

The SKA and "High-Resolution" Science

A.P. Lobanov

(Submitted on 1 Jul 2011)

"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.

Comments: JENAM-2010: Invited talk at JENAM session S7: The Square Kilometre Array: Paving the way for the new 21st century radio astronomy paradigm; 9 pages

Subjects: **Instrumentation and Methods for Astrophysics (astro-ph.IM)**; Cosmology and Extragalactic Astrophysics (astro-ph.CO); High Energy Astrophysical Phenomena (astro-ph.HE)

Cite as: [arXiv:1107.0186](https://arxiv.org/abs/1107.0186) [astro-ph.IM]
(or [arXiv:1107.0186v1](https://arxiv.org/abs/1107.0186v1) [astro-ph.IM] for this version)

Submission history

From: Andrei Lobanov [[view email](#)]
[v1] Fri, 1 Jul 2011 10:33:32 GMT (41kb)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

astro-ph.IM

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[astro-ph](#)

[astro-ph.CO](#)

[astro-ph.HE](#)

References & Citations:

- [INSPIRE HEP](#)
([refers to](#) | [cited by](#))
- [NASA ADS](#)

Bookmark ([what is this?](#))

