



SCAR External Performance Review



Annex 1. Evaluation criteria for SCAR Scientific Research Programmes

Reviewers should complete this page, expanding the text where necessary, but to no more than 2-3 pages of A-4 including this page.

Science quality. Recognising that the national science on which the research was based has already been peer-reviewed, the scientific highlights and published papers indicate that the internationally collaborative research stimulated by the programme has produced science that is **GOOD**.

SCAR AAA “sees its role...in the facilitation of new international projects, particularly involving nations that have not traditionally had a large presence in Antarctic astronomy”. The scientific work carried out under the auspices of SCAR AAA consequently focuses on site testing, which has undoubtedly significantly improved our knowledge of the astronomical qualities of Antarctic and Arctic sites (see references [4]-[8], [14], [16]-[17], [19]-[22]), and on demonstrations or forecasts of scientific capabilities that foreshadow more significant science to come (see [9]-[13], [15], [18]). These are all useful contributions towards SCAR-AAA’s stated goals, but the intrinsic value of the science is good rather than excellent.

Science importance/relevance/timeliness. Has the work advanced scientific understanding and been in accordance with the SCAR Strategic Plan (<http://www.scar.org/strategicplan2011/>)? **YES**.

As noted above, the science carried out under SCAR-AAA has clearly advanced our understanding of the value of Antarctic (and Arctic) sites to astronomy, quantifying key site properties of the high plateau sites and demonstrating their scientific potential for specific small-scale ‘demonstrator’ projects. This science is highly relevant to the SCAR Strategic Plan and to the specific mission undertaken by SCAR-AAA. It is also very timely ‘advance work’ that is aiding the development of new international scientific facilities. In this broader sense it is certainly important.

Data archival and access. Is the programme adequately addressing the issues of data archiving and data access, and are its data accessible to the wider community? **YES**.

The project provides the ‘SCAR-AAA site testing database’, which is certainly a valuable resource for the community interested in developing new facilities in Antarctica. At present the database just consolidates and provides access to relevant publications; the report notes that in future a key activity of SCAR-AAA will be extending it to include access to the data themselves. This would be a very valuable improvement, but one that may require significant additional resources; it would be worthwhile investigating whether this database might be cost-effectively implemented as a part of one of the Virtual Observatory projects or some other existing public database, in order to minimise the need to replicate infrastructures.

Outreach - Public/policy profile. Is this programme enhancing the public profile of SCAR? **YES**.

SCAR-AAA is enhancing the public profile of SCAR within the astronomical community and contributes useful input to policy decisions on Antarctic facilities, which is in accord with it

chosen role and goals. It does not particularly impact the broader public profile of SCAR, but that is not its remit.

Education. Is the work contributing to education about Antarctic science? **YES.**

As above, SCAR-AAA makes valuable contributions to the education of the astronomical community and policy-makers about the potential of Antarctic facilities, but not significantly to education of the wider public.

Building capacity across all SCAR Member countries. Has the programme contributed to building the capacity of countries with less well developed Antarctic programmes and/or early career scientists **MODESTLY.**

The statement above is true in so far as the countries with less well developed programmes have generally not yet chosen to build significant new capacity (with China being the potential exception, though still to be fully realised). However this does SCAR-AAA less than justice, since it has done an excellent job of providing the necessary scientific information to the astronomical communities and policy-makers in these countries – unfortunately, however, this has not yet been translated into significant new capacity building.

Value for Money. Considering that SCAR is only able to invest some \$20-25,000 per year in each SRP, the results indicate **EXCELLENT** value for money.

The scientific programmes performed under the auspices of SCAR-AAA, and the workshops, database and capacity-building efforts that it carries out, are highly appropriate to its mission, have provided valuable scientific information, and have put this information effectively into the hands of the wider astronomical community and scientific policy-makers. For the very modest investment made by SCAR, this seems to be excellent value for money.

Terms of Reference. To what extent do you feel the SRP has met the Terms of Reference given in Annex 2.

I cannot comment on SCAR-AAA's response to requests from the SCAR Executive Committee or its compliance with reporting guidelines, but in all other respects it would appear to be meeting the SRP Terms of Reference quite exactly.

A final, personal comment: From my own perspective, and in my own national community, SCAR-AAA's activities are valuable in informing and shaping the on-going debate about investing in astronomical facilities in Antarctica, which has not yet reached a proper conclusion. In this context, it would be a serious problem if SCAR-AAA's activities did not continue.