EUROPEAN SPACE INTERFEROMETRY

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Abstract. Optical interferometry is ensconced as an 'area of future interest' (a socalled Green Dream) in Horizon 2000, the long-term scientific plan of ESA. Over the years, there have been three large ESA workshops on Space interferometry, where many different concepts and designs were proposed, and several ESA committees have studied the possibilities. These committees were also involved, in an advisory role, in a modest technological research program (TRP) by ESTEC. In 1990, the Space Interferometry Study Team (SIST) recommended building an optical interferometer, consisting of 10-15 small telescopes attached to an 100m inflatable structure, as a scientifically interesting first step. The SIST even produced a workable design. It quickly became clear, however, that such an undertaking would cost much more than an ESA cornerstone mission, and was thus far too ambitious. Simultaneously, another ESA study team (LIST) came to the conclusion that the Moon, contrary to earlier beliefs, does not offer a particularly suitable environment for interferometry. At the Beaulieu workshop in 1992, it was decided to try to achieve cornerstone status for one or two smaller interferometry missions in Space: a 10m UV imaging interferometer, or an interferometric successor to the astrometry satellite Hipparchos. The latter seems to have a good chance at the moment, in the form of the GAIA proposal which has been selected for further study for the new 'post-Horizon 2000' program. GAIA may have some limited imaging capability, but a true imaging interferometer in Space will have to wait for a few decades yet.

E. Høg and P. K. Seidelmann (eds.),
Astronomical and Astrophysical Objectives of Sub-Milliarcsecond Optical Astrometry, 345.