the main nucleus, "C", at meter per second speeds.
- Measurements give the sizes (10 m and above), size distribution (a power law with differential index -3.6), fractional mass (about 4% of the main nucleus) and ejection date (late 2015).
- Primary C is ~275 m in radius and rotating quickly, suggesting that rotational instability

is the root cause of the breakup. Once ejected, the fragments themselves are subject to very rapid rotational disruption, producing a fragmentation cascade.

• Rotational breakup, as opposed to the more usually assumed sublimation losses, may determine the survival of small comets in the terrestrial planet region.

