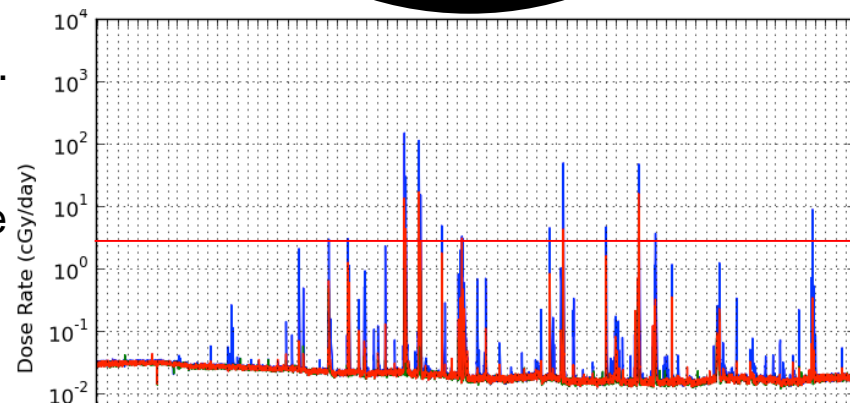


# Coronal Mass Ejections measured at the Moon

**Despite the minimal solar activity during the current sunspot cycle, a low unprecedented in the past century, recent large solar events indicate that, while calmer, this cycle is also more extended than prior cycles.**

- On 10-29-2015 the Lunar Reconnaissance Orbiter's Cosmic Ray Telescope for the Effects of Radiation (CRaTER) instrument measured a large coronal mass ejection (CME), one of the top events measured during the past six years of the mission. During this event, measured radiation dose rates were on the scale of 5 rad/day (bottom right).
- Despite being a period of relative quiescence, this solar cycle is prolonged compared to previous cycles. Although low overall, the solar maximum in this cycle has continued for nearly three years, and has featured the first example of a double peak where the second peak was higher than the first.
- CRaTER continues to monitor this unique solar cycle and its direct effects on the lunar surface as well as on the experimental tissue equivalent plastic to determine the effects of radiation on human tissue.



Radiation measured by the CRaTER detectors from Sept. 2009 to Oct. 2015. Dose levels from the 10-29-15 event is marked with a red line