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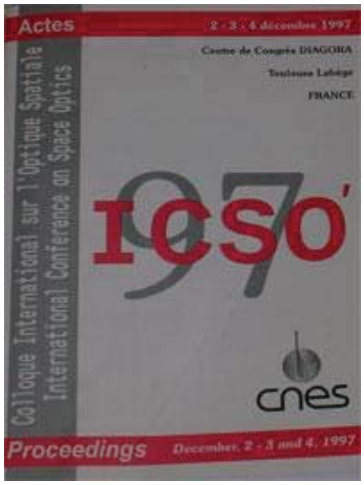

ESA's space science programme

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ESA's Space Science Programme

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The Space Science Programme of ESA encompasses three broad areas of investigation, namely solar system science (the Sun, the planets and space plasmas), fundamental physics and space astronomy and astrophysics.

The programme is articulated over a 20 year long term plan, called Horizons 2000, which is based on a set of major missions, the Cornerstones, complemented by a number of medium to smaller missions. The Cornerstones address a number of preidentified areas of space science which reflect the strength of the European scientific community. These projects require a long lead time (10 to 20 years) necessary to develop the key technologies needed to implement them. Through a competitive selection process, the medium or smaller missions allow ESA to respond to new developments in the various disciplines of space science. They also provide the flexibility and a certain degree of balance in the overall programme

The disciplines of space astronomy are well represented in Horizons 2000. With past and future astronomy missions ESA is acquiring a visible position in high resolution astronomy (Hipparcos, HST, NGST), in high energy astrophysics (EXOSAT, XMM, INTEGRAL) and infrared astronomy (ISO, FIRST, Planck)

The present talk will emphasize areas of space optics which are being or will be developed for these missions. In particular, it will briefly address the specific area of space interferometry, identified as the next major long term endeavour in the Horizons 2000 plan. At present, two possible concepts are being considered, one for very high precision astrometry (GAIA), the other for very high resolution infrared astronomy, with emphasis on detection of extrasolar planets (IRSI/Darwin)