

## Chandrayaan-1 X-ray Spectrometer: latest results

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### Abstract

The C1XS X ray spectrometer [1] performed to a very high standard throughout the mission, producing high quality data, although unprecedentedly low Solar activity during the mission limited its output. While the operational mission is over, good quality data was gathered in the spacecraft lifetime, and this will allow us to meet many of the science goals [2]. C1XS will determine the major element geochemistry (including Mg/Si) for ~5% of the lunar surface. In addition, determination of the crustal aluminium abundance and distribution is important for the assessment of lunar refractory element budget, and the C1XS- derived aluminium abundance maps, even on a less-than global scale, will help to constrain models of lunar origins.

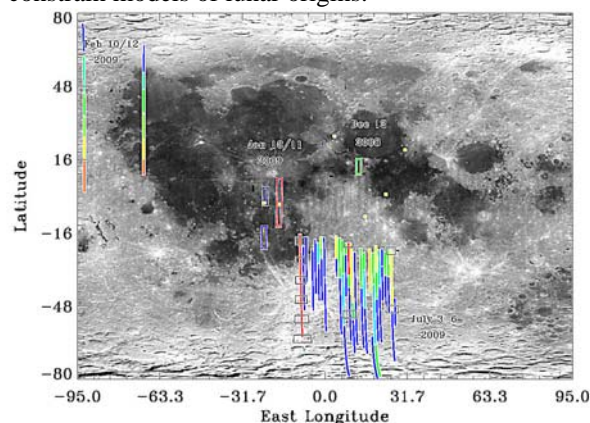


Figure 1: A map showing the spacecraft tracks for C1XS which detected statistically significant levels of solar X-ray flux. The colour of the tracks indicates flare strength, with blue as low and red equal to high X-ray activity. The black rectangles along some tracks indicate footprint sizes. The yellow dots indicate Apollo landing sites. The area covered totals about 4%. Figure courtesy B. Kellett.

The analysis has now reached a level where we can produce numerically well calibrated and significant results enabling us to address We will show latest

results, and relate this quantitatively to current knowledge of Lunar elemental Abundances.

The Figure shows a map of the C1XS footprints and flare locations, showing the locations of the data gathered. We expect a great deal of high quality science from C1XS as a result of detailed analysis.

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