

June 20, 1956

Dr. Marie A. Tave ,
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Dear Marie:

I have received your circular memorandum dated June 14th addressed to the members of the NSF Panel on Radio Astronomy and the copy of your letter of the same date to Dr. Seeger. It is indicated that I should comment briefly on both letters and to facilitate your work I shall circulate copies of my comments to all of the Panel and to Drs. Seeger, Hagg and Edmonson.

1. In your letter to the members of the Panel you make the points that AUI is basically a northeastern United States activity and that its Trustees are primarily interested in the atomic energy field. I have seen quite a good deal about the inner workings of AUI in the course of the past two years and I do not share those misgivings. At least half a dozen of AUI's Trustees - not counting its regular officers - have in the past year shown a profound personal interest in the problems of the National Radio Observatory and I have nowhere found any indication that anyone in AUI is inclined to favor the northeastern part of the United States over other sections, the middle West for example. The location of the site near Green Bank, West Virginia, insures equally ready access to the facility by workers from the Northeast, the Southeast and the Middle West. I do feel, however, quite strongly that operation by AUI must be acceptable to astronomers, radio astronomers and electronic physicists and engineers from all sections of the country that will participate actively in the National Radio Observatory and I hope that a scheme can be worked out satisfactory to all potentially really active participants in the work at Green Bank.

2. As chairman of the Committee that has advised AUI in the radio astronomy field, I have obviously had a good deal to do with the formulation of the report and I find it very encouraging that you express yourself so favorably in the second paragraph of your letter to Dr. Seeger on the main contents of the report. I hope very much that the praise contained in this paragraph will be transmitted shortly to Dr. Eberson, who has worked faithfully and very hard and with great skill on the many aspects of the preparation of the feasibility report.

3. I have no strong feelings with regard to the functions of the proposed Advisory Board, or the Visiting Committees, nor just who appoints them and I hope very much that satisfactory solutions to the remaining problems may be arrived at with a minimum of effort and expressed willingness from all sides to compromise if need be. To my mind the really important question is that the new facility should have as soon as possible a responsible and competent Director and a good nucleus for a future staff.

4. I have no strong feelings with regard to the planning for the future, either with respect to the 250-foot or the 600-foot dish. I suggest that the question of what is to happen after the 140-foot dish be left open for the present, but that feasibility studies on a modest scale be continued, so that fairly prompt action may be possible if experience with the 140-foot dish indicates the desirability of prompt further action leading to a larger instrument. I am as much concerned with the matter of tolerances, precision of setting and following, and the whole problem of alt-azimuth versus equatorial mounting as anyone associated with the present study. I for one have learned a great deal about these problems in the course of the past year and the experience gained from working toward the feasibility report, along with what I have learned at first-hand through our own 60-footer at Agassiz Station, would be of great help to me if I had to come to a decision at the present time, but I would hope that I might learn a little more about these matters before the time for a final decision is at hand.

5. Since I had at one time considered the possibility that I might become associated with the National Radio Observatory in a responsible capacity, I had of course considered very seriously the problems of how to bring optical astronomers to the facility at Green Bank. I have not heard anything about discussions regarding the necessity of bringing a 24-inch Schmidt and a 72-inch reflector to Green Bank for use by all factions and I can frankly not go along with this particular proposal. The climate of West Virginia is such that it simply does not warrant the mounting of any good optical equipment near the site of the radio observatory, certainly not equipment involving an investment of two to three million dollars. I had thought in terms of two possible ways of promoting close continued and effective cooperation between optical and radio astronomers. The first one would be to work toward an effective and fairly frequent exchange of staff members between the radio observatory and optical observatories, notably with the National Optical Observatory now planned for Arizona. Second, I would like to see available to the Director of the National Radio Observatory a considerable sum of money annually set aside wholly for the purpose of bringing leading optical astronomers for six months or a year to the National Radio Observatory and, along with it, a comparable sum for advanced graduate students and post-doctoral fellows who have received their major training in optical astronomy and who were anxious to come to the National Radio Observatory for one or two years. There is sufficient interest in the field among optical astronomers in the United States that the availability of travel and fellowship grants for

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study at the National Radio Observatory would work as an excellent stimulus toward bringing the optical astronomers in considerable numbers to Green Bank. Incidentally, I consider it equally important that the radio astronomers visit regularly, and in a similar fashion, the home bases of the optical astronomers.

Very sincerely yours,

BJB:jh
cc to Dr. Seeger
Dr. Hogg
Dr. Edmundson
Panel members

Bart J. Bok