

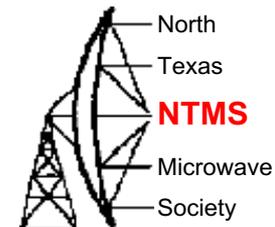
Review of Society of Radio Astronomy Eastern Conference.

N5BRG

August 6, 2022

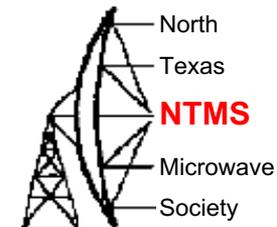
Virtual Meeting

Link to YouTube Presentations



- SARA Eastern Conference
 - Society of Amateur Radio Astronomers annual conference was held July 30 and 31 2022.
- <https://www.youtube.com/channel/UC-SzptAQZ-20c9CkRb9ZPxxw/videos>

Example of one of 2000 Antennas to be used in a collection of radio telescopes. Presented by Dr. Sander Weinreb et al.



DSA-2000 Antenna



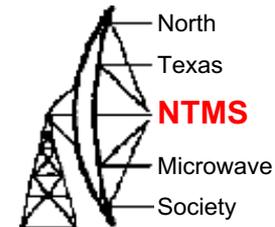
DSA-2000: A streaming calibration/imaging pipeline Dynamic range of 10^6

*1 mm RMS surface
Stable and uniform beam
patterns Pointing of 1
arcminute*

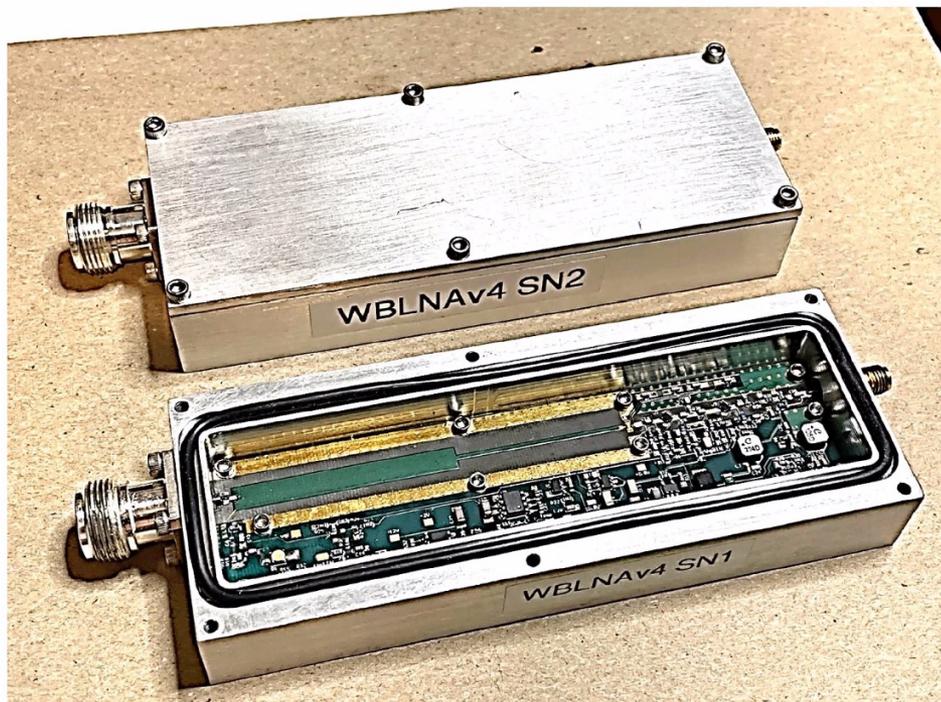
Pure rim supported primary reflector with RF shield as structural element FEA favors hydroforming fabrication

Requires on-site fabrication!

Example of LNA to be used in a collection of radio telescopes. Presented by Dr. Sander Weinreb et al.

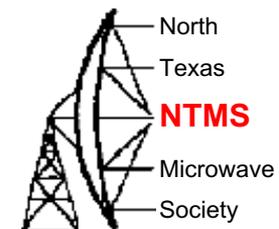


Low Noise Amplifier for DSA2000, Status, April 2022



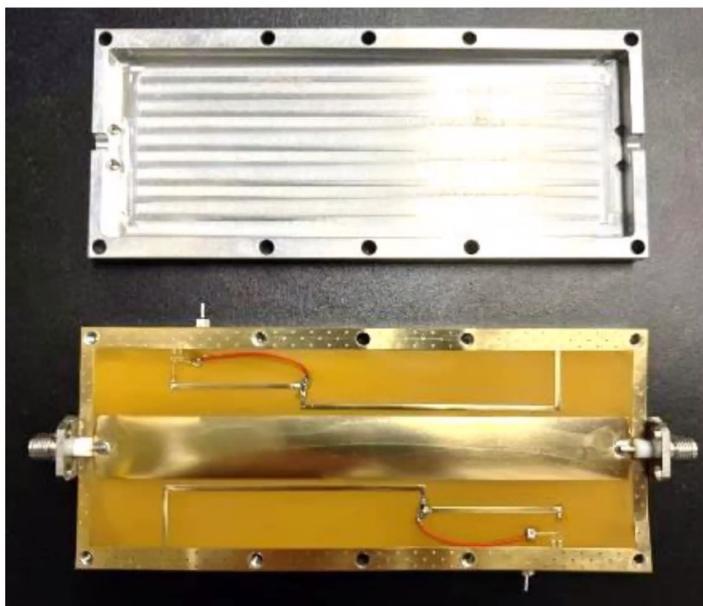
- Under development for 4 years including development for manufacture.
- 150 of 250 MHz bandwidth version in use in at OVRO in DSA110
- Four of the 1300 MHz bandwidth version now complete and ready for testing with a wideband feed.
- Powered by +5V on output cable – no other wires needed. LED indicates power on.
- Includes internal noise calibration source to test performance
- Weatherproof case

Example of tunable Filter to be used in a collection of radio telescopes. Presented by Dr. Sander Weinreb et al.



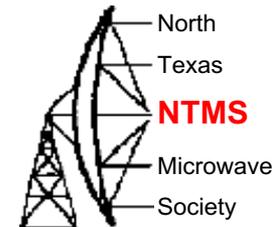
Tunable Narrow Band Reject Filter for DSA2000 - Fabrication

Tightly enclosed clam-shell enclosure of printed circuit on thin substrate with no back side copper.



- 0.1mm thickness flexible board to reduce the dielectric loss
- Module Size: 126.4mm × 54mm × 14.2mm

The YouTube Videos



- Have a look at the presentations if you are interested. There are lots of good presentations on Radio astronomy including, Introduction to Radio Astronomy by Ed Harfmann which is very nice overview. Check it out!