

Report from KAT

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DPG, Division Particle Physics, General Assembly

3 April 2025

- News from KAT
 - Upcoming KAT elections
- What happened in 2024 and early 2025
 - Multimessenger-Workshop, Görlitz
 - BMBF-Priorisierungsverfahren für Forschungsinfrastrukturen (FIS process): In evaluation phase
 - Towards decadal KAT strategy paper
 - Dedicated strategy meeting Oct 2024, Karlsruhe
 - Community meeting, Nov 2024, Bad Honnef
 - ESPPU
 - Participated in KET workshops and discussions
 - Prepared and submitted KAT document
 - Preparing ErUM-Pro strategy talks



News from KAT

- In 2022 we shifted the election date to fall to disentangle it from ErUM-Pro strategy talks (typically May)
- Expected timeline:
 - Nominations of candidates by end-September
 - Elections in October
 - New KAT takes over for/before Bad Honnef meeting (27-28 Nov 2025)
- Reminder: KAT has topical constituencies
 - Dark matter
 - Neutrino properties
 - Low-energy neutrino astrophysics
 - Cosmic rays
 - Gamma-ray astronomy
 - High-energy neutrino astrophysics
 - Gravitational waves
 - Nuclear astrophysics
 - Theory



What happened in the last year

26-27 March 2024: First science workshop in DZA context

SOC with 2/2/2 members from DZA/KAT/RDS

LOC from DZA

Incentive:

Strengthen MM cooperation astroparticle-astronomy

Explore short/medium/longer term opportunities for cooperation

Discuss DZA role in this process

Investigate options for a DFG Schwerpunktprogramm

Observations:

Lively exchanges between astronomy and astroparticle physics

Many common topics but not necessarily common priorities

Discussion on DFG Schwerpunktprogramm (as yet) inconclusive

MM-Workshop Görlitz (2)



Covers all fields of science; German invest/project > 50M€

4 proposals submitted:

- **Einstein Telescope** (Gravitational waves)
- **IceCube-Gen2** (Neutrino astronomy & neutrino physics)
- **Legend-1000** ($0\nu\beta\beta$)
- **XLZD** (Direct dark matter search and more)

All 4 „survived“ validity check and are now under evaluation
(altogether 32 projects – see full list [on BMBF page](#))

Results expected July 2025

(note: Process does not directly imply financial commitments)

Time line:

Process started March 2023

Community meetings Oct+Nov 2024 (>150 group leaders invited)

Discuss structure, contents, procedures

Towards completion:

Work towards having community-endorsed draft asap.

Chapters:

1) Introduction

2) Astroparticle physics in Germany

3) Scientific achievements of astroparticle physics

4) Plans and challenges for the next decade

5) Astroparticle Physics and society

6) Recommendations

Appendix: Project fact sheets (1 page/project, currently 39 projects)

Editorial Board:

Christian Stegmann, Kathrin Valerius, Thomas Schwetz-Mangold, UK

Incentive:

Communicate views of German astroparticle physics community

KAT members participated in:

KET non-collider workshop, Nov 2024, Bad Honnef
KET concluding workshop, Jan 2025, Bad Honnef

**Many thanks to KET for invitation,
transparent organisation and the
opportunity to contribute!**

KAT document:

Started in Nov. 2024
First draft discussed at KAT community meeting, Bad Honnef
Editing taken over by EB for decadal paper
Community response collected Feb 2025, implemented
Final version endorsed and submitted

Input to ESPPU by the German Astroparticle Community

26 March 2025

Prepared by the German Committee for Astroparticle Physics (KAT)



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Abstract:

This document summarises, from a German perspective, the close relation of astroparticle physics and particle physics. It specifically identifies CERN activities complementing and supporting astroparticle physics, and concludes with recommendations on cooperation between both fields, on the projects mentioned, and on suggested astroparticle-related activities at CERN.

ErUM-Pro: Next 3-year funding cycle 2026-2029

Here: ground-based astronomy and astroparticle physics

**Strategy talks with BMBF, PT-DESY, RDS, KAT, further experts:
Hamburg, 14 May 2025 (in preparation of call for applications)**

Preparatory steps:

- 3-year strategy paper with recommendations (KAT+RDS)

- Presentations

- KAT meeting on 7 April to discuss details