

Title: **Hunting solar axions in low Earth orbit**

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Abstract

Several years ago we proposed a novel scheme to detect solar axions using geomagnetic conversion of solar axions into x-rays (GECOSAX). The idea is, to use the Earth magnetic field to allow axions to convert via the Primakoff process into photons. The Earth is a weak but very large magnet, hence the relevant product of magnetic field and the size of the conversion region is comparable to conventional solar axion experiments like CAST, here at CERN. The resulting x-rays would be detected using a x-ray telescope aboard a satellite in a low Earth orbit. Here, I will present a detailed feasibility study and general discussion of how an optimal satellite mission could look like.