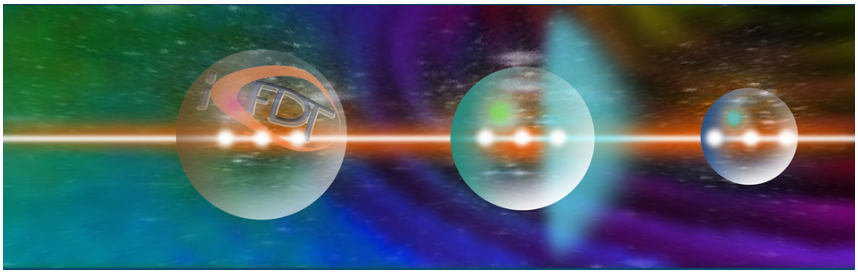

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Imaging the invisible parts of the Earth - ESA's Swarm mission probing the core, the magnetosphere, and nearly everything in-between

Wednesday, 3 October 2018 09:00 (45 minutes)

ESA's magnetic field and geospace explorer constellation mission Swarm was launched in November 2013 and has ever since delivered on all its promises. In particular, the mission has offered new ways of mapping the rapid dynamics of Earth's outer core, the crystalline mantle, and the magnetisation of the rocks in the lithosphere. Concerning magnetic fields external to the Earth, the mission has detected strong dynamics in the ionospheric plasma and magnetic field even during geomagnetically extrmely quiet periods, with due implications on the understanding of magnetosphere-ionosphere-thermosphere coupling. Last but not leat, the mission is also routinely measuring the space weather effect of weather phenomena occurring in the lower atmosphere, and lower/upper atmosphere coupling imaging techniques are gradually becoming more central to the mission exploitation activities. This contribution aims at describing the major discoveries enable by Swarm since launch nearly five years ago.

Summary

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