

# Particle Astrophysics Advisory Panel (PAAP) Update






Laura Nuttall for the PAAP

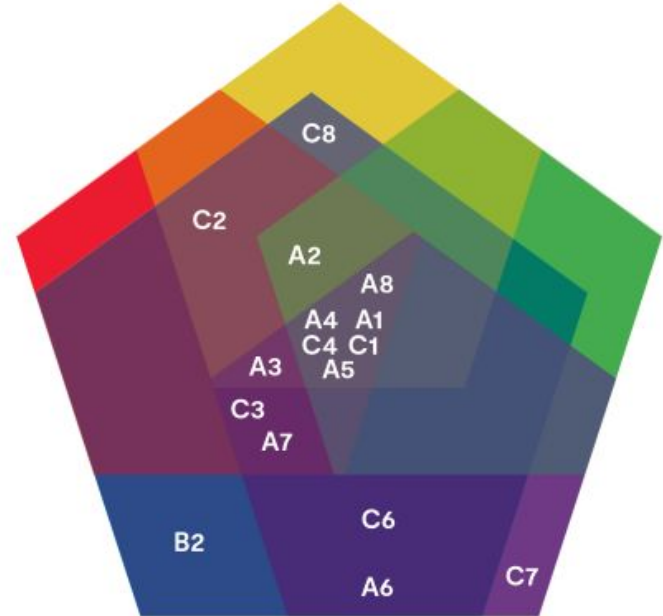
9th April 2026

# PAAP

- Matteo Agostini (UCL)  
**Neutrino Astronomy**
- Djuna Croon (Durham)  
**Theory**
- Laura Nuttall (Chair, Portsmouth)  
**Gravitational Waves**
- Blake Sherwin (Cambridge)  
**Cosmic Microwave Background**
- Juri Smirnov (Liverpool)  
**Dark Matter Searches**



Gravitational waves   
Very High Energy Gamma   
Neutrino   
Direct Dark Matter   
Cosmic Microwave Background 



## Science Board Representatives

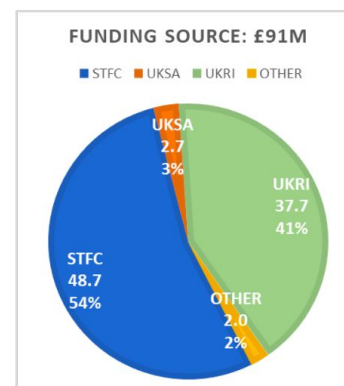
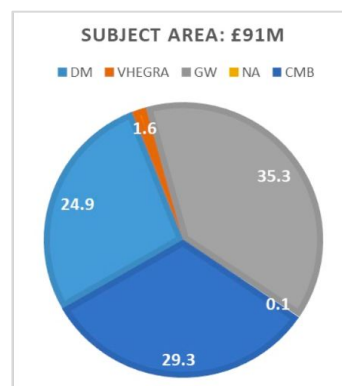
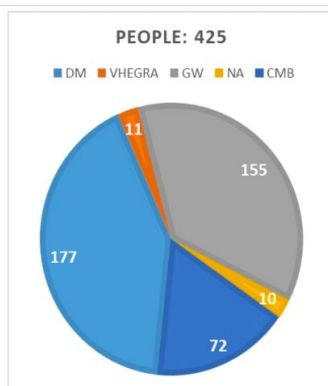
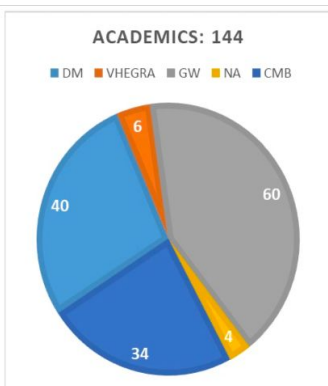
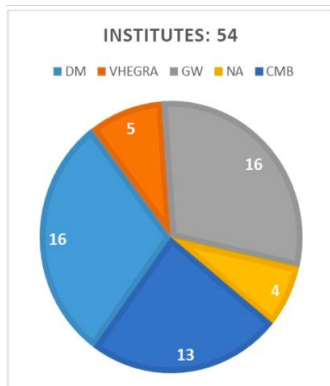
Francesca Di Lodovico (KCL), Anne Green (Nottingham), Patrick Sutton (Cardiff)

A big thank you to Sergey Burdin, Ed Daw, Teppei Katori and Garret Cotter

# Status of UK Particle Astrophysics

Slide taken from 2024 Presentation to Science Board

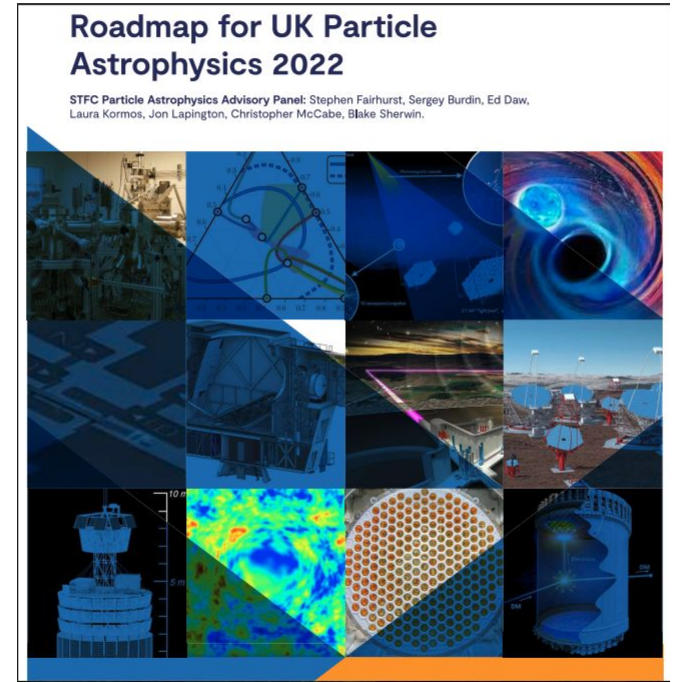
- **Over 400 people in 54 institute**
  - 144 academics
  - Large communities: Dark Matter, Gravitational Waves, CMB Cosmology
- **Significant growth in key areas in the last decade**
  - Gravitational Waves ~3x, Dark Matter ~2x
- **Total funding over ~5 years: £91M**
  - Major funding from UKRI Infrastructure Fund: GW, Simons, XLZD



# Purpose of PAAP

To provide a link between Science Board and the particle astrophysics community, and represent the needs of the community to the STFC

- **Interact** with the particle astrophysics community to ensure the panel understands their views
- **Maintain** the science vision of the particle astrophysics community - 2022 Roadmap
- **Coordinate** input to international roadmaps (such as European Astroparticle Physics Strategy 2027-2036)
- **Provide a link** to other panels (e.g. PPAP, AAP, NPAP and SSAP)
- **Advise** science board on the priorities and needs of the particle astrophysics community as well as on specific questions



# Particle Astrophysics Response to Science Board

- In December the new membership of the PAAP was established
- Mid December all panels received 3 questions from science board
- Mid January the new PAAP met for the first time
- End of January all panels received an amendment from science board to answer 5 questions
- Submission - end of February

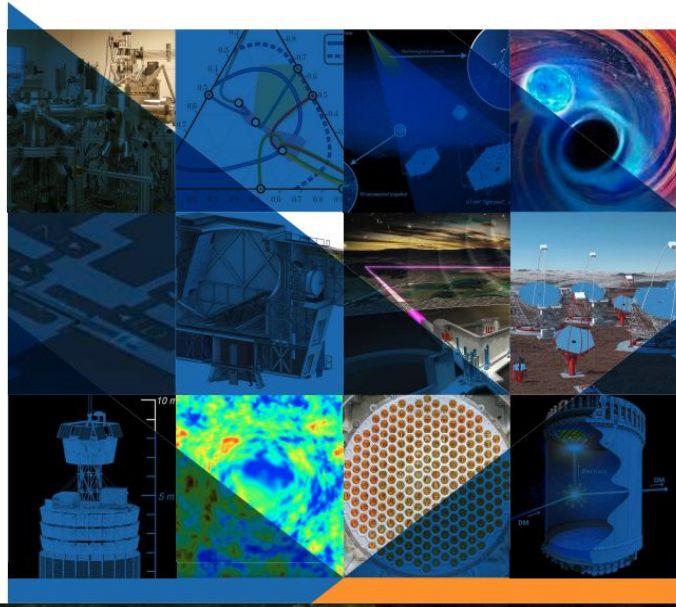
PAAP decided to ask the community for input to science board by email (PAAP-ML) and through community contacts

Thank you to everyone (around 40 people) who contributed to our response to science board

# Particle Astrophysics main priority is to preserve the breadth of the programme

## Roadmap for UK Particle Astrophysics 2022

STFC Particle Astrophysics Advisory Panel: Stephen Fairhurst, Sergey Burdin, Ed Daw, Laura Kormos, Jon Lapington, Christopher McCabe, Blake Sherwin.



- Presented priorities for each area of PA, including experiments of importance
- Highlighted that the programme requires sustained core funding for discovery research
  - this underpins the skills base that enables downstream applications and impact
    - gave concrete examples of how PA has provided impact in Industrial Strategy Sectors - this went down well with science board
- Importance of consolidated grants, essential to:
  - deliver projects at the scale and complexity required in each subfield of PA
  - provide the stability and critical mass needed to lead major international collaborations and sustain long term scientific exploitation programmes
  - training and skills building of early career scientists

# Particle Astrophysics Programme is already being affected...

Example from the gravitational wave consolidator grant (3 years) - mainly funds LIGO science and related activities

|                                        | <b>2020</b> | <b>2024</b> | <b>Difference</b>                                             |
|----------------------------------------|-------------|-------------|---------------------------------------------------------------|
| <b>Available funding</b>               | £8M         | £7M         | £1M, however this equates to ~28% reduction in spending power |
| <b>Requested academic</b>              | 31          | 39          | ~26% increase                                                 |
| <b>Academic average FTE</b>            | 9%          | 3%          | ~67% reduction                                                |
| <b>PDRA (total FTE per year)</b>       | 16.2        | 10.2        | ~37% reduction                                                |
| <b>Technician (total FTE per year)</b> | 1.7         | 0.4         | ~76% reduction                                                |
| <b>Total number of FTE per year</b>    | 24.3        | 17          | ~30% reduction                                                |

# Particle Astrophysics Programme is already being affected...

## PA Community supports transparent, evidenced-based prioritisation

We appreciate that prioritisation is necessary, but it must be in consultation with the community (i.e. advisory panels) and strategic (i.e. programme level)

| Requested academic                     | 01   | 05   | 20% increase   |
|----------------------------------------|------|------|----------------|
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# In the near future...next week!

## Particle Astrophysics Community Consultation Meeting

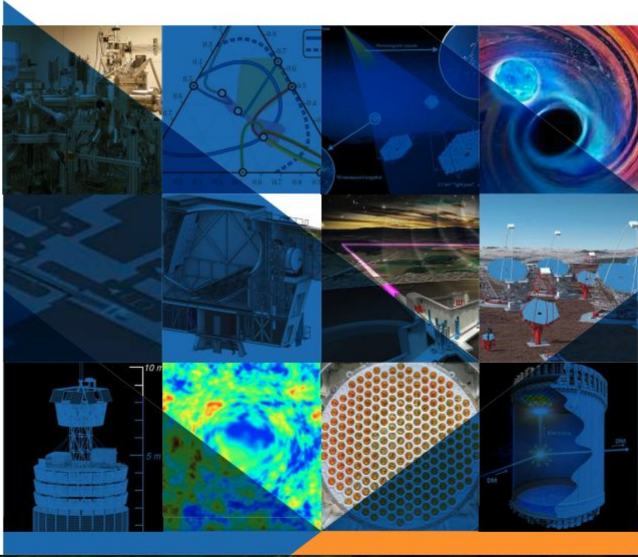
Wednesday 15th April - 9-11am (on zoom)

- Community input in advance of the Science Board (SB-PPAN) prioritisation meetings
- If there are specific points/themes you would like to be discussed at the consultation meeting, please send them by 12pm on Tuesday 14th to the PAAP chair ([laura.nuttall@port.ac.uk](mailto:laura.nuttall@port.ac.uk))
- Connection instructions will be sent to the PAAP-ML early next week

# In the near future: Particle Astrophysics Roadmap 2026 and APPEC

## Roadmap for UK Particle Astrophysics 2022

STFC Particle Astrophysics Advisory Panel: Stephen Fairhurst, Sergey Burdin, Ed Daw,  
Laura Kormos, Jon Lapington, Christopher McCabe, Blake Sherwin.



In the next month we will start the process of rewriting the Particle Astrophysics Roadmap

Aim to have a draft by the end of the summer and contribute to the European Astroparticle Physics Strategy (Town Meeting in Geneva - September)

# In the near future: Particle Astrophysics Virtual Townhall

Tuesday 19th May - Afternoon

- Kick off discussion for Roadmap
- Advocating for Particle Astrophysics
- Session for early career researchers - discuss needs and concerns

**Discord server - called UK astroparticle physics**

**<https://discord.gg/TXWCba2C>**