

# GRIPS and the Perspective of Next-generation Gamma-ray Surveys

Roland Diehl

(Submitted on 25 Jul 2011)

GRIPS is one example of next generation telescopes proposed for astronomy the energy range between hard X-ray mirror instruments such as NuStar and the Fermi telescope. The Compton telescope principle is an advantageous concept in view of background suppression, imaging sensitivity within a large field of view and energy range, and capability to measure polarization. The diversity of astrophysical sources at high energies (diffuse emission from cosmic-ray interactions, nuclear lines from point-like and diffuse sources, accreting binaries, cosmic-ray acceleration sites, novae and supernovae, GRBs) presents a challenge, and in particular emphasizes the need for large fields of view and surveys. We discuss the astrophysical challenges which are expected to remain after the extended INTEGRAL mission, and how such a next-generation survey at low-energy gamma-rays would impact on these. We argue that qualitatively new and more direct insights could be obtained on cosmic high-energy phenomena and their underlying physical processes.

Comments: 7 pages, 2 figures. INTEGRAL Science Workshop "The Restless Gamma-Ray Universe", Dublin (IRL) Oct 2010

Subjects: **Instrumentation and Methods for Astrophysics (astro-ph.IM)**

Journal reference: PoS(INTEGRAL2010)035

Cite as: [arXiv:1107.4892](https://arxiv.org/abs/1107.4892) [astro-ph.IM]  
(or [arXiv:1107.4892v1](https://arxiv.org/abs/1107.4892v1) [astro-ph.IM] for this version)

## Submission history

From: Roland Diehl [[view email](#)]

[v1] Mon, 25 Jul 2011 11:07:07 GMT (499kb,D)

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

## Download:

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

Current browse context:

astro-ph.IM

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

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

Change to browse by:

[astro-ph](#)

## References & Citations

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

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



Science  
WISE