

Potential charges for consideration by the ANASAC

January 21 2008

1. Drafting of white papers for the Decadal Committee, supporting ALMA development

This item is one of the unsolicited recommendations made by ANASAC. The NRAO has submitted a letter of intent covering ALMA development, led by A. Wootten. The next step is to write one or more white papers aimed at specific science goals, with a due date of Feb 15. NRAO would appreciate ANASAC assistance with this process.

2. Provisions for allocation of ALMA observing time

This is the second of the self-nominated charges made by ANASAC. A discussion of this topic by ANASAC was begun by email in early January, leading to some revisions of the Richer/Lo outline by the Science Operations IPT at its f2f meeting in Santiago in mid-January. The recommendations of the IPT will be discussed by the ALMA Board and then the regional advisory committees will have an opportunity to review the plan further.

3. ALMA data processing computational resources

The 3rd self-nominated ANASAC charge concerns computational demands of offline data reduction. The data rate for ALMA will be an order of magnitude or more greater than experienced before by either NRAO or its users, therefore we will be in a new regime for data acquisition, storage, transfer and processing. The NRAO must begin planning for the build up of its data archiving facility, and the requirements for re-processing and post-processing of pipelined data by users. The ALMA project has investigated this issue to some extent, and several critical issues remain uncertain at this time, most critically the degree of parallelizability of key algorithms. We suggest that NRAO should gather relevant material on this topic for a presentation to ANASAC in the near future, at which point the charge may be more precisely defined.

4. Combining ALMA and EVLA science meetings

Many ALMA users are likely to find that their science projects will benefit from EVLA as well as ALMA data, since the two arrays can in many ways produce very complementary data over different but overlapping wavelength ranges. The recent EVLA workshop in Socorro was very successful, and highlighted the synergy of the arrays. NRAO therefore consults ANASAC for input regarding when it might be appropriate to transition the current ALMA meeting series to a more pan-facility format. We note that we have also been approached by the National Herschel Science Center (NHSC) to consider joint ALMA/Herschel science meetings.

5. NAASC end user documentation and support, and the challenges facing inexperienced users

The goal of the ALMA project is that ALMA be an instrument that is not seen as an expert-only facility, but as accessible as part of multi-wavelength studies by observers from many backgrounds. Nonetheless

the observing capabilities are extraordinarily complex and could be very intimidating to the non-expert user. NRAO would like to ask ANASAC to consider what kind of challenges the inexperienced user is going to face, when designing projects, developing observing proposals, and processing/analyzing data. In particular some use cases would be very helpful for designing NAASC documentation and the helpdesk support system.