



Helpdesk, Proposal Tips, and Discussion

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Helpdesk

<https://help.nrao.edu> (requires my.nrao.edu account)



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Proposal Planning Workshop - Jan 2022



Helpdesk Demo

We will now continue
with a live demo 😊



Proposal Categories

Great, Good, and Poor Proposals

- 300-500 proposals reviewed every deadline.
- Few (~10) are obviously great.
- Few (~10-20) are obviously poor.
- All others are good and about equal.

How do you make your proposal standout?



Proposal Tips

Science Justification Tips

Do

- Be thorough but concise – this is a skill that takes practice to develop!
- Provide a relevant introduction
- Cite relevant literature
- Discuss the potential impact of a successful proposal
- Discuss the potential impact of a **null result**

Don't

- Assume that all referees are experts in your domain
- Don't “blind with science” - Keep it simple
- Use words when a figure would suffice (and vice versa)



Proposal Tips

Technical Justification Tips

Do

- Make sure you are up-to-date on instrumental availability and capabilities
- Ask observatory support staff if you have questions
- Provide all the information that is asked for
- Use observatory provided tools
- Be explicit about any assumptions you are making

Don't

- Ask for something that is unavailable or impossible
- Ask for an instrumental set up that is not justified by the science
- “Pad” the time request – we conduct an independent review



Proposal Tips

Technical Justification Tips

- If in doubt, contact us!
- Technical justification – unlimited space
 - What you are using
 - How you are using it
 - How long you need it
 - How you determined those values
- Include Overhead times:
 - Pointing/focus every 0.5-2 hours
 - AutoOOF every 1-2 hours (above 30 GHz)
 - Interscan latencies
- Slew times



Proposal Tips

Common mistakes

- **Confusion Limit**

- Once you hit it you can't go deeper (unless you have knowledge of emission at higher resolution)

- **1/f noise (Gain variations)**

- Receiver dependent

- Relevant when product of BW and tint exceeds certain limits ([GBT Memo 282](#))

- **RFI**

- Check for known emissions

- Have a plan

- **Use the GBT sensitivity calculator**

- https://dss.gb.nrao.edu/calculator-ui/war/Calculator_ui.html

- **Use the GBT mapping calculator**

- <http://www.gb.nrao.edu/~rmaddale/GBT/GBTMappingCalculator.html>



Proposal Reviews

Panel Based system

- Eight different panels
- Broad community representation on panels
- Non experts on panels

0=best and 10=worst

Will be given a group

- A: active for one year, expect to complete
- B: one semester, should get most of time
- C: one semester, filler time
- N: not accepted



Discussion

Questions, comments or others?

- Welcome, Overview of GBT Science, and GBT Capabilities
- Sensitivity Calculator
- Mapping Calculator
- Proposal Submission Tool
- Helpdesk, tips for a good proposal, and additional discussion





GREEN BANK OBSERVATORY

greenbankobservatory.org

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