Astrophysics > Instrumentation and Methods for Astrophysics

The SKA and "High-Resolution" Science

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"High-resolution", or "long-baseline", science with the SKA and its precursors covers a broad range of topics in astrophysics. In several research areas, the coupling between improved brightness sensitivity of the SKA and a sub-arcsecond resolution would uncover truly unique avenues and opportunities for studying extreme states of matter, vicinity of compact relativistic objects, and complex processes in astrophysical plasmas. At the same time, long baselines would secure excellent positional and astrometric measurements with the SKA and critically enhance SKA image fidelity at all scales. The latter aspect may also have a substantial impact on the survey speed of the SKA, thus affecting several key science projects of the instrument.

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