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Dr. Wayne Van Citters
Division of Astronomical Sciences
National Science Foundation
4201 Wilson Blvd.
Arlington, VA 22230

Dear Wayne:

As you know, I'm chairing an ad hoc "Futures Committee" sponsored by Associated Universities, Inc. to make recommendations concerning future prospects for radio/millimeter/submm (RMS) science (see http://www.aui.edu/future_committee/). We intend to produce a report by the end of the year and we will keep you informed of our progress.

On June 16, 17, our committee met at Charlottesville immediately preceding the NRAO 50th anniversary symposium. We held two town hall meetings for the attendees of that symposium, one on Sunday June 17 and the other on Wednesday June 20. Vern Pankonin attended the meetings of our committee.

One issue came up repeatedly in discussions among the committee and with attendees of the NRAO symposium about which there is unanimous agreement. That issue is the support for US astronomers to undertake science associated with use of the ALMA facility in its early years of operation. It is timely because, as we understand, NSF-AST will recommend the ALMA operations budget to the NSB this Fall. The issue of adequate user support for data analysis and associated theory for major new facilities has been addressed in many venues including the last decade survey report ("Astronomy and Astrophysics in the New Millennium" – AANM, more recently by the AST Senior Review Committee, and in the attached report by the ALMA North American Science Advisory Committee (ANASAC). The AANM Report recommended (Executive Summary, p 5):

"To achieve the full scientific potential of a new facility, it is essential that, prior to construction, funds be identified for operation of the facility, for renewal of its instrumentation, and for grants for data analysis and the development of associated theory."

Specifically, the AANM report recommended (pp. 186 – 188) that NSF should include a grants program to support the development of instrumentation and data analysis in the budget plans for any new major astronomical facility for the first 5 years of operation. We note that the ANASAC report recommended an annual level of \$6 M/yr to support ALMA users.

Our committee and the community remain deeply concerned that, without such grant support, ALMA will not yield a scientific return for US astronomy that is commensurate with NSF's major investment in building and supporting the facility. We fully support the "open skies" policy, in which any astronomer in the world can compete on an equal playing field for observing time on major NSF RMS facilities. However, without adequate grant funding, US astronomers may find themselves disadvantaged in this competition compared to astronomers from ALMA partner countries who receive funds to support their use of these facilities from their home institutions or national organizations.

The exact mechanism by which the grant support is managed is a secondary consideration. It wouldn't matter much to the community whether the grants are provided to individual scientists directly by the NSF Astronomy Division, or indirectly through NRAO in conjunction with the ALMA proposal review process. The important thing is to ensure that US astronomers who win observing time on ALMA or undertake theoretical work critical to ALMA science have adequate resources to exploit fully ALMA's potential for transformational scientific discovery.

Yours truly,

A handwritten signature in black ink that reads "Dick McCray". The signature is written in a cursive, slightly slanted style.

Dick McCray

<http://jilawww.colorado.edu/~dick>