



STFC 2021 PARTICLE PHYSICS REVIEW OF EXPERIMENTS AND EXPERIMENTAL CONSOLIDATED GRANTS

Guidelines for applicants
23 October 2021

CLOSING DATES: Experiment submissions – 2 February 2021 at 4pm
Grant proposals and Form X – 17 February 2021 at 4pm
(to include Capital Equipment requests)

Please read these guidelines carefully as the proposal format has changed.

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1 Overview

1.1 Introduction

- 1.1.1 This document sets out the guidelines for the 2021 Particle Physics Experiment Consolidated Grants round. While the document provides specific guidance concerning this grants round, it should be read in conjunction with the [Research Grants Handbook](#). Part A provides guidance on the consolidated grant round, including the assessment criteria and how applications should be structured – please read this carefully. Part B gives guidance on the experiments review, with information on the experiments detailed in the review and the information that should be included in experiment submissions.
- 1.1.2 Please note that the outcome of the Spending Review is not yet known and continues to cause uncertainty for future budgets. As a result, STFC are required to plan on a flat cash basis and as such Applicants are asked to submit realistic bids. The funding level for the grants round is currently around £20M per year. In addition, funds of £500k per year is also available for capital equipment items.
- 1.1.3 The grants round and these guidelines have been developed to ensure that the process:
- Is transparent and accountable, particularly with respect to the means of prioritisation;
 - is efficient, both in terms of the requirement for applicants and the reviewers – both panels and referees, and the use of office resources;
 - provides a timely outcome.
- 1.1.4 UKRI recognises that the COVID-19 pandemic has caused major interruptions and disruptions across our communities and are committed to ensuring that individual applicants and their wider team, including partners and networks, are not penalised for any disruption to their career(s) such as breaks and delays, disruptive working patterns and conditions, the loss of on-going work, and role changes that may have been caused by the pandemic.
- 1.1.5 Reviewers and panel members will be advised to consider the unequal impacts that COVID-19 related disruption might have had on the track record and career development of those individuals included in the proposal and will be asked to consider the capability of the applicant and their wider team to deliver the research they are proposing. Where disruptions have occurred applicants can highlight this within their application, if they wish, but there is no requirement to detail the specific circumstances that caused the disruption.
- 1.1.6 UKRI acknowledges that it is a challenge for applicants to determine the future impacts of COVID-19 while the pandemic continues to evolve. Applications should be based on the information available at the point of submission and, if applicable, the known application-specific effects of COVID-19 should be accounted for. Where

known impacts have occurred, these should be highlighted in the application, including the assumptions/information at the point of submission. There is no need to include contingency plans for the potential impacts of COVID-19. Requests for travel both domestically and internationally can be included in accordance to the relevant scheme guidelines, noting the above advice.

1.1.7 Reviewers will receive instructions to assume that changes that arise from the pandemic, post-submission, will be resolved and complications related to COVID-19 should not affect their scores.

1.1.8 Where an application is successful, any changes in circumstances that affect the proposal will be managed as a post-award issue.

1.2 Timetable

1.2.1 The timetable for the review will be as follows:

Closing date for experiment submissions	2 February 2021, 4pm
Closing date for consolidated grant proposals and Form X	17 February 2021, 4pm
Reviewing process	April –May 2021
Grant clarification meetings via video conference	April - May 2021
Experiment Review meeting	26 May 2021
Applicants to receive and respond to reviewer comments	Mid-June 2021
Peer Review meeting	26-28 July 2021 & 2 September 2021
Science Board	12-13 October 2021
Outcome announced	December 2021
Grants commence	01 October 2022

1.3 Particle Physics Grants Panel (PPGP) Remit

1.3.1 Grant proposals are reviewed by the PPGP. The panel's role is to:

- Assess and make recommendations to the STFC Executive on research grant applications in particle physics;
- Take account of the recommendations of international reviewers and the conclusions of specialist peer review panels (as appropriate). The latter may be convened by the Executive to advise on consolidated grants, contiguous groups of research requests, or research requests which are judged (based on cost or propriety) to warrant such separate, in-depth assessment;
- Advise the STFC's Science Board and the Executive as required on all issues relating to research grants, including monitoring the level of funding allocated to grants; and

- Carry out such other tasks associated with peer review as the Executive might require.

1.3.2 The membership of the PPGP taking part in the 2021 review of experiments and experimental consolidated grants can be found on the [STFC website](#)

1.4 Strategic guidance

1.4.1 In assessing proposals, the PPGP will take account of the outcome of the 2020 [Balance of Programmes Exercise](#) and the strategic priorities identified by Science Board. Programme evaluations of Particle Physics and Particle Astrophysics were carried out in 2018/19 with a view to ensuring that the programme is optimal, balanced, coherent and sustainable. These evaluations were input to the Balance of Programmes and provide more detail on the current programme.

1.4.2 The grants panel will ensure that:

- The programme supported is scientifically excellent;
- The programme is clearly in line with STFC's strategic science objectives and priorities; that it addresses the impact agenda (e.g. in terms of technology development and knowledge transfer) and is responsive to changes and future opportunities within the community;
- There is an appropriate balance between the programmatic themes within particle physics (identified in the PPAP roadmap) and the development of novel technologies consistent with the overall STFC science strategy.

1.4.3 In the case of activities not currently supported by STFC:

- Research proposals for exploitation will be considered and may be funded if the quality of science proposed merits it;
- The grants panel will also consider funding for new activities where a strong case is made.

For these activities, it is expected that only a few, excellent proposals will be funded, and that funding will not create any further, ongoing financial or legal commitments beyond the period of the award.

1.5 Enquiries

1.5.1 Enquiries can be directed to the following staff at STFC:

- Mrs Jane Long: e-mail: jane.long@stfc.ukri.org

1.5.2 Problems encountered using the JeS system should be directed to the JeS helpdesk:

- Je-S enquiries: JeSHelp@rcuk.ac.uk

PART A: 2021 Review of Experimental Particle Physics Consolidated Grants

2 Consolidated grants

2.1 2021 consolidated grant

- 2.1.1 STFC provides support for the particle physics community through consolidated grants (CG) for a period of three years. During the CG period, there is the potential to request up to a one-year no-cost extension providing flexibility to start posts later in the grant period.
- 2.1.2 Each institution (or equivalent sub-unit within the university) may submit one consolidated grant proposal per subject area every three years. Particle physics theory and particle physics experiment are separate subject areas. This grants round will consider consolidated grant requests in the particle physics experiment subject area. Where more than one department/group at a university is involved in the same subject area a single consolidated grant proposal should be submitted.

2.2 Consortium grants

- 2.2.1 Groups from different institutions working collaboratively in the same well-defined research area may apply for a consolidated research grant as a consortium. This is intended to allow members of such consortia the opportunity to bid for shared resources, particularly core expertise, that they might not otherwise be able to secure on their own, perhaps due to the size and/or scope of their activity. In practice, this would require the submission of a single case for support, with either one JeS form per institution or one JeS form on behalf of the consortium.
- 2.2.2 An individual may only be supported on a maximum of one consolidated grant per subject area. Therefore, individuals in groups that apply as a consortium would be excluded from also applying as part of their individual institution's application in that subject area.
- 2.2.3 If you are considering submitting a new consortium grant, please notify STFC prior to submission using the contact details in 1.5.1. In some instances, a brief written summary of the proposed consortium may be requested as part of this process.

3 Classification of posts

3.1 Categories of staff

- 3.1.1 Consolidated grants have three categories of staff: academics, core staff and non-core staff.
- 3.1.2 New posts may be requested in each of the categories. For existing posts, a change in categorisation may be requested, so a post assigned as non-core in the 2018 round may now be requested as part of the core group and vice versa. Please highlight these changes clearly.

3.2 Definition of core posts

3.2.1 'Core posts' are those key staff identified by the grants panel as being crucial for the long-term support of research activities and are defined as underpinning research capability. Ultimately, the grants panel will make judgements on a case-by-case basis, but the following may be used as a guide:

- expertise in the areas of experimental development and construction;
- expertise in the development, maintenance and operation of experimental computing infrastructure, including software skills;
- expertise in the maintenance and operation of experiments;
- engineering and technical expertise, e.g. electronic engineers, mechanical designers; and

3.2.2 The categories used on the JeS system should be the same ones used on Form X. The only exceptions to this would be when identifying engineer posts (including software engineers), or physicist programmers, which may be applied for on the JeS form either as a Researcher or a Technician; the category they fall into will determine whether the post attracts overheads. An engineer in the Researcher category will typically have hardware (design, mechanical or electronic) interests, with critical skills and experience, and be a member of a collaborative experiment. It is anticipated that most of these posts will be requested under the technician category attracting no overheads, with those requested as Researchers being the exception. Where applying for the latter you should be prepared to justify why this is appropriate.

3.3 Case for the Core Posts

3.3.1 Each group must make a case as part of their proposal for the overall size and composition of their proposed core group. This should stress the areas of expertise of the group, building on the work of individual post-holders over the current consolidated grant. It should also give a plan of work for the next award period and explain how this maps on to the proposed core group.

3.3.2 For CERN based experiments the case for the core group should state where core posts are critical to the UK's Category A or Category B Maintenance and Operations (M&O) commitments. These are defined as follows:

- M&O A - activities that the experiment collaboration has agreed to bear as a common expense, and
- M&O B - sub-detectors/systems that are the responsibility of individual institutes or groups of Institutes.

A similar case should be made for UK M&O commitments for other experiments where core staff fulfil commitments similar to Categories A and B.

3.3.3 Please note that posts requested as part of the core group may be awarded as non-core posts by the panel. Following the consideration of all the posts, the Panel may decide that a core post should not be classified as a core post. It may be deemed

that the post is not fundable, however, the post may be reconsidered as a non-core post and ranked again in line with other non-core posts.

3.4 Non-core posts

- 3.4.1 Posts outside the core group are referred to as non-core. These posts will largely be associated with experimental physics exploitation, including the maintenance and operation on which they spend 90% of their time. Posts may also be associated with early work on R&D projects and novel, generic R&D. These will be allocated in response to strong physics cases and are referred to here as ‘responsive’ consolidated grant posts. A competitive allocation procedure will be used for them, comparing cases for the continuation of existing posts with new posts.
- 3.4.2 Experiment support responsibilities in responsive post cases (e.g. for M&O) should be identified with numerical reference to the experiment submission, which should contain a numbered list of M&O activities.
- 3.4.3 Responsive posts should be anonymised everywhere throughout the proposal, and in the experimental submissions. Responsive posts should be referred to in the form University_Experiment_Post_Number, but abbreviated e.g. Stra_LIGO_RA? (add an identifier). Make the posts unique and avoid sequential numbering.
- 3.4.4 Requests may also be made for support staff. These include administrative effort as well as general computing support. These posts are considered as non-core posts.

3.5 Ring-fenced posts

- 3.5.1 Consolidated grant core support approved as part of construction projects is contained within a project ring-fence. Maintaining the level of support for projects in the last round proved difficult because of the cumulative effects of flat cash funding, and because small fractions of individual posts were highlighted as ring-fenced. Please note that it may not be possible for the PPGP to recommend the level of effort requested in this round due to the impact on the wider experimental programme, or award full support for a post for whom only a small fraction is ring-fenced. Note that the project ring-fence only applies to core posts in approved construction projects.
- 3.5.2 It is anticipated that the group must make the ring-fenced effort available to the project over the consolidated grant period; however, the profile can change between years, with the agreement of the UK spokesperson, within the overall financial envelope.
- 3.5.3 Funds for the ring-fenced staff effort will be awarded to the group through their consolidated grant using the same inflation index as for non-ring-fenced staff. The actual funds awarded for these staff may therefore be less than the notified ring-fenced envelope.
- 3.5.4 The case for support should include a description of posts, or parts of posts, which are ring-fenced, for the period when they are ring-fenced, so that the panel has all

relevant information. The level of ringfencing for posts must be included in the group's Form X.

3.5.5 The current ring-fenced projects are:

- ATLAS Upgrade (for the duration of the 2021 CG)
- CMS Upgrade (for the duration of the 2021 CG)
- DUNE (for the duration of the 2021 CG)

3.5.6 A number of projects may be reviewed by the PPRP during the consolidated grant review. In these cases, the PPGP will liaise with the PPRP to ensure that the two panels are consistent in their handling of requested resources.

3.6 Project studentships

3.6.1 It is possible to apply for project PhD studentships as part of grant proposals. For guidance please see the STFC [Research Grants Handbook](#).

3.6.2 The PPGP will assess the scientific quality of the project, consider whether the project offers suitable training in research methods and techniques, and consider if the studentship adds value overall to the research proposal. All potential costs should be included in the proposal.

3.7 Academics with dual theory/experiment roles

3.7.1 Academics spending up to one third of their time in the other discipline (e.g. a theorist working as a full member of an experimental collaboration or an experimenter with specific duties/obligations to a theoretical collaboration) should apply for all of their time to the panel relevant to the majority of their work. However, theory academics who meet these criteria may be named as Co-Is and request travel support and/or posts for experimental exploitation activities from the PPGP(E).

3.8 Co-investigators named on grants

3.8.1 Co-applicants who, following peer-review, are not in receipt of any funding for Academic time are not usually listed on the grant. However, genuine participants in the research who do not require any funding for Academic time such as emeritus researchers or fellows fully or partially funded from other sources are eligible to be named as co-investigators. It is recognised that such individuals may sometimes be difficult to identify so the PI should alert STFC to ensure that any such instances can be dealt with. Cases should be made for such posts as the grants panel will assess these along with all others to decide whether they will add value. In certain cases, posts may be removed from the grant.

3.9 Long Term Attachment (LTA)

3.9.1 LTA costs should be calculated in the usual way in accordance with the STFC policy on LTA. The latest guidelines can be found [here](#).

3.9.2 Reductions should not be made on the JeS form to estates and infrastructure technician costs to take account of individuals who will be on LTA during the grant period; this will be calculated by STFC on award of the grant based on the panel recommendations. Applicants should provide a list in the case for support of individuals who are expected to be on LTA during the grant, stating for each individual the period when they will be on LTA and the experiment they will be working on. For STFC approved projects this list should match the list submitted in the experiment workbook.

4 Applying for a consolidated grant

This section should be read in conjunction with guidance in the [Research Grants Handbook](#)

4.1 Submitting applications through the JeS system

4.1.1 All proposals should be submitted online using the [JeS login screen](#). This screen also has links to tutorials and system help. In the event of any queries relating to the JeS system please contact the JeS helpdesk directly by e-mail at: JeSHelp@je-s.ukri.org or by phone on: +44 (0)1793 444164. Applicants should use the JeS form for standard grants and should apply for a grant of three years duration. The following options should be selected in the JeS system when putting your proposal together:

Council:	STFC
Document Type:	Standard Proposal
Scheme:	Standard
Call:	PPGP Experiment 2021
Peer Review Preference:	PPGP (Experiment)

4.1.2 Failure to select the correct options may mean the proposal does not reach the correct Research Council or department and will ultimately result in your JeS proposal being returned.

4.1.3 The consolidated grants for this round will have a start date of 1 October 2022 and an end date of 30 September 2025. All consolidated grants must start on the announced start date - there is no flexibility for starting the grant, and when awarded, the latest start date will be the same as the earliest date.

4.1.4 The deadline for the submission of consolidated grant proposals and Form X is 4pm on **17 February 2021**.

4.1.5 It is the responsibility of the PI to ensure that their institution's administration department submits the proposal before the submission deadline, and that they therefore submit the proposal to the administration department sufficiently far in advance of the deadline to allow for their internal approvals. Applicants can view the status of their proposal online by logging into the JeS system – STFC office staff are unable to view the proposal until it is finally submitted by the institution's administration department and has undergone initial checks by UKRI. Proposals cannot be submitted after the closing date.

4.1.6 Further information on how to apply for a grant can be found on the [STFC website](#).

4.2 Additional documents required

4.2.1 In addition to the online application form which must be submitted through JeS, the following documents are required. Responsive posts should be anonymized in all of these.

- Case for Support

- Publications table/list
- Data Management plan
- Form X: staff details and programme/project participation

4.2.2 Applicants should be careful to classify documents correctly using the options available and submit as a PDF. Failure to do so will result in incomplete proposals being sent out to reviewers (e.g. documents classified as 'Other' are not sent out for review). The appendices should be uploaded as attachments to the JeS proposal. The Form X spreadsheet should be emailed to: pp@stfc.ac.uk.

4.2.3 **All documentation** (including any references provided) should be written in one of the following fonts:

- Standard Arial 11pt (please note that this is the preferred font for STFC)
- Helvetica Regular 11pt or
- an equivalent regular 11pt sans serif universal font e.g. FreeSans with a minimum of 2 cm margins around each page.

4.3 Costings

4.3.1 Details relating to grant costs can be found in the [Research Grants Handbook](#):

4.4 Justification of resources

4.4.1 All costs associated with the research proposal must be justified, with the exception of estates, indirects, and infrastructure technician costs, and the unit cost of TRAC-determined elements such as investigator salary costs or research facility charge-out costs; although the amount of resource required does need to be justified.

4.4.2 An explanation for all costs requested on the JeS form must be given in the case for support. Each directly incurred non-responsive post must be given a name, or, for anonymised responsive posts, a unique number (e.g. Oxf_ATLAS_RA? etc.). The same name or number must be used on the JeS proposal, in the case for support, on the Form X for both the past and future work, and (if applicable) in an experiment submission. Where these details do not match the documents will be returned for correction.

4.5 Case for Support

4.5.1 The Case for Support should contain the report on research in the previous three years and plans for the future programme. [The page limit for the total length of the Case for Support is 12 pages + 1.25 pages per investigator + 0.5 pages per \(academic, core, responsive\) case.](#)

Page Limit Summary

Paragraph Number	Number of Pages	Post/Item	Details
Summary of the Group's Activities and Strategy			
4.5.3 – 4.5.7	0.25	per investigator	
	0.5	per academic & core case	
Project Reports			
4.5.8 – 4.5.14	12	baseline	
	+ 1	per investigator	
	+0.5	per responsive	
Support Posts			
4.6.7	1	in total	The case for the admin & computing support is part of the overall Project Reports total page limit.
Non-staff costs			
4.6.8	2	in total	The case for non-staff costs (excluding capital equipment items) is part of the overall Project Reports total page limit.
Equipment			
4.6.10	0.5	per item	This is in addition to the page limits
Additional Information			
4.6.12			This section does not count towards the page limit

4.5.2 The Case for Support should contain the following sections:

- Summary of the group's activities and strategy
- Project reports on each area of the group's research

4.5.3 Summary of the group's activities and strategy: this part of the proposal should provide the highlights of the past contributions from 1 January 2018 to 31 December 2020 and the strategy for the future of the group for the three years of the new grant proposal. It is also important to demonstrate how the group's strategy is supporting the impact agenda for growth through investment in science and innovation (e.g. through knowledge transfer and technology development). Reference should be made to any plans to submit project proposals to the PPRP, indicating likely timescales and any implications for funding through the consolidated programme, e.g. additional staff posts. Note that responsive cases should be anonymised throughout the proposal for both the past and future work.

4.5.4 This part of the proposal should include a justification for the overall size and composition of the group, including the cases for academic and core posts. It may be helpful to use a table to indicate group composition, to aid international reviewers who do not have access to FormX.

4.5.5 To be counted as a group member, an academic must contribute at least 10% FTE to the consolidated grant for at least one year of the proposal; this can include academics where no salary is requested.

4.5.6 Core post cases should indicate if this is a new or continuing post, and the level of ringfence if applicable.

4.5.7 The maximum page limit for the Summary of the group's activities and strategy section is: 0.25 pages per investigator, plus 0.5 page per (academic, core) case.

4.5.8 Project reports: For each project (i.e. experiment, R&D project or Small Research Facility (SRF – see below)) this part of the proposal should provide the information requested below by Theme, then sub-divided by experiment. To aid in comparative peer review, please split the project themes corresponding to the following science areas:

- Energy Frontier Physics (e.g. projects ATLAS and CMS): this should include both exploitation and upgrade, and phenomenology if support is requested
 - We encourage groups to sub-divide efforts within energy frontier experiments as appropriate, to aid external peer review
- Flavour Physics (e.g. LHCb, g-2, LFV): this should include both exploitation and upgrade, and phenomenology if support is requested
- Neutrino Physics (e.g. T2K, neutrino-less double beta decay): as above
- Dark sector (e.g. dark matter, EDMs, LSST): as above
- Accelerator Physics (to include Future Colliders): as above
- Generic Detector R&D: see 4.5.8
- Computing (e.g. GridPP)
- Special Facilities: see 4.5.9

If a project report does not fit these categories, please contact STFC.

4.5.9 As in the past, support at a low level for underpinning research and development activity for new opportunities and the development of novel technologies may be sought through the PPGP. This may include generic detector R&D (i.e. not project-specific) and feasibility or conceptual design studies not related to a currently funded or identified project. Such research typically would be of relevance to a range of applications and could lead to the development of new project-specific instrumentation in the future and/or GCRF/ISCF-related activity. Applications for larger scale research and development relevant to projects already within the Council's Science Roadmap or in relation to a specific experiment should follow the PPRP route.

4.5.10 Very large, specialised mechanical or electronics workshops, technology centres or computing facilities, can be treated as separate projects in the proposal if desired.

4.5.11 For each project, please provide the information below. Please note that responsive posts should be anonymised throughout.

- a. A report on the work by group members since the last review. Highlight the most important publications on the project in the current consolidated grant period to which members of the group have directly contributed.
- b. A proposed plan describing the group's future programme and participation in specific projects/experiments for the period of the new CG.
- c. Cases for responsive posts on the project.

4.5.12 For clarity, it is requested that the structure of each project report have all the responsive cases for that project follow the text for that project. References to responsive posts in the group's reports should be highlighted in bold face.

4.5.13 The maximum page limit for the entire Project reports section is: baseline 12 pages + 1 page per investigator + 0.5 pages per (responsive) case.

4.5.14 It is recognised that investigators may be active in more than one area and may therefore be included in more than one project report, with the constraint of respecting the total Case for Support page limit.

4.6 Cases for posts

4.6.1 The order and format of names should be consistent between the case for support and Form X.

Academic, core and responsive posts

4.6.2 A scientific or technical case relating to the proposed programme and Form X must be made for the continuation of each current staff post, or fraction of a post, including a ring-fence, and for initiation of new posts, including project studentships. In line with the principles of FEC, cases must also be included for academic staff posts where no funding is sought. The case for investigator time should be justified in terms of the future programme, not past productivity. For all cases, please include the following information:

- a. The key contributions of the post for the proposed CG period.
- b. The key contributions of the post in the past.
- c. Positions of responsibility held in the past and specify which will be held during the proposed CG period.
- d. Fraction of post funding requested. If less than 100% FTE specify the funding source for the remainder.
- e. If applicable, what fraction of the post is M&O, with reference to the M&O task by number in the experiment case.
- f. If applicable, what fraction of the post is ringfenced, and for what tasks

- 4.6.3 If appropriate, the case should indicate why the post should be considered “core”. It is acceptable that in year three, non-ring-fenced effort can be attributed up to 50% FTE on non-specific projects.
- 4.6.4 Within each section of the proposal, post cases should be listed alphabetically by surname, or post title for unnamed posts. The posts on Form X must be listed in the same order. The naming format used must be consistent on the case for support, JeS form and Form X. All posts should have the same name/number as given on the JeS form so that it is clear how each case for support relates to a JeS form post.
- 4.6.5 Academics should apply for the amount of their time they expect to spend on research, taking into account other commitments (e.g. teaching, other funded research activity). The typical amount of time is 0.6 FTE per year. If a proposal is only requesting a particular investigator’s time for part of the grant duration (e.g. if an academic has fellowship funding for the first two years of the grant and so only seeks funding for the last one year), this needs to be made clear in the text as the JeS form does not have the facility to enter this information. Similarly, if an academic is requesting variable levels of FTE support during the grant this also needs to be made clear, with the different amounts of FTE and exact start and end dates of the changes specified. If no salary costs are requested for a particular investigator but estates and indirect costs are requested for that investigator, again this needs to be made clear in the text as it will not be apparent from the JeS form.
- 4.6.6 Bids for continuation of existing posts, and for additional staff support, will be assessed on their merits by the PPGP. The overall group size and the number of academics in the group are among the factors that the PPGP may take into account in their deliberations.

Support posts

- 4.6.7 A case should be made for the administrative and computer support requested. This case should be a maximum of one page long, included within the total case for support page limit. Where administrative support or computer support is requested under the ‘Other Directly Allocated’ heading or the ‘Directly Incurred’ heading, the following information should be provided for each post: type (e.g. administrative support or computing support), FTE, duration and total cost. The cases for support posts should be in alphabetical order by surname, or post title for unnamed posts. Support posts should be included on Form X below the scientific and technical posts.

Non-staff costs

- 4.6.8 A case, no longer than two pages in total should be made for travel and subsistence, public engagement resources and consumables (including computing equipment and tier 3). This should be included within the total case for support page limit. For information purposes, we have provided figures that the Grants Panel used during the last grants round to arrive at the non-staff cost awards. Please note that these

are only indicative and will not necessarily be the figures used in this round. The total amount awarded for three years per FTE was:

Travel and subsistence	£ 3,300
Tier 3 computing	£ 0
Computing	£ 1,000
Consumables (ODI)	£ 4,875
Computing support	1 FTE per 30 persons per year
Administrative support	1 FTE per 60 persons per year

4.6.9 Travel and subsistence: Applicants should request the full estimated cost of group travel, in line with the rules of their institution, including a justification of the request. Support for journeys within the UK and overseas should be sought only where these are not directly connected with approved experiments which are funded through the experiments funding line. Funds may be requested to make visits to discuss new projects if these cannot be combined with other journeys. The PPGP also expects that groups should seek travel funds from sources other than their institutions.

4.6.10 Equipment and Other Directly Incurred (ODI) costs

When applying for ODI (consumable) costs, please ensure that the funds requested are clearly listed under the separate headings given below in your Case for Support. The cost of the items listed should agree with those provided in the JeS form. Please refer to the Research Grants Handbook when putting together these lists and ensure that these items are individually less than £10k.

- a) Consumables
- b) Computing
- c) Tier 3 (under £10k – note that Tier 3 over £10k should be included under the equipment heading)

Equipment: Funds are available in this grants round to apply for large capital equipment items. This is to help underpin the university infrastructure needed to sustain UK leadership and enhance technology capability, and not to fund hardware components which are integral to a new detector or running experiment. Please refer to the [Research Grants Handbook](#) when requesting equipment items (above £10k). Given the financial envelope, groups are asked to be realistic when making their bids and should aim to keep the scale of request <£250k (cost to STFC) in capital equipment. Research organisations (ROs) will be expected to make a contribution towards the total cost of the equipment of up to 50%, but in certain circumstances requests may be funded by STFC in full (i.e. at 100%). It is possible for a Group to apply for one large exceptional item, amongst their request, which you are reminded will be tensioned against other similar requests. You are required to verify the cost estimates by providing quotes or an indication from a recognised source such as an online catalogue.

Where requesting a number of items (maximum half a page per item), groups are asked to provide a prioritised list. Please explain whether the item is intended for sole or joint use.

- d) **Impact Funding:** With effect from 1 March 2020 you are no longer required to provide a Pathways to Impact document. Applicants may still request funds for public outreach activities on consolidated grants, subject to a well justified case. A description of the proposed activities and a justification of the resources requested should be included as a separate section within the Summary of the Group's Activities and Strategy of the proposal document. This section should be a maximum of one page. Please see the [STFC Website](#) for guidance concerning impact.
- e) **Small research facilities (SRF):** for guidance on SRF costs that are to be included in the ODI, please see the ODA section below.

4.6.11 Other Directly Allocated (ODA) costs

- a) You are required to provide details of all posts (excluding infrastructure technicians). Please list the names, cost and effort requested for all pool staff and non-infrastructure technicians (other than those listed on the JeS form).
- b) SRF costs should be detailed by giving the number of staff days requested for each individual project within each financial period, along with the unit cost. If support for SRF usage has already been obtained (or requested) for a project through another source (e.g. a PPRP proposal), this should be stated in the text and the relationship between the two requests clarified.

4.6.12 Additional Information

This section of the proposal should follow the bibliography and does not count against the page limit:

- i. An explanation of any expenditure which has resulted in a variation of 20% or more against the funds awarded against each heading in the original announcement and a statement how the posts were used if this was different from what was awarded.
- ii. A summary of Non-PPGP and non-STFC support: The panel seeks information on other support outside the consolidated grant over the review period. Examples include PPRP project funding, Responsive RAs, IPS, Fellowships etc. The panel is only interested in support which has been obtained for equipment, consumables, travel and staff posts directly involved in the programme; it is not necessary to detail any other items.
- iii. Concordat to Support the Career Development of Researchers: The applicant is required to report on how the concordat is being implemented within the context of the group.

4.7 Publications

4.7.1 A table of the group's publications accepted for publication or published from 1 January 2018 to 31 December 2020 should be provided in the following format:

Investigator	Number of refereed publications	Number of lead researcher refereed publications	Number of technical reports	Number of first author technical reports	Number of conference proceedings
A. N. Other1					
A. N. Other2 ¹					

1. Note: A.N. Other2 was on maternity/compassionate/sick leave from June-Dec 2018.
2. Technical reports are defined here as those specifically arising from instrument development, construction or analysis, which are refereed internally and publicly available.

4.7.2 For the purposes of the publications table 'Investigator' also includes Research Assistants as well as academics. The second column, 'Number of lead researcher refereed publications' should be the subset of publications from the first column in which the investigator has led the research. In the case where there is a justifiable career break such as a period of maternity leave, or extenuating circumstances, a footnote should be added as shown above.

4.8 Data management plan

4.8.1 Applicants are required to provide a data management plan, details of which can be found in the STFC [Research Grants Handbook](#).

Proposals must include an acceptable data management plan before a grant will be awarded.

4.9 Form X

4.9.1 Groups should provide the details of staff posts by completing the Form X using the Excel workbook provided, and send it to the following email address: pp@stfc.ac.uk by 4 pm on **17 February 2021**.

4.9.2 Form X is intended to give the PPGP an indication of how the focus of effort for each staff post has changed since the previous review and how it will change through the period of the grant.

Separate Guidance is now provided for completing Form X, as well as an example spreadsheet.

4.9.3 Please note:

Form X must be completed by financial year (i.e. from April to March). Effort should be given as a percentage of FTE. The typical values for an academic in a full financial year are 60%, and 100% for a core or responsive post. Where some columns cover only half a financial year, the maximum effort percentage noted in these cells should be 50%.

5 Peer Review Process

5.1 Introducers

- 5.1.1 Two or three members of the PPGP will be allocated as “introducers” for each consolidated grant proposal. As in previous rounds, introducers will act to clarify any issues which are unclear in the grant proposal documentation.

5.2 Meetings with University Groups and Experiment PI’s

- 5.2.1 Meetings will be arranged with each applicant group to clarify any issues arising from the proposals. These will be held via video conference, during the period April – May 2021. The meeting will involve STFC, Introducers, the PI and key applicants (with no more than 4 university members of staff expected to be present). The purpose of these meetings is clarification to help the introducers to fully understand the grant proposal and is not an opportunity to re-make the science case. A list of questions requiring clarification will be sent in advance of the meeting, and the group will be required to provide a brief written response following the meeting.
- 5.2.2 On occasion, staff changes take place following the proposal submission. The clarification meeting is the ideal opportunity for the additional information to be provided. If changes do occur, please contact the Office as soon as possible. The latest date that STFC will be able to accept revised information will be **18 June 2021**.
- 5.2.3 Meetings will also be arranged with the Experiment PI’s.

5.3 Reviewers

- 5.3.1 The reports on projects will be sent to international reviewers for assessment. In view of the number of projects per group, rather than nominate a single reviewer on the proposal form, applicants are invited to send reviewer nominations for each project to pp@stfc.ac.uk. The PPGP will take the nominations into consideration when assigning reviewers, but it is not guaranteed that the nominated reviewers will be used.

5.4 Applicants response to reviewers’ comments

- 5.4.1 Following the reviewers process, applicants are then given the opportunity to see and comment on the reports via the JeS system.

5.5 Peer review meeting

- 5.5.1 A peer review meeting will take place to consider the consolidated grant proposals and make recommendations on the programme to Science Board and the STFC Executive.

5.6 Assessment criteria

- 5.6.1 The PPGP will assess all proposals in accordance with the assessment procedures set out in the STFC [Research Grants Handbook](#).

5.7 Cost revision following review

- 5.7.1 If, as a result of the PPGP review of the grants, a reduction is recommended in resources on a proposal, in some instances it may be necessary for STFC to contact the University to re-calculate the Estates and Indirect costs, but this will only be applicable where Long Term Attachment is included, and in some instances to clarify support staff details. Please note this will not be the norm.

6 New Applicant Funding

6.1 New Applicants Scheme

- 6.1.1 Newly appointed academic members of staff (lecturers or lecturer equivalent fellows) who have joined a department between grant reviews may exceptionally apply separately for support. This will potentially allow them to begin to establish a research programme on appointment. If grant funding is agreed, funding will be awarded as a separate grant to the department's existing consortium or consolidated grant.
- 6.1.2 It should be noted that the number of awards is likely to be limited and funding will be extremely competitive. Where awards are made it is likely to be at the level of Travel, Consumables, Computing and Secretarial Support (4.6.7)

6.2 Eligibility

- 6.2.1 Applicants may not be funded on more than one grant. For example, if an individual transfers from another university, they cannot hold resource on both a new applicant grant, and a consolidated grant at their previous institution.
- 6.2.2 Applicants must be employed on a full or part-time basis as academic members of staff at the grant-holding University by the start date of the new applicants grant. Note that the usual eligibility rules apply – please see the STFC [Research Grants Handbook](#).
- 6.2.3 Applicants will need to demonstrate that there are insufficient funds within the flexibility of the existing grant to support their research.

6.3 Terms of the scheme

- 6.3.1 Applicants must be the sole investigator.
- 6.3.2 Applicants can only apply once at any institution for a new applicant award.
- 6.3.3 Applicants can apply for funding for a minimum of a year and a maximum of three years up to the start of the department's consortium/consolidated grant. Applicants can apply for limited resources to allow the applicant to begin to establish a research programme.
- 6.3.4 The relevant grant panel will assess applications against the same criteria as the consolidated grant proposals (and funding will come from the appropriate grants line); however, research potential in addition to track record will be taken into account.
- 6.3.5 Grants are not renewable and cannot be extended.

6.4 Proposals

- 6.4.1 Applicants should submit a one-page pre-proposal for consideration by the executive in consultation with the relevant grant panel.
- 6.4.2 Requests will be considered under urgency procedures.
- 6.4.3 The pre-proposal should briefly set out the circumstances, explaining why a new applicant proposal is appropriate, and how the application matches the eligibility criteria set out above.
- 6.4.4 The pre-proposal should also briefly sketch the nature and strength of the scientific case that would be described in full if permission for a full proposal is given.
- 6.4.5 The pre-proposal should provide an indication of the requested resources.
- 6.4.6 The pre-proposal should be accompanied by a brief letter from the Principal Investigator of the consolidated grant held by the department concerned, confirming the employment status and timing, and explaining carefully why the new member of staff's research cannot be supported using the spending flexibility allowed within the existing grant.
- 6.4.7 If the case for funding is considered to be potentially a high priority, applicants will be advised of next steps.

PART B: PPGP guidelines for bids for experiment maintenance and operations (M&O), travel and technology department effort requests

7 Experiment submissions

7.1 STFC approved experiments

- 7.1.1 Applications will be accepted from experiments which are either already in or are about to enter the exploitation phase. This may include STFC approved experiments, e.g. ATLAS, CMS, LHCb, LZ, Mu2e, Mu3e, T2K, SBND, and SNO+, as well as other experiments seeking exploitation phase support (see 7.2).
- 7.1.2 The application must be made to the PPGP by the UK spokesperson for the experiment on behalf of the UK experimental collaboration, and **the collaboration must state whether the awarded funds are to be administered by the collaborating universities, or by STFC through RAL**. If funding is to be held by STFC then please identify an STFC budget holder to administer the funding on behalf of the collaboration.
- 7.1.3 The closing date for all written applications is: 4 pm on **2 February 2021**.
- 7.1.4 The PPGP will review and assess each of the applications, taking into account the strategic priorities and input from STFC, to determine the level of award of funds and posts in support of each experiment.
- 7.1.5 The experiment submissions should focus on providing full justification for each of the requests for travel, M&O and TD technical support, rather than an extended description of the science.
- 7.1.6 The university M&O tasks and FTE required should be numbered, for reference in the group proposals.
- 7.1.7 A 'caretaker' will be allocated from the membership of the PPGP to each experiment. Their duty will be to clarify any issues or questions arising from the experimental submission.
- 7.1.8 A clarification meeting will be arranged via Zoom in order for the Panel Caretakers to speak to the experiment UK spokesperson (or a nominee) in order to address any queries arising from the Experiment Submission
- 7.1.9 Provisional allocations for travel and M&O for FY 2022/23 were made by the PPGP in 2018. The new application covers the period April 2022 to March 2026 and is for:
- Confirmation or adjustment of the provisional allocation for FY 2022/23
 - Firm allocation of funds for the financial years 2023/24 and 2024/25
 - Provisional allocation of funds for FY 2025/26

Note that some experiments that were awarded funding in the 2018 consolidated grant will have received their allocation for 2022/23 and so STFC may make adjustments for that in a future award.

7.1.11 For costing, experiments should assume exchange rates of 1.20 CHF, 140 JPY, 1.30 USD, and 1.12 EUR.

7.2 Other experiments

7.2.1 For experimental activities being proposed that are not currently supported by STFC or not part of its currently approved programme (i.e. where STFC is not a signatory to the experiment MoU), for example, participation in a new experiment, an application may also be submitted to assist the PPGP with its evaluation.

7.2.2 Experiment submissions which fall into this category will be considered by the panel on their merits and may be funded if justified by the quality of science proposed. For these activities, it is expected that only a few, excellent proposals will be funded, and that funding will not create any further, ongoing financial or legal commitments beyond the period of the award.

7.3 Guidelines for written submissions

7.3.1 Each experiment should submit a written case for support. Responsive posts should be anonymised, using the same convention as the group submissions. The body of the report should be divided into two Sections, A and B. Section A should contain a report on work since 1 January 2018. Section B should set out the future programme of the experiment. The report should highlight the UK contributions to the experiment over the period of this consolidated grant round and focus on the cost justification for the requested funds.

7.3.2 The maximum total length of the report (in 12-point type, excluding appendices), is as follows:

- STFC-approved experiments: not more than 10 pages; (please note, the large experiments should contact the Office if they have problems with the page limits)
- other experiments (not currently supported): not more than 5 pages; if appropriate addressing Section B only.

7.3.3 Section A of the report should contain:

- a brief overview of the status of the experiment, a summary of the data taken, and, where appropriate, the accelerator or facility used;
- brief highlights of the physics results with major UK involvement, and a description of the UK contributions, including a list of UK personnel in experiment-wide coordinating roles since 1 January 2018;
- the status of the UK-funded items (hardware and software) and how these items are performing;

- A summary of the support awarded to the experiment submission in the previous Consolidated Grant round, and how this was spent.

7.3.4 Section B of the report should contain:

- A brief overview of the future programme of the experiment, highlighting physics goals and future UK exploitation activities;
- the requirement for effort in the universities/STFC laboratories to fulfil detector operation and maintenance obligations, with reference to the numbered list in Appendix (b) (7.3.5). RAL PPD baseline staff effort, which is not funded through the grants round, should be identified separately. The level of all such effort requested should be justified, as it will be used as one input in consideration of the level of experiment support, both for M&O and for bids for posts from the universities/STFC;
- a detailed justification of the bid for UK experiment M&O and travel, and STFC Technology Department effort. This bid should cover the period from April 2022 to March 2026. Bids for Category A costs for the LHC experiments are not required; it is expected that bids for category B costs will be justified.
- any Statement of Interests (SOI) submissions to Science Board in the next four years for new hardware, upgrades or computing resources. This is useful information for STFC planning.
- for participation in new experiments or ones that are not currently STFC-approved, a timeline for seeking strategic approval (i.e. through submission of a Sol) should be given.
- the experiments are requested to provide 90% and 80% descoping scenarios for the funding requested here. There will be an opportunity for the experiment PI to interact with the panel introducers for clarification.

7.3.5 In addition to the written report, the following appendices are required. These do not count against the page limit.

- a) a numbered list of UK commitments to maintenance and operation (M&O) of the detector, specifying FTE required, over the period April 2022 to March 2026;
- b) a short justification of the requested long-term-attachments, including a report on the number awarded vs. used in the previous Consolidated Grant round. Note that the PPGP will allocate a total sum for travel, and the declaration of named individuals will not affect the flexibility of the spokesperson to re-assign funds after the final award has been made;
- c) the fully completed Excel workbook detailing the funds requested from April 2022 to March 2026 and, for non-ring-fenced periods of projects, the outturn over the past two years. The individual workbooks will be supplied by STFC to each UK experimental spokesperson.

7.3.6 The written report and completed Excel workbook should be sent to the STFC Particle Physics group email: pp@stfc.ac.uk as email attachments.

8 Other Useful Information

8.1 Cross-disciplinary or cross-council proposals

- 8.1.1 For advice on cross-disciplinary or cross-Council proposals please see:
<https://www.ukri.org/funding/how-to-apply/applications-across-research-council-remits/>

8.2 Unconscious bias and the peer review framework

- 8.2.1 Details relating to equality and diversity can be found at:
<http://www.stfc.ac.uk/funding/promoting-equality-and-diversity/>
- 8.2.2 Unconscious bias information can be found here:
<https://stfc.ukri.org/files/unconscious-bias-briefing/>
- 8.2.2 Peer Review framework information can be found on the [STFC Website](#).
- 8.2.3 Data Management Review Guidance: <https://stfc.ukri.org/funding/research-grants/peer-review-and-assessment/data-management-review-guidance/>

8.3 Research Fish

- 8.3.1 Details related to Research Fish can be found on the [STFC Website](#).