

AGENDA

AUI Advisory Committee on Radio Astronomy October 16-17, 1956

Recess for lunch at 12:30 p.m.
Tuesday evening recess: Dr. Berkner
has invited the Committee to dinner
at the Century Club, 7 West 43rd St.
with cocktails at 6:15 p.m.

1. The 140-foot radio telescope program
 - 1.1 Report on the Sept. 25-27 meeting of consultants (Emberson)
 - 1.2 Discussion of performance requirements (Haddock, Heeschen)
 - 1.3 Review of telescope specifications (Attachment A-1.3)
 - 1.4 Review of program for alignment and testing (Emberson, Heeschen)
 - 1.5 Tentative schedule and procedure for bids (Emberson)
2. Possible 28- and 60-foot telescopes
 - 2.1 Review of need, relative to instruments at other institutions
 - 2.2 Discussion of specifications (reference item 1.3)
3. The Greenbank Site
 - 3.1 Report on the foundation core borings (Price-Davis Report
previously distributed)
 - 3.2 The West Virginia Zoning Act (August 9, 1956)
 - 3.3 Presentations to the FCC
 - 3.4 Site acquisition plans
 - 3.5 Wind measurements
 - 3.6 Early radio astronomy observations
4. Budgets for the Radio Astronomy Observatory
 - 4.1 Report on funds available and NSF plans for FY 1958
 - 4.2 Discussion of basic requirements for an operating observatory
 - 4.3 Review of tentative budgets
5. NSF/AUI Relations
 - 5.1 The Planning Document
 - 5.2 Contract considerations
6. Plans for future activities
 - 6.1 AUI Staff
 - 6.2 Observatory Staff
 - 6.3 Time schedule

Provisional Statement
on
140-Foot Radio Telescope Performance

1. A number of consulting engineers met at the AUI office on September 25-27. The matter of telescope performance was discussed in detail, with regard both for the components and techniques now available and for the observational requirements as expressed by Messrs. Haddock, Heeschen, and McClain.
2. The following tabulation represents the best compromise now believed possible between the technical difficulties of the telescope design and the ideal performance desired:

<u>Wind Condition</u>	<u>Zero Wind</u>	<u>16 mph Wind</u>	
Paraboloid surface	$\pm 1/4''$	$\pm 1/4''$	
Absolute pointing accuracy	$\pm 30''$	$\pm 40''$	
Relative pointing accuracy*	$\pm 10''$	$\pm 20''$	
Tracking accuracy over 15 min time	$\pm 10''$ (10" / 15 min)	$\pm 20''$	(30" - 1 min)
Tracking accuracy over 1 hr or more	$\pm 20''$ (20" / 1 hr)	$\pm 40''$	(1' - 2 hr)

*Relative pointing accuracy is defined as the accuracy with which the telescope can be moved from one point to another point, assuming the subtended angle between points is under 30 deg and that both points are 30 deg or more above the horizon.