



Clarification of STFC Support for Gravitational Waves Research

This document provides clarification for researchers regarding STFC support for gravitational waves research and the relevant funding mechanisms. Gravitational wave support falls into both the Astronomy and Particle Astrophysics programmes and the table below clarifies which activity fits within each programme and the relevant funding opportunity.

A frequently asked questions section is given below, which aims to answer potential questions arising from the implementation of the remit clarification.

Type of Activity	Description	Programme	Funding Opportunity
Early Stage R&D	Blue skies R&D for non-project specific technologies (i.e. ones that could be used for a range of opportunities including gravitational wave infrastructures which are not suspended-mass laser interferometric gravitational wave detectors).	Astronomy	Astronomy Consolidated Grants
Detector R&D/development (ground-based)	Development of new technologies (including hardware and the use of theoretical analysis and simulations) to improve detector potential and development of technology to improve sensitivity of existing and future suspended-mass laser interferometric gravitational wave detectors.	Particle Astrophysics	Small scale development for GW detectors – Gravitational Wave Programme Large scale R&D programme for specific detector development – Statement of Interest to Science Board
Construction (ground-based)	Construction of new detectors or upgrades to existing detectors.	Particle Astrophysics	Statement of Interest to Science Board
Operations	Commissioning and operation of detectors to ensure continuity of observation and improved level of sensitivity of observations (including detector characterisation). This includes on site detector support and shifts undertaken by UK groups, as well as provision of computing resources for	Particle Astrophysics	Gravitational Wave Grants



	gravitational wave searches and parameter estimation.		
Exploitation	Development and application of tools to model signals, perform searches and analyse data from the global network of gravitational wave observatories, and interpret the scientific significance of the results. This includes the measurement of source parameters; interpretation of gravitational wave observations in the context of astrophysical populations; tests of general relativity; inferences of neutron star structure; cosmology with gravitational waves.	Particle Astrophysics	Gravitational Wave Grants
Exploitation	Other science related to gravitational wave astronomy, including theoretical research. This includes the development of astrophysical models for binary formation and evolution; electromagnetic observations complementary to GW; exploitation of public GW data.	Astronomy	Astronomy Consolidated Grants
Detector R&D and construction (space-based)	R&D and construction of space-based instruments and ground based data centres for gravitational wave research.	UK Space Agency	

Frequently Asked Questions

Why has STFC clarified the gravitational waves remit?

Following on from the STFC Balance of Programmes exercise and recent Particle Astrophysics Programme Evaluation, STFC is clarifying how gravitational waves research is supported across the Astronomy and Particle Astrophysics programmes and the relevant funding opportunities. This is particularly timely given the detections of gravitational waves and the emergence of gravitational wave astronomy. STFC recognises that the remit clarification may have an impact on groups in different ways and aims to take a pragmatic and flexible approach to its implementation.

When does the definition come into effect?

The definition applies from March 2020.

I currently apply to the astronomy consolidated grant but would like to apply to the gravitational wave programme in future, however the timings of the grant rounds and grants do not align – how will this be managed?



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This will depend on the specific timings for your grants and the remit of your work. Please talk to the relevant Grants Manager. In all cases, STFC will work with you to determine a suitable transition process. For example, you may currently have an astronomy consolidated grant which runs until March 2022 but would like to apply to the three year gravitational waves programme which starts in October 2021. In this case you could apply to the gravitational waves programme for the final two and a half years of the grant (April 2022 until September 2024).

My research falls into both programmes – which programme should I apply for?

STFC recognises that in some cases a group's research may span both programmes and it is more appropriate to apply for a coherent programme of work which has relevance to both the astronomy and particle astrophysics programmes. In this case, you should consider the remit definition to decide where the majority of your research fits and apply to that programme. In order to ensure that the proposal undergoes fair and transparent review, STFC will follow the principles of peer review outlined under the ['Applications across Research Council remits'](#) policy for e.g. seeking reviewers from both panels, cross panel membership etc.

Can I apply through both the astronomy consolidated grant and the particle astrophysics gravitational wave programme?

Yes, you can apply to both programmes, as long as you apply for clearly differentiated activities and present two different programmes of work. You should not apply for funding for the same activity to both programmes and STFC will monitor to ensure there is no duplication of funded activity across the programmes. It may be the case that the two applications form part of an overall research programme, but you should explain which activities are relevant to each programme.

How will you ensure that research will not fall between panels?

We will ensure that there is liaison between the Grant Managers, Programme Managers and the Panel chairs within both programmes to ensure that proposals are not rejected by both panels. If you are applying to a programme for a new activity or the first time, please inform the Grants Managers before submission to ensure that your proposal is considered appropriately.

Do I need to apply to the gravitational wave programme as part of a consortium?

Previously, STFC required groups applying to the gravitational wave programme to submit one consortium application. Given the broadening gravitational wave programme, there is no longer a requirement to submit as a consortium. However consortium applications are still welcome where appropriate, for example if more than one group is working within one science case/programme of activity; or if you are a smaller group. Please refer to specific call guidance for details on applying as part of a consortium.



Science and Technology Facilities Council

The remit clarification may result in groups moving between programmes – what are the potential resource implications and how will this be managed?

Any resource implications for each programme will only become fully apparent once the revised remit clarification is in place and groups have had an opportunity to consider how their future programmes of work will fit across the two programmes. As a result of a flat cash funding settlement over recent years, all programmes within STFC are under financial pressure. Given this, the broadening programme in gravitational waves and the probabilistic nature of applying for funding (especially through the astronomy programme), there will not be a short term transfer of resources. STFC will continue to monitor the overall gravitational wave programme and keep under review any potential impact from the remit clarification.

Further Information

Astronomy

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