

**David Frayer** (NRAO, faculty/staff)

Brian Mason (NRAO)

Karen O Neil (NRAO)

**Presentation Requested: poster**

**Category: Other**

**Question: Other**

### **GBT 3mm Observations in the ALMA Era**

We discuss the current capabilities and instrumentation under development covering the 3mm atmospheric window from 67–115.3 GHz for the Robert C. Byrd Green Bank Telescope (GBT). The current GBT 4mm receiver operates from 67 GHz to 93 GHz and has comparable sensitivity to ALMA at 84-90 GHz. Within the 3mm atmospheric window below 84 GHz (ALMA has no frequency coverage below 84 GHz), no facility in the world comes close to matching the GBT sensitivity. The development of 3mm multi-pixel cameras such as Argus and Mustang-2 will greatly improve the spectral-line and continuum mapping capabilities of the GBT. While ALMA provides excellent sensitivity at sub-arcsec resolution over small areas, multi-pixel cameras on the GBT will greatly improve the available mapping speeds for large areas at 3mm. The GBT surveys will provide targets for detailed follow-up ALMA studies and provide sensitive short-spacing data for ALMA imaging projects. The GBT is operated by the National Radio Astronomy Observatory and is a facility of the National Science Foundation operated under cooperative agreement by Associated Universities, Inc.