User Support Programme Space Research (GO)

Use of space infrastructure for earth and planetary sciences

Call for proposals

Science

(Please note that the Dutch version of this call is the leading legal document. No rights can be derived from the English translation.)

Contents

1 Introduction

1.1 Background

The aim of the User Support Programme Space Research (GO) is to provide support to researchers working in the Netherlands during the (preparation for) use of infrastructure in space for the purpose of high quality scientific research. The programme is open to excellent research in the areas of earth observation and planetary research. This document describes the programme and contains information on how to apply for a grant.

The NWO Domain Science (ENW) is responsible for this programme. The Netherlands Space Office (NSO) is responsible for the realisation and day-to-day management of the programme. All organisational and administrative issues are dealt with via the NSO (see 5.1).

1.2 Available budget

The User Support Programme Space Research is financed by the Ministry of Education, Culture and Science. For the period 2017-2019 a budget of 7.2 M€ is available for three calls.

For this 2019 call a maximum budget of 2.4 M€ is available. Only applications that qualify as excellent or very good are eligible for funding. This could mean that the available budget for this call is not completely used.

1.3 Validity of the call for proposals

This call for proposals is valid until the closing date **9 January 2020**, 14:00 hours CE(S)T.

Please note: The closing date for the compulsory pre-proposals is **7 November 2019**, 14:00 hours CE(S)T.

2 Aim

2.1 Objective

Various national and international space organisations and institutes have realised and maintain an advanced and diverse infrastructure in space. This space infrastructure, including the data/signals obtained from it, is available for scientific and other users. The Netherlands also contributes to the construction and maintenance of this infrastructure. NWO, together with the Ministry of Education, Culture and Science, wants to encourage the use of this infrastructure by Dutch researchers for the benefit of science and society. Therefore, the aim of the User Support Programme Space Research is:

To provide support to researchers working in the Netherlands with the (preparation for) use of infrastructure in space for the purpose of high-quality scientific research.

Within this aim, the programme is open to excellent earth observation research and planetary research.

2.2 Focus

In accordance with the aim of the programme, as stated above, the following conditions apply (in the given order):

1. The proposed research will make direct use of space infrastructure;
2. The proposed research fits within one of the priority areas: earth observation research or planetary research.

1. Use of space infrastructure
The User Support Programme Space Research is part of the Dutch space policy. Encouraging the use of space infrastructure for the benefit of science and society is one of the priorities of this policy. The User Support Programme Space Research is therefore only open for scientific research that will make direct and substantial use of the space infrastructure and the primary data/signals it produces.

'Substantial use' refers to the extent to which the selected data/signals are relevant to the planned research, rather than to the total amount of data/signals used. 'Direct use' refers to the use of original or 'primary' data: data which have not yet been irreversibly influenced or changed, i.e. raw data or (geo)physical variables directly derived from raw data. The use of so-called 'secondary' data, such as further derived and/or combined data (i.e. data not exclusively originating from space infrastructure), literature values, or datasets consisting of simulated results, is seen as 'indirect use'.

This space infrastructure includes scientific and operational satellites and space vehicles that are managed by national and international space agencies such as ESA, NASA, JAXA, CNES, ISRO, CNSA and DLR, international institutional organisations such as the EU and EUMETSAT, and/or commercial providers. The space infrastructure stated is understood to include (a) (currently or in the past) existing space infrastructure, and (b) planned space infrastructure, which is being developed within a programmatic framework or is at least being considered in a peer-review process.

2. Thematic priorities
The User Support Programme Space Research is only open for scientific research in the areas of earth observation and planetary research, both of which are scientific priorities in the current Dutch space policy.

Earth observation research

The observation of the earth from space offers the possibility to obtain data about land surfaces and vegetation, oceans and icecaps, weather and climate, air quality, the inside of the Earth and more. Using this information, processes and changes in – parts of – the 'System Earth' can be studied, modelled and interpreted. This provides insight into the state and function of the 'System Earth' and can be used to provide evidence for future scenarios. The usefulness of satellite instruments for scientific research, specifically in earth sciences is undisputed and both data from satellites and the knowledge acquired via scientific research find their way into operational, societal and commercial applications (as elaborated in the Knowledge Utilisation section below).

Within the theme earth observation research, the User Support Programme Space Research is open to subjects in the areas geosphere, hydrosphere, atmosphere, cryosphere, biosphere and anthroposphere, as well as research where these areas intersect.

Planetary research

Planetary research is a prime example of an interdisciplinary field. It shares common ground with spaceflight and astronomy (observations), geophysics (modelling), water and ice (hydrology and glaciology), atmosphere (composition and wind interaction with the surface), geology, chemistry and biology. With the continuation of the User Support Programme Space Research in 2011, the Ministry of Education, Culture and Science established the theme planetary evolution and habitability. The research for this theme is limited to our solar system.

Within scientific research, a trend towards additional multidisciplinary and interdisciplinary efforts is noticeable, not only within the earth sciences under the heading Earth System Science, but also for the combination of earth observation and planetary research. As both subjects are part of the User Support Programme Space Research, themes that combine these two areas are also possible.

2.3   Knowledge utilisation

General

Since 2009, NWO has pursued a concrete policy that aims to stimulate the transfer of knowledge generated with the help of funding from NWO. This transfer can take place to other scientific disciplines as well as to users outside of science (industry/society). The knowledge utilisation policy is mainly targeted at increasing researchers' awareness of knowledge utilisation. NWO therefore requests all researchers applying for funding to provide an explanation regarding the possible knowledge utilisation of their project by means of answering several questions (for example: how will knowledge utilisation be implemented and how does the researcher intend to facilitate knowledge utilisation?). This explanation is one of the assessment criteria.

NWO realises that the possibilities for knowledge utilisation differ per discipline and that some research projects have few if any opportunities for (direct) knowledge utilisation. In this case, an applicant should explain why no knowledge utilisation can be expected for his or her project.

Space Research

From the beginning of the space age, space infrastructure has been used as a source of information in various scientific fields of research, as well as for applications that meet the information requirements of governments, institutional organisations, companies and the general public. Many of these space infrastructure-based applications for science, the economy and society, make use of scientific knowledge accumulated in the past, on the use, processing and interpretation of data and signals of satellites. In view of the strongly increasing availability of space infrastructure (and the data/signals originating therefrom), it is to be expected that many new possibilities for the application of scientific knowledge, acquired using the GO programme (both in earth observation and planetary research), will arise, to the benefit of further scientific research (in various fields of expertise) and the response to economic and societal questions. Examples are: climate, security, origin and evolution of life, wellbeing and prosperity,

environment, sustainable Earth, etc. This demand for knowledge originating from the GO programme on both areas of earth observation and planetary research, can also emerge from research questions of the Dutch National Research Agenda, for example on the themes building blocks of matter, fundaments of space, water, quality of the environment, origins of life, smart liveable cities, Sustainable Development Goals, energy transition and sustainable food production. Knowledge utilization of GO can also be relevant in the context of mission-driven topsector and innovation policy on the themes of energy transition and sustainability; agriculture, water and food; and security.

3 Guidelines for applicants

3.1 Who can apply

Full, associate and assistant professors and other researchers with a comparable appointment can submit an application if they:

- are employed (i.e. hold a salaried position) at one of the following organizations:

  – Universities established in the Kingdom of the Netherlands;
  – University medical centres;
  – NWO and KNAW institutes;
  – the Netherlands Cancer Institute;
  – the Max Planck Institute for Psycholinguistics in Nijmegen;
  – researchers from the DUBBLE Beamline at the ESRF in Grenoble;
  – NCB Naturalis;
  – Advanced Research Centre for NanoLithography (ARCNL);
  – Princess Máxima Center;
  – Royal Netherlands Meteorological Institute[1]
  – UNESCO-IHE Institute for Water Education[1].

- and also have an appointment period for at least the duration of the application procedure and the entire duration of the research for which the grant is being applied for. Personnel with a zero-hour appointment is excluded from applying.

An exception to the required duration of appointment can be made for:
- applicants with a "tenure track" appointment that does not cover the entire duration of the project. The applicants should then demonstrate by means of a letter that adequate supervision is guaranteed for the entire duration of the research for all researchers that they request funding for.

The NWO Grant Rules 2017 and the conditions below apply to all applicants[2]:
  o Applicants may not apply for a position for themselves.
  o Per applicant only one application can be submitted each year (as main applicant).
  o An application may be resubmitted once, provided that a substantial correction or addition was made in reaction to the previous assessment.
  o When applying for a PhD student (AIO), the research group must include a promotor. The promotor does not need to be the main applicant.
  o A grant is always applied for by a single applicant, with whom correspondence will be maintained.

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[1] Researchers from these knowledge institutions can submit an application if they are collaborating with a university within the project, which should be clear from a personnel or material contribution to the project from this university.

[2] "Applicants" refers to both main applicants and co-applicants.

3.2   What can be applied for

Within this call, applicants can request funding for a PhD student or a postdoc and material costs directly related to expenses that are necessary for the realisation of the research described in the application. The requested funding may not exceed the maximum of € 300,000. You should only apply for funding that is vital for carrying out the research and provide a clear motivation.

Budget module	Maximum amount
PhD	1 position, in accordance with VSNU or NFU salary tables
or	or
Postdoc	1 position, in accordance with VSNU or NFU salary tables
Material budget	€ 15.000 per year per fte scientific position
Money follows Cooperation	Less than 50% of the total requested budget

Explanation of budget modules for personnel

Funding for the salary costs of personnel who make a substantial contribution to the research can be applied for. Funding of these salary costs depends on the type of appointment and the organisation where the personnel are or will be appointed.

– For university appointments, the salary costs are funded in accordance with the VSNU salary tables applicable at the moment the grant is awarded (www.nwo.nl/salary-tables).
– For university medical centres, the salary costs are funded in accordance with the NFU salary tables applicable at the moment the grant is awarded (www.nwo.nl/salary-tables).
– For personnel from universities of applied sciences and other institutions, the salary costs are funded on the basis of the collective labour agreement salary scale of the employee concerned, based on the Handleiding Overheidstarieven 2017.
– For the Caribbean Netherlands, the Dutch government employs civil servants on Bonaire, Sint Eustatius and Saba under different conditions than in the European part of the Netherlands. (https://www.rijksdienstcn.com/werken-bij-rijksdienst-caribisch-nederland/arbeidsvoorwaarden)

For the budget modules "PhD" and "Postdoc", a one-off individual bench fee of € 5,000 is added on top of the salary costs. This bench fee is intended to encourage the scientific career of the project employee funded by NWO. Remunerations for bursary PhD students at a Dutch university are not eligible for funding from NWO.

The available budget modules are explained below.

PhD (including MD-PhD)

A PhD is appointed for 1.0 fte for a duration of 48 months. The equivalent of 48 full-time months, for example an appointment of 60 months for 0.8 fte is also possible. If a different duration of appointment is considered necessary for the realisation of the proposed research, then as long as this is properly justified, the standard time can be deviated from. However, the duration of appointment must always be at least 48 months.

Postdoc

The size of the appointment of a postdoc is at least 6 full-time months and at most 48 full-time months. The size and duration of the appointment is at the applicant's discretion, but the appointment is always for at least 0.5 fte or for a duration of at least 12 months. The product of fte x duration of appointment should always be a minimum of 6 full-time months. The material budget is available to cover the costs of a more limited appointment of a postdoc.

Explanation of budget module Material

For each fte scientific position (PhD, postdoc) applied for, a maximum of € 15,000 material budget can be applied for per year of the appointment. Material budget for smaller appointments can be applied for on a proportionate basis and will be made available by NWO accordingly.

The applicant is responsible for distributing the total amount of material budget across the NWO-funded personnel positions. The material budget that can be applied for is specified according to the three categories below:

Project-related goods/services

– consumables (glassware, chemicals, cryogenic fluids, etc.)
– measurement and calculation time (e.g. access to supercomputer, etc.)
– costs for acquiring or using data collections (e.g. from Statistics Netherlands), for which the total amount may not be more than € 25,000 per proposal
– access to large national and international facilities (e.g. cleanroom, synchrotron, etc.)
– work by third parties (e.g. laboratory analyses, data collection, etc.)
– personnel costs for the appointment of a post-doc and/or non-scientific personnel for a smaller appointment size than those offered in the personnel budget modules.

Travel and accommodation costs for the personnel positions applied for

– travel and accommodation costs
– conference attendance (maximum of two per year per scientific position applied for)
– fieldwork
– work visit

Implementation costs

– national symposium/conference/workshop organised within the research project
– costs for Open Access publishing (solely in full gold Open Access journals, registered in the "Directory of Open Access Journals" https://doaj.org/)
– data management costs
– costs involved in applying for licences (e.g. for animal experiments)
– audit costs (only for institutions that are not subject to the education accountants protocol of the Ministry of Education, Culture and Science), maximum € 5,000 per proposal; for projects with a duration of three years or less, a maximum of € 2,500 per proposal applies.

Costs that cannot be applied for are:
– basic facilities within the institution (e.g. laptops, desks, etc.);
– maintenance and insurance costs.

If the maximum of € 15,000 per year for each fte position is not sufficient for the realization of the proposed research, it may be deviated from, as lons as this is properly motivated.

Explanation of the budget module Money follows Cooperation (MfC)

The module Money follows Cooperation provides the possibility of realising a part of the project at a publicly funded knowledge institution outside of the Netherlands.

The applicant must convincingly argue how the researcher from the foreign knowledge institution will contribute specific expertise to the research project that is not available in the Netherlands at the level necessary for the project. This condition does not apply if NWO has concluded a bilateral agreement concerning Money follows Cooperation with the national research council of the country where the foreign knowledge institution is located.

The budget applied for within this module cannot be more than 50% of the total budget applied for.

A researcher from the foreign institution should satisfy the conditions set for co-applicants in 3.1 of this call for proposals, with the exception of the condition that the co-applicant should be employed in the Kingdom of the Netherlands.

The applicant receives the grant and is responsible for transferring the amount to the foreign knowledge institution and for providing accountability for the MfC part of the grant.

The exchange rate risk lies with the applicant. Therefore, gains or losses due to the exchange rate are not eligible for funding. The applicant is responsible for:
- The financial accountability for all costs in both euros and the local currency, for which the exchange rate used must be visible;
- a reasonable determination of the size of the exchange rate. If requested by NWO, the applicant must always be able to provide a description of this reasonable determination.

NWO will not issue any funding to co-applicants in countries that fall under national or international sanction legislation and rules. The EU Sanctions Map (www.sanctionsmap.eu) is guiding in this respect.

3.3   When can applications be submitted

The deadline for the compulsory pre-proposals is **7 November 2019**, 14:00 hours CE(S)T.

The deadline for the submissions of full proposals is **9 January 2020**, 14:00 hours CE(S)T.

When you submit your application to ISAAC you will also need to enter additional details online. You should therefore start submitting your application at least one day before the deadline of this call for proposals. Applications submitted after the deadline will not be taken into consideration.

3.4   Preparing an application

The following procedure applies to both the pre-proposal phase and the full proposal phase:
- Your grant application consists of two parts: a fact sheet and the application form.
- You complete the fact sheet directly in NWO's electronic application system (ISAAC).
- The application form can be found on the grant page for this programme on
the NWO and NSO websites. As soon as you have completed it you can add this form to the fact sheet as a PDF file.
- The application should be written in English in a standard font (references may be in a smaller font). References to external documents (with the exception of references to literature) should be avoided. Do not place any bookmarks in the PDF as these will hinder the processing of your application. To ensure a good processing of your application, the PDF documents may not in any way be protected.

- Additional files (e.g. recommendation letters, reprints, separate curricula vitae, etc.) will not be forwarded to the referees and assessment committee.

Please note that submission of a pre-proposal is compulsory. Proposals without a corresponding pre-proposal will not be accepted. Incomplete application forms or exceeding page limits may lead to your application being declared inadmissible. When writing your full proposal please bear in mind that it will be read by expert referees as well as a more broadly composed international assessment panel.

See the Annex for an explanation of the items on the application form.

3.5 Conditions on granting

The NWO Grant Rules 2017 and the Agreement on the Payment of Costs for Scientific Research apply to all applications.

Start project

If the proposal is awarded funding, the main applicant will be designated as project manager. The project manager will receive the administrative guidelines regarding funding of scientific research projects. Within six months of the project being awarded funding, the research must start with the appointment of the PhD or postdoc. If this cannot be realised on time then the funding awarded can be withdrawn.

Annual progress

In case the annual progress report and/or annual project review shows that the activities for which the grant was awarded have not been or will not be carried out, or have not been or will not be carried out in full, NWO may decide to withdraw the awarded funding.

Open Access

All scientific publications resulting from research that is funded by grants derived from this call for proposals are to be immediately (at the time of publication) freely accessible worldwide (Open Access). There are several ways for researchers to publish Open Access. A detailed explanation regarding Open Access can be found on www.nwo.nl/openscience-en.

Data management

Responsible data management is part of good research. NWO wants research data that emerge from publicly funded research to become freely and sustainably available, as much as possible, for reuse by other researchers. Furthermore NWO wants to raise awareness among researchers about the importance of responsible data management. Proposals should therefore satisfy the data management protocol of NWO. This protocol consists of two steps:

1. Data management section

The data management section is part of the research proposal. Researchers should answer four questions about data management within their intended research project. Therefore before the research starts the researcher will be asked to think about how the data collected must be ordered and categorised so that it can be made freely available. Measures will often need to be taken during the production and analysis of the data to make their later storage and dissemination possible. Researchers can state which research data they consider to be relevant for storage and reuse.

2. Data management plan

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After a proposal has been awarded funding the researcher should elaborate the data management section into a data management plan. The data management plan is a concrete elaboration of the data management section. In the plan the researcher describes whether use will be made of existing data or a new data collection and how the data collection will be made FAIR: Findable, Accessible, Interoperable, Reusable. The plan should be submitted to NWO via ISAAC within a maximum of 4 months after the proposal has been awarded funding. NWO will approve the plan as quickly as possible. Approval of the data management plan by NWO is a condition for disbursement of the funding. The plan can be adjusted during the research.

Further information about the data management protocol of NWO can be found at www.nwo.nl/datamanagement.

Nagoya Protocol

The Nagoya Protocol became effective on 12 October 2014 and ensures an honest and reasonable distribution of benefits emerging from the use of genetic resources (Access and Benefit Sharing; ABS). Researchers who make use of genetic sources from the Netherlands or abroad for their research should familiarise themselves with the Nagoya Protocol (www.absfocalpoint.nl). NWO assumes that researchers will take all necessary actions with respect to the Nagoya Protocol.

3.6   Submitting an application

An application can only be submitted to NWO via the online application system ISAAC. Applications not submitted via ISAAC will not be taken into consideration. The submission of **a pre-proposal is compulsory**. Full proposals without a corresponding pre-proposal **will not be accepted**.

A principal applicant must submit his/her application via his/her own ISAAC account. If the principal applicant does not have an ISAAC account yet, then this should be created at least one day before the application is submitted to ensure that any registration problems can be resolved on time. If the principal applicant already has an NWO-account, then he/she does not need to create a new account to submit an application.

When you submit your application to ISAAC you will also need to enter additional details online. You should therefore start submitting your application at least one day before the deadline of this call for proposals. Applications submitted after the deadline will not be taken into consideration.

For technical questions please contact the ISAAC helpdesk, see 5.1.2.

4 Assessment procedure

4.1 Procedure

The first step in the assessment procedure is to test whether an application is admissible. Only those proposals that satisfy the criteria stated in section 2.2 and chapter 3 are admissible and will be taken into consideration.

The NWO Code for Dealing with Personal Interests applies to all persons involved in the assessment and/or decision-making process.

4.1.1 Pre-proposal

The first eligibility check of all submitted pre-proposals is carried out by NSO and concerns the admissibility of the application. This is done using the conditions stated in section 2.2 and chapter 3 of this call for proposals. NSO may contact applicants in case of questions.

4.1.2 Eligibility of the full proposals

The first step in the assessment procedure is to determine the eligibility of the full proposals. The conditions stated in this call for proposals and on the application form will be applied and if it is determined that an application is not administratively complete, the applicant will be given the opportunity to rectify this shortcoming within a period of 48 hours so that the application can still be admitted to the assessment process.

NWO will not consider any applications to which at least one of the following aspects applies:
• the application has not been completed or has been completed incorrectly and the applicant has not or has not on time satisfied the request to submit a corrected application;
• the application is not in English;
• the main applicant does not satisfy the conditions provided in 3.1;
• the application does not concur with the themes of this call;
• the application was not submitted via ISAAC;
• the application was submitted after the deadline;
• there is no corresponding pre-proposal for the application;
• the requested budget does not satisfy the conditions stated in 3.2.

4.1.3 Assessment of the full proposals

The assessment of the full proposals consists of two phases.

Phase 1: Advice from referees and rebuttal.
For each full proposal at least two international referees will issue an advice based on the applicable criteria (see 4.2). The applicant will be given the opportunity to respond to the anonymized advice from the referees in writing. The rebuttal must be written in English, addressed to the assessment committee and cannot exceed the maximum of two pages A4. Applicants will be given five working days to submit their rebuttal.

Phase 2: Assessment by the assessment committee.
The NWO Domain Science Board will appoint an independent assessment committee that will consider all eligible proposals. The assessment committee will consist of renowned scientists with expertise within the scope of GO and sufficient experience to act as generalist for the assessment of all proposals. The

assessment committee will be headed by an independent chair who supervises the process. The assessment committee is appointed after receipt of the applications.

The assessment committee will use the proposals, the comments from the referees and the rebuttal to reach an independent assessment of the proposals.

The role of the assessment committee differs from that of the referees because unlike the referees they see all of the proposals, referee comments and rebuttals. The assessment committee can therefore reach a different assessment from that of the referees.

The members of the assessment committee will discuss all of the proposals on the basis of the applicable criteria (see 4.2) during a meeting. This will result in an assessment advice for every proposal and a priority ranking.

The data management section in the application is not evaluated and hence not included in the decision about whether or not to award funding. However, both the referees and the committee can issue advice with respect to the data management section. After a proposal has been awarded funding the applicant should elaborate the data management section into a data management plan. Applicants can make use of the advice from the referees and committee when they write the data management plan. The project can start as soon as the data management plan has been approved by NWO.

NWO will award a qualification to all full proposals and will make this known to the researcher with the decision about whether or not the application has been awarded funding. Only applications that receive the qualification "excellent" or "very good" will be eligible for funding. For more information about the qualifications please see www.nwo.nl/en/funding/funding+process+explained/nwo+qualification+system.

4.1.4 Decision

The NWO Domain Science Board will decide about the allocation of funding, based on the recommendations of the assessment committee. The Domain Science Board reserves the right not to use all of the available budget if the minimum qualification criteria are not satisfied.

4.1.5 Schedule (tentative)

7 November 2019	Submission deadline pre-proposals
9 January 2020	Submission deadline full proposals
January-April 2020	Referees are consulted
Early May 2020	Applicants can submit a rebuttal
June 2020	Meeting of the assessment committee
July 2020	Decision of NWO Domain Science Board
July 2020	NSO informs the applicants about the decision

4.2 Criteria

The proposals will be assessed on the basis of three criteria.

Criterion 1: Scientific quality of the proposal
This includes aspects such as:
- clarity of the proposal, research question(s) and objective(s);
- scientifically innovative and/or groundbreaking elements;
- scientific approach: (challenges in) the approach and feasibility thereof;
- effectiveness in terms of proposed methodology.

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Criterion 2: Scientific and/or societal impact

This includes aspects such as:

- the importance of potential research results in the short and long term within the own field;

- strengthening the (inter)national position of the own research discipline;

- the extent to which the research contributes to a better utilization of the space infrastructure (for example through calibration/validation, data exploitation and/or algorithm development);

- knowledge utilisation (see also 2.3):

- knowledge utilisation within science: possible use and relevance of the generated knowledge in other scientific fields;

- knowledge utilisation outside of science: possible use and relevance of the generated knowledge for application in social, technical and/or economic use;

- the way in which knowledge utilisation is implemented/facilitated (concrete plan of approach);

- if little to no (direct) knowledge utilisation: clear explanation/justification why knowledge utilisation for this project is not to be expected.

Criterion 3: Quality of the research team

This includes aspects such as:

- the quality and scientific achievements of the research team insofar as relevant to a successful execution of the submitted proposal[3];

- a clear added value of the collaboration;

- a clear and effective organisational structure of the research team;

- appropriate expertise and (access to) the required equipment.

In the assessment the criteria will be weighted as follows:

Scientific quality of the proposal constitutes 40% of the total assessment score, the scientific and/or societal impact 40% and the quality of the consortium 20%.

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[3] The quality of the research group is related to, inter alia:

i. Research output

The value and impact of various forms of research output of the members of the research team. Output can consist of e.g. (peer reviewed) papers, other publications (such as e.g. (project) reports, articles, documentation), datasets, software- and hardware products, results of analyses, etc.

ii. Research position

The position and status of the members of the research team in their own domain, as well as the position and status of the collective team of members with respect to the research theme. The value and impact of relations and contacts in (inter)national collaborations are taken into account, as well as the extent to which the research team is prominent and leading.

5 Contact details and other information

5.1 Contact

5.1.1 Specific questions

For specific questions about User Support Programme Space Research (GO) and this call for proposals please contact:

> Netherlands Space Office (NSO)
> Ms Danielle Hollman
> P.O. Box 93144
> 2509 AC THE HAGUE
> Phone: +31 (0)88 042 45 44 or +31 (0)6 5023 1589
> E-mail: go@spaceoffice.nl

5.1.2 Technical questions about the electronic application system ISAAC

For technical questions about the use of ISAAC please contact the ISAAC helpdesk. Please read the manual first before consulting the helpdesk. The ISAAC helpdesk can be contacted from Monday to Friday between 10:00 and 17:00 hours CE(S)T on +31 (0)20 346 71 79. However, you can also submit your question by e-mail to isaac.helpdesk@nwo.nl. You will then receive an answer within two working days.

5.2 Other information

All information can also be found on the website of Netherlands Space Office: www.spaceoffice.nl/go.

6 Annexe(s)

Explanation of the questions on the application form

1a. Project title
Provide a (descriptive) project title of no more than 100 characters.

1b. Theme
Indicate the theme of application (earth observation or planetary research).

2a. Details of main applicant
Details of the main applicant, the research institute and the research school. Also, state the name and address of the responsible person at your institution (for example the scientific director of the institute or dean of the faculty).

2b. Alternative contact
Please state the name and address of the person who can provide further information about the application in the applicant's absence.

2c. Renewed application
Applications which have previously been assessed and rejected, are only eligible in case they have been substantially revised. If you have previously submitted an application for this research project which was rejected by NSO or NWO, please indicate which points of the application have been changed. Please also state the previous file number.

2d. Similar grant applications
In case you applied for any additional grant(s) for (part of) this project or a similar research topic from NWO or from any other institution/funding agency, please provide the details here.

3. Applying for
Please indicate whether you are applying for a PhD or postdoc position.

4. Duration of the project & Proposed starting date
Indicate the intended duration of the project and the proposed starting date.

5a. Composition of the research team
Please indicate who will be verifiably involved in carrying out the proposed research, including the personal support requested. Please give their surnames with initials, titles and specialisation. You should also state the nature of their involvement, such as day-to-day supervision, technical support, promotor, or advisor. When applying for a PhD position the 'promotor' (doctoral advisor) must be indicated here.

5b. Description of the research team (max. ½ page)
Explain the set-up of the research team, thereby paying attention to aspects such as:
- added value of the collaboration;
- appropriate expertise and (access to) the required equipment.
- position and status of the research team members in their own domain, as well as that of the collective team of members with respect to the research theme, taking into account e.g. relations and contacts in (inter)national collaborations and the extent to which the research team is prominent/leading;
- organisation of the research team.

6a. Scientific summary (max. 300 words)

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Please provide the scientific summary of the fact sheet with up to 300 words. This summary will be used to invite reviewers to assess your proposal, it should therefore have sufficient scientific content.

6b. Summary for the general public (in Dutch and English)
Please give a short summary in Dutch and English (each with a maximum of 50 words) of your application for the general public. If your application is awarded, this summary will be used for publicity purposes.

6c. Keywords
Provide six relevant keywords.

7. Description of the proposed study
7a. Science (max. 6 pages)
Please describe the proposed research and address the following aspects (include as subheadings in the text):
• (historical) background and position of the research in the relevant specialist area;
• research question(s) and objective(s) of the project proposal;
• scientific approach (including research plan, methodology and (technical) feasibility): indicate how the research is to be conducted and which methods and equipment will be used;
• innovative aspects: describe the originality and the innovative aspects of the research question and the proposed approach; indicate the importance of the project both within and beyond the relevant specialist area;
• scientific significance and impact: this should include at least i) the (short- and longer-term) importance of potential research results for the relevant scientific domain, ii) the extent to which the research can strengthen the (inter)national position of the relevant scientific domain, and iii) the extent to which the research contributes to a better scientific exploitation of space infrastructure;
• indicate how and why you will be using space infrastructure.

7b. Literature references
Please give a list of references including full bibliographical details, such as authors, title, journal. Other references if applicable.

8. Space infrastructure
Please indicate which satellite data or which space infrastructure will be used in this project. The space infrastructure must be (a) existing space infrastructure, or (b) planned space infrastructure, which is being developed within a programmatic framework or is at least being considered in a peer-review process. Please also indicate how you plan to gain access to the satellite data or space infrastructure.

9. Knowledge utilisation (max. 1 page)

9a. Knowledge utilisation within science
Possible use and relevance of the generated knowledge in other scientific fields

9b. Knowledge utilisation outside of science
Possible use and relevance of the generated knowledge for application in social, technical and/or economic use

NB: If little to no (direct) knowledge utilisation can be expected for this project, give a clear explanation/justification why not.

10. Timetable of the project (max. ½ page)
Indicate the schedule of the entire project, in time periods (no more than half a page). Specify the activities to be carried out as part of the project. Which tasks can be distinguished as those of the researcher requested, and how will they be timetabled? For a PhD position: when will the doctoral thesis be defended? It is important that doctoral research should be completed within the 4 years available. This is why there should be a realistic timetable. NWO requires the work plan to be framed in such a way that the experimental phase is completed after 3½ years and the writing of the thesis is started in good time, to enable the doctoral thesis to be defended at the end of the grant period.

11. Deliverables
Provide a detailed list of the expected deliverables of the project, e.g. publications, (video) presentations, software releases, demonstrators, etcetera.

12. Scientific embedding of the proposed research (max. ½ page)
Describe the relationship with national and international research programmes and the collaborations relevant to this project.

13. Data Management Section
For the completion of the section please contact the university library/intended repository/ICT Department of your institute or university. They can help you with the completion of the data section.
The data management section focuses on FAIR (findable, accessible, interoperable and reusable) data during and after the research (archiving). In this section, NWO understands 'data' to be both collected, unprocessed data as well as analysed, generated data. Under this all forms are conceivable; digital and non-digital (for example samples, completed questionnaires, sound recordings, etc.). NWO only requests storage of reusable relevant data. NWO assumes, in principle, that within different disciplines there is a widely held view about which data are relevant to store for re-use. See also: http://www.nwo.nl/en/policies/open+science/data+management+chapter.

14a. & 14b. Budget overview & specification and motivation of the requested material costs
See 3.2 for conditions!
In the table, state the number of research years for which the PhD or postdoc is requested. PhDs must be requested for 4 years, postdocs for up to 3 years.
Specify the requested goods/services, travel and accommodation costs and implementation costs. The applicant should argue why this expenditure is necessary for the research and why it cannot be paid by the relevant institution as part of the 'standard facilities package'. Standard office or laboratory equipment is not funded. If there is no (clear) motivation of the funds requested, the budget will not be granted.

15. Curriculum vitae
Give a brief CV of the main applicant and other members of the research group listed under item 5 (max. 1 page A4 per person, including a list of max. 10 relevant outputs). Separately added CV's will not be accepted!
Outputs can consist of e.g. (peer reviewed) articles, letters (to editors), books, book chapters, preprints, patents, working papers, proceedings, conference reports, software, codes and open access databases. The status of the output should be clearly given.

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