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## **SEP contribution to Mercury's fluorescence [\*]**

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Illumination by solar X-rays produces X-rays at the surface of Mercury, by exciting inner shell electrons in atoms of the surface material. These atoms return almost instantaneously to their ground state, emitting secondary fluorescence X-rays of characteristic frequencies. In addition, solar wind and solar energetic particles (SEPs) are capable to induce X-ray emission. In particular, SEPs are expected to impinge on the surface of the planet, altering the sputtering rates. We report an attempt to evaluate the X-ray fluorescence following several types of SEP events, being this work particularly useful for the MIXS/MPO experiment aboard BepiColombo.

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