


Proposal Writing



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Ninth Synthesis Imaging Summer School
Socorro, June 15-22, 2004

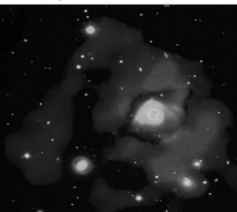
Outline 2

- 30 minutes: Lecture
 - Generic
 - VLA and VLBA
- 60 minutes: Practical
 - Small groups write proposals
 - Group selects either VLA or VLBA case
 - Textbook, Observational Status Summaries provided
 - Scientific justification, target list provided
 - Group completes proposal, compares with "real" one




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Generic 3

- Start with nifty scientific idea, target list
- Specify required ...
 - Angular resolution
 - Largest angular scale
 - Observing frequency
 - Observing bandwidth
 - Stokes parameters
- Select trial array



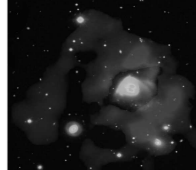
Arp220 FOV 6'x6' HI plus optical
Image courtesy of NRAO/AUI and M. Yun & J. Hibbard




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Generic 4

Evaluate Trial Array - 1

- Special needs
- Geometry
 - Target above elevation limits?
 - Snapshot or full u-v coverage?
 - Adequate range of angular scales?
- Interferometer sensitivity
 - Adequate signal-to-noise to self-calibrate target?
- Image sensitivity
 - Adequate signal-to-noise on target?
 - Compare to dynamic-range limitations

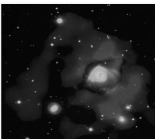
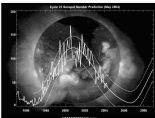





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Generic 5

Evaluate Trial Array - 2

- Adequate undistorted field of view?
 - Primary beam attenuation
 - Bandwidth smearing
 - Time-average smearing
 - Non-coplanar baselines
- Optimal timeframes?
 - Time of day
 - Season
 - Year
- If trial array ...
 - Fails evaluation, pick another
 - Passes evaluation, write and submit observing proposal







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VLA and VLBA 6

Regular Proposals - 1

- Cover information
 - Go to www.nrao.edu/administration/directors_office
 - Download, fill in LaTeX file
- Scientific justification, technical matters
 - Add up to 1000 words: be clear, specific, concise
 - Science: provide motivation, state goals (eg)
 - Technical: give observing strategies, consult archives (eg)
- Staff collaborator optional but welcomed
 - See www.aoc.nrao.edu/epo/ad/aoc-research.html
- Submission method
 - Email PostScript file to proposoc@nrao.edu


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VLA and VLBA

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Regular Proposals - 2

- Proposal handling steps
 - Received by email for deadlines 1 Feb, 1 Jun, 1 Oct
 - For trimesters T2, T3, T1
 - For VLA configurations (see latest NRAO Newsletter)
 - Classified by scientific categories
 - Distributed to category's referees
 - Referees return grades, comments
 - Proposal Selection Committee receives grades, comments
 - Proposal Selection Committee meets early Apr, Aug, Dec
 - Results emailed to proposers by 1 May, 1 Sep, 1 Jan
- Details at www.aoc.nrao.edu/epo/ad/scheduling.shtml



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VLA and VLBA

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Regular Proposals - 3

- Hints for students
 - Consider submitting proposal a trimester early
 - Use referee feedback to prepare, submit improved proposal
 - Tell us your graduation year
 - Helps us understand your time constraints
 - Tell us if proposed observations are for your thesis
 - Consider supplementing proposal with your dissertation plan
 - See NRAO Newsletter of Oct 1999
- Plea to graduating students
 - Please donate thesis copies to NRAO library
 - See NRAO Newsletter of Jul 2003



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VLA and VLBA

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Other Proposal Types and Routes

- NRAO Rapid Response Science
 - Exploratory: quick follow-up of recent discovery (eg)
 - Target of opportunity: unpredicted phenomenon (eg)
 - See www.vla.nrao.edu/astro/prop/rapid
- NRAO Large Proposals
 - Requests more than about 250-300 hours in total
 - See www.nrao.edu/administration/directors_office
- Joint Chandra/NRAO Proposals
 - Chandra and VLA/VLBA essential for science goals
 - See NRAO Newsletter of Oct 2003



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