

Proposal Writing

Joan Wrobel

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Outline

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- 30 minutes: Lecture
 - Generic
 - VLA and VLBA



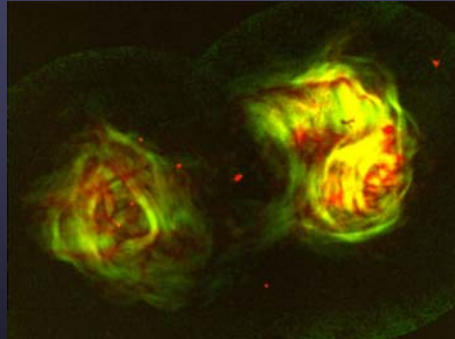
- 60 minutes: Practical
 - Small groups write proposals

Generic

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- Start with ...
 - Scientific idea
 - Target list
- Specify required ...
 - Angular resolution
 - Largest angular scale
 - Observing frequency
 - Observing bandwidth
 - Stokes parameters
- Select trial array

Radio Galaxy Fornax A



VLA 1.4 GHz 1.0d x 0.7d R. Ekers

Generic: Evaluate Trial Array

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- Special needs
 - Redshifted HI?
 - Redshifted CO?
- Geometry
 - Target above elevation limit?
 - Snapshot or full u-v coverage?
- Interferometer sensitivity
 - Signal-to-noise to self-cal target?
- Image sensitivity
 - Enough signal-to-noise on target?
 - Dynamic-range limited?

Supernova Remnant Crab Nebula

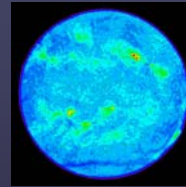


VLA 5 GHz 7' x 5' M. Bietenholz

Generic: Evaluate Trial Array

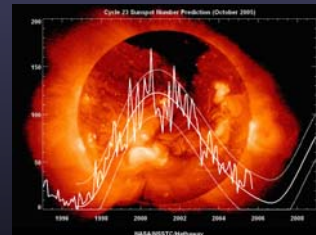
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- Enough field of view?
 - Primary beam attenuation
 - Bandwidth smearing
 - Time-average smearing
 - Non-coplanar baselines
- Optimal timeframes?
 - Time of day
 - Season
 - Year ~ sunspot number
- If trial array ...
 - Fails, pick another
 - Passes,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



Sun

VLA 5 GHz
43' x 43'
S. White



Sun

TRACE
X-rays

Now

Regular VLA and VLBA Proposals

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- Recent news www.vla.nrao.edu/astro, www.vlba.nrao.edu/astro
- Quarterly news www.nrao.edu/news/newsletters
- Proposal cover information
 - VLA Proposal Submission Tool e2e.nrao.edu/userdb
 - VLBA LaTeX file www.nrao.edu/administration/directors_office
- Scientific justification, technical matters
 - Add up to 1000 words: be clear, specific, concise
 - Science: give motivation, state goals (eg)
 - Technical: give observing strategies, consult archives (eg)
- Staff collaborator optional
 - www.aoc.nrao.edu/epo/ad/aoc-research.shtml
- Submission method
 - VLA Proposal Submission Tool
 - Email VLBA PostScript file to propsoc@nrao.edu

Regular VLA and VLBA Proposals

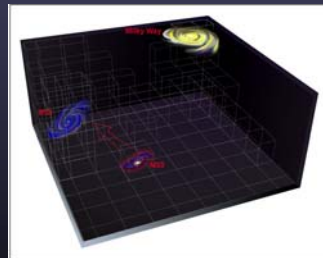
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- Proposal handling steps
 - Received for deadlines 1 Feb, 1 Jun, 1 Oct
 - For trimesters T2, T3, T1
 - For VLA configurations in www.nrao.edu/news/newsletters
 - Classified by scientific categories
 - Sent to category's referees
 - Referees return their grades, comments
 - Proposal Selection Committee receives the 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

Regular VLA and VLBA Proposals

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- Suggestions for students
 - Submit VLA proposal a deadline early, improve, re-submit
 - Tell us if proposed observations are for your thesis
 - Tell us your graduation year
 - Tell us your dissertation plan
- Plea to graduating students
 - Donate thesis copies to NRAO
 - www.nrao.edu/library



VLBA 22 GHz A. Brunthaler

Other Proposal Types and Routes

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- VLA/VLBA rapid response science
 - Exploratory: quick follow-up of recent discovery (eg)
 - Target of opportunity: unpredicted phenomenon (eg)
 - www.vla.nrao.edu/astro/prop/rapid
- VLA/VLBA large proposals (> 200 hours)
 - www.nrao.edu/administration/directors_office/largeprop.shtml
- Joint Chandra/VLA/VLBA proposals
 - cxc.harvard.edu/proposer/
- Joint Spitzer/VLA proposals
 - ssc.sptizer.caltech.edu/propkit/

Star V838 Mon HST



Spitzer



Chandra

Proposal Writing: Practical

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- 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
- VLA tutors
 - Aaron Cohen
 - Cornelia Lang
 - Joan Wrobel
- VLBA tutor
 - Amy Mioduszewski

NRAO VLA



NRAO VLBA

