

KHuK Annual Meeting, Zoom, 10-11 Dec. 2020

Report from KAT

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First things first ...

- **Thank you** to the previous KHuK members & chairs!
- **Congratulations** to the newly elected members, new chair Tetyana Galatyuk and deputy chair Kai Brinkmann!
- KAT welcomes **Wilfried Nörtershäuser** as our new KHuK liaison. Cordial thanks to **Yuri Litvinov** who filled the liaison role up to 2019.



Outline

- Quick facts about the KAT
- BMBF funding period 2020-2023
New since 2020: Gravitational waves
- BMBF and LNGS infrastructure
- Miscellaneous news items
BMBF – JINR cooperation, NFDI and ErUM-Data, APPEC

Most material drawn from report of Uli Katz (KAT Chair)
at the Annual Meeting, 3-4 Dec. 2020

Elected representatives of astroparticle physics,
from 9 thematic constituencies:

Constituency	Elected	Deputy
Dark Matter	Manfred Lindner	Federica Petricca
Neutrino properties	Kathrin Valerius	Stefan Schönert
Low-energy ν astrophysics	Achim Stahl	Michael Wurm
Cosmic rays	Andreas Haungs (Dep.)	Martin Erdmann
Gamma-ray astronomy	Stefan Funk	Jim Hinton
High-energy ν astrophysics	Uli Katz (Chair)	Elisa Resconi
Nuclear astrophysics	Roland Diehl	Camilla Hanson
Gravitational waves	Karsten Danzmann	Harald Lück
Theory	Thomas Schwetz-Mangold	Martin Pohl

The KAT (continued)

Ex-officio representatives (non-voting members):

- One representative each from KET, KHuK, RDS
- Chair of DPG Division “Particle Physics”
- Two representatives each from Helmholtz Centres and Max-Planck Institutes *active in astroparticle physics* (new in Dec. 2020 update of KAT guidelines: used to be 2 representatives from Helmholtz & MPG)
- One representative each from BMBF and PT-DESY, DFG
- Chair of BMBF-Gutachterausschuss
- One representative from APPEC
- One representative from yHEP (added in Dec. 2020 update)

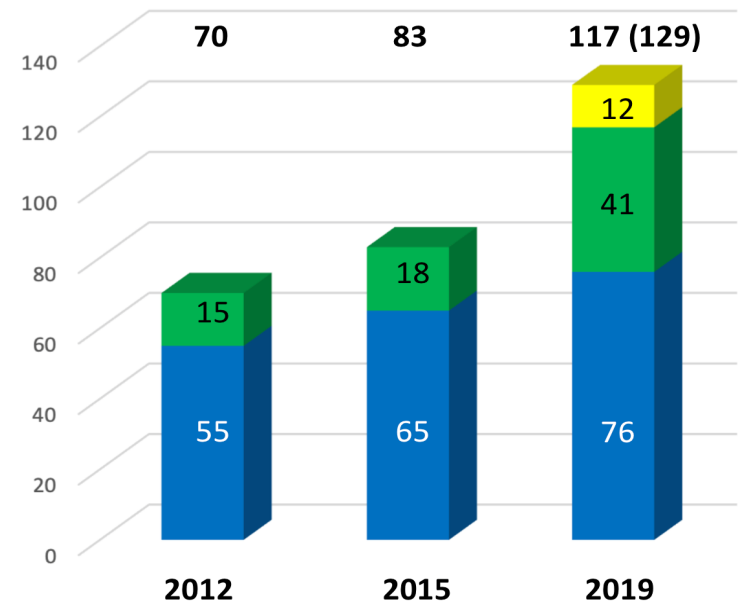
Astroparticle physics in Germany

From 2018,
needs update



From the 2019 strategy paper:

Entwicklung der Astroteilchenphysik in Deutschland



- Professorinnen/Professoren und Privatdozentinnen/Privatdozenten
- Nachwuchsgruppen- und Forschungsgruppenleiterinnen/leiter
- Neue Astroteilchenphysikgruppen mit Interesse an Gravitationswellen



- Strategy paper composed in spring 2019, in preparation of ErUM-Pro consultations
- Recommendations across the 9 topic constituencies of KAT
- Community-endorsed statements on international cooperations, early-career researchers, equal opportunities, transfer & outreach goals, research data as cultural heritage, ...
- Available via [KAT webpage](#)

ErUM-Pro 2020-23: Recommendations

Projects:

- CTA, IceCube, Pierre Auger (gamma-rays, neutrinos, cosmic rays)
- KATRIN (neutrino mass)
- GERDA → LEGEND ($0\nu 2\beta$)
- XENONnT and CRESST-III; preparation of DARWIN (direct dark matter searches)

All included in call

New:

- Gravitational waves → Einstein Telescope

Cross-sectional items:

- Computing & Big Data Science
- Science communication & Outreach
- Networking and coordination structures

Note: Data analysis
not BMBF-funded
in astroparticle physics,
but in particle and
hadron/nuclear physics

Theory:

- Work in immediate cooperation with experiments

ErUM-Pro 2020-23: Outcome

Projects:

- All received funding ...
- ... including gravitational waves!

Cross-sectional items:

- Not funded, applications withdrawn

PhD salaries

- 2/3 E13 positions applied for
- Too early to judge implementation, but PhD salaries definitely receive enhanced attention.
- Difficult to bring BMBF, DFG, Max-Planck, HGF and university rules and constraints “under one umbrella”.

Initiative on Gravitational Waves

- Verbundforschung:
17 full and associated partners

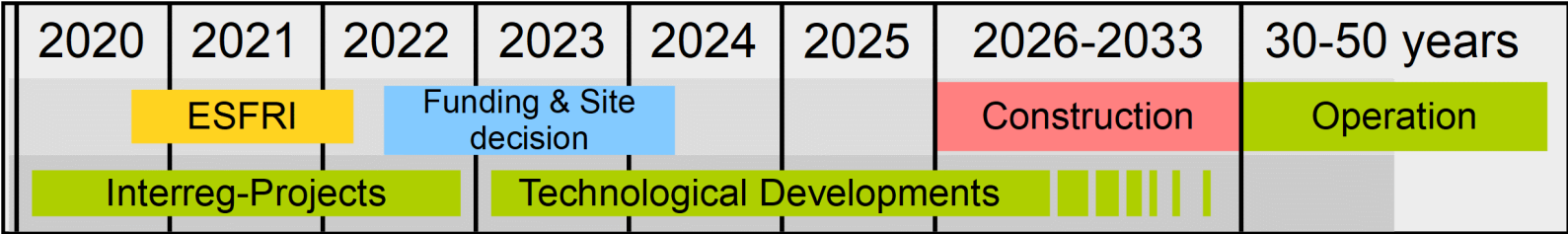


2.1 Mio Euro over three years
for hardware developments



- Multi-messenger approach: thinking of corresponding consortium
- Advertisement: Community Workshop „Gravitational Wave Physics“
Jan 11-15, 2021 (5 colloquium-style presentations by experts)

Developments on Einstein Telescope



**Nov. 2020 Entschließungsantrag Landtag NRW:
Das Einstein-Teleskop – die Euregio Maas-Rhein
überzeugt als Standort des internat. Großprojekts**

- Der Landtag beauftragt die Landesregierung,
- International support incl. ESFRI
 - Coordination in the Euregio
 - Financial support for coordination within Euregio
 - Push BMBF for support:
„sich gegenüber dem Bundesministerium für Bildung und Forschung dafür einzusetzen, den geplanten Bau des Einstein-Teleskops unter eventueller Beteiligung des Landes NRW finanziell zu unterstützen.“

Unanimously approved!



- BMBF support for LNGS infrastructure in the framework of a bilateral German-Italian cooperation.
- Discussions started 2019, KAT involved end-2019
- Timeline:
 - 12/2019: Discussion at strategy meeting, call for suggestions
 - 02/2020: Discussion of project list in phone meeting
 - 03/2020: Decision on and unanimous endorsement of project list by KAT, list communicated to BMBF
 - 06/2020: Start discussing projects with Italian side
 - 7-9/2020: Evaluation of projects by small GER-IT expert teams
 - 09/2020: Call for proposals, evaluation by German review panel
 - 12/2020: Decisions expected very soon.
- Discussion process fully transparent, complete German astroparticle community included.

Other news

- Upgrade of cooperation agreement BMBF – JINR/Dubna, Russia
 - No invest money, but strengthening exchanges, workshops, ...
 - Application “Enhancing Russian-German research cooperation in the field of Astroparticle Physics” submitted.
Objectives: bilateral workshop (expected in fall 2021),
PhD and postdoc positions in Dubna for German scientists
- NFDI: 2nd-round proposal PUNCH4NFDI submitted by 4 communities, evaluation Dec 10, 2020
- ErUM-Data: Action plan published, first call expected soon
- ESFRI Roadmap: Update process 2021-2022
- APPEC (Astroparticle Physics European Consortium):
 - Meeting of the General Assembly on Dec 9, 2020; elections
 - APPEC-SAC organizes Community Meetings, e.g. Direct Dark Matter Detection (Feb 2, 2021)

**Thank you
and all the best for 2021!**

