

NATIONAL SCIENCE FOUNDATION  
WASHINGTON, D.C. 20550

November 23, 1982

Dr. Robert W. Wilson  
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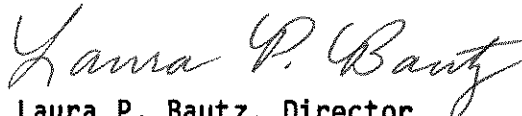
Dear Dr. Wilson and Co-Signatories:

Thank you for your letter of October 29 to F. S. Johnson and myself, describing the outcome of your meeting at Bell Laboratories to consider the future of millimeter wave astronomy in the United States. We appreciate being informed of your conclusion that a millimeter wave aperture synthesis instrument, capitalizing on technology at the Very Large Array (VLA), should be planned immediately because of its high scientific importance.

As most of you are aware, I have convened a Subcommittee of the NSF Astronomy Advisory Committee to advise on the future needs of millimeter- and submillimeter-wavelength astronomy. I am forwarding your letter to the Subcommittee for consideration. Its membership, which includes four of you, and its charge are enclosed. Their first meeting will be held on December 3, 1982, at the Foundation. The agenda includes a presentation and discussion of a mm-wavelength VLA.

Your overall outline for a scaled down VLA and brief enumeration of some of the significant scientific areas to be addressed are informative and helpful. Please keep us advised as you hold future meetings to study this instrument in more detail.

Sincerely yours,



Laura P. Bautz, Director  
Division of Astronomical Sciences

Enclosures

List of Signatories Attached

copy w/incoming to: F. S. Johnson  
Subcommittee Members

List of Signatories to October 29, 1982, Letter  
to F. S. Johnson and L. P. Bautz

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Dennis Downes  
Charles J. Lada  
Patrick Palmer  
Lewis E. Snyder  
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A Subcommittee of the NSF Astronomy Advisory Committee has been formed to advise on future needs of millimeter- and submillimeter-wavelength astronomy.

The Report of the Astronomy Survey Committee "Astronomy and Astrophysics for the 1980's" is a general outline for the scientific thrusts and funding needs for astronomy in the coming decade. Implementation of the recommendations in this Report is the responsibility of the funding agencies. As the funding climate changes and scientific emphases change, the Foundation must have mechanisms to reassess the priorities periodically.

Other major construction projects now have a higher priority than the 25-meter millimeter-wavelength telescope and this development imparts a significant perturbation on the 1980's outline: The Report of the Survey Committee assumes the 25-meter telescope would be constructed. It is essential to maintain the momentum in millimeter- and submillimeter-wavelength astronomy that has developed through pioneering efforts of U.S. scientists, and advice is needed on the alternatives available for enhancing the research opportunities in this field. Hence, a Subcommittee of the Astronomy Advisory Committee on Millimeter- and Submillimeter-Wavelength Astronomy is being convened.

The Subcommittee should examine the following questions in particular:

1. What are the emerging emphases in the science which is addressed by observations at millimeter and submillimeter wavelengths?
2. Are the millimeter- and submillimeter-wavelength facilities in the United States, at universities and National Centers, and abroad adequate for the science to be addressed?
3. Are the facilities surveyed above accessible to U.S. astronomers? If not, what should be done to improve the accessibility?
4. What new facilities and instrumentation are required to remedy inadequacies, and what are the relative priorities for implementation?

The Subcommittee is asked, if possible, to provide a final report with recommendations at the spring 1983 meeting of the Astronomy Advisory Committee.