

# ALMA Development Workshop



## ALMA-NA Draft Proposal Management Plan

Mark McKinnon

March 21, 2011

Atacama Large Millimeter/submillimeter Array  
Expanded Very Large Array  
Robert C. Byrd Green Bank Telescope  
Very Long Baseline Array



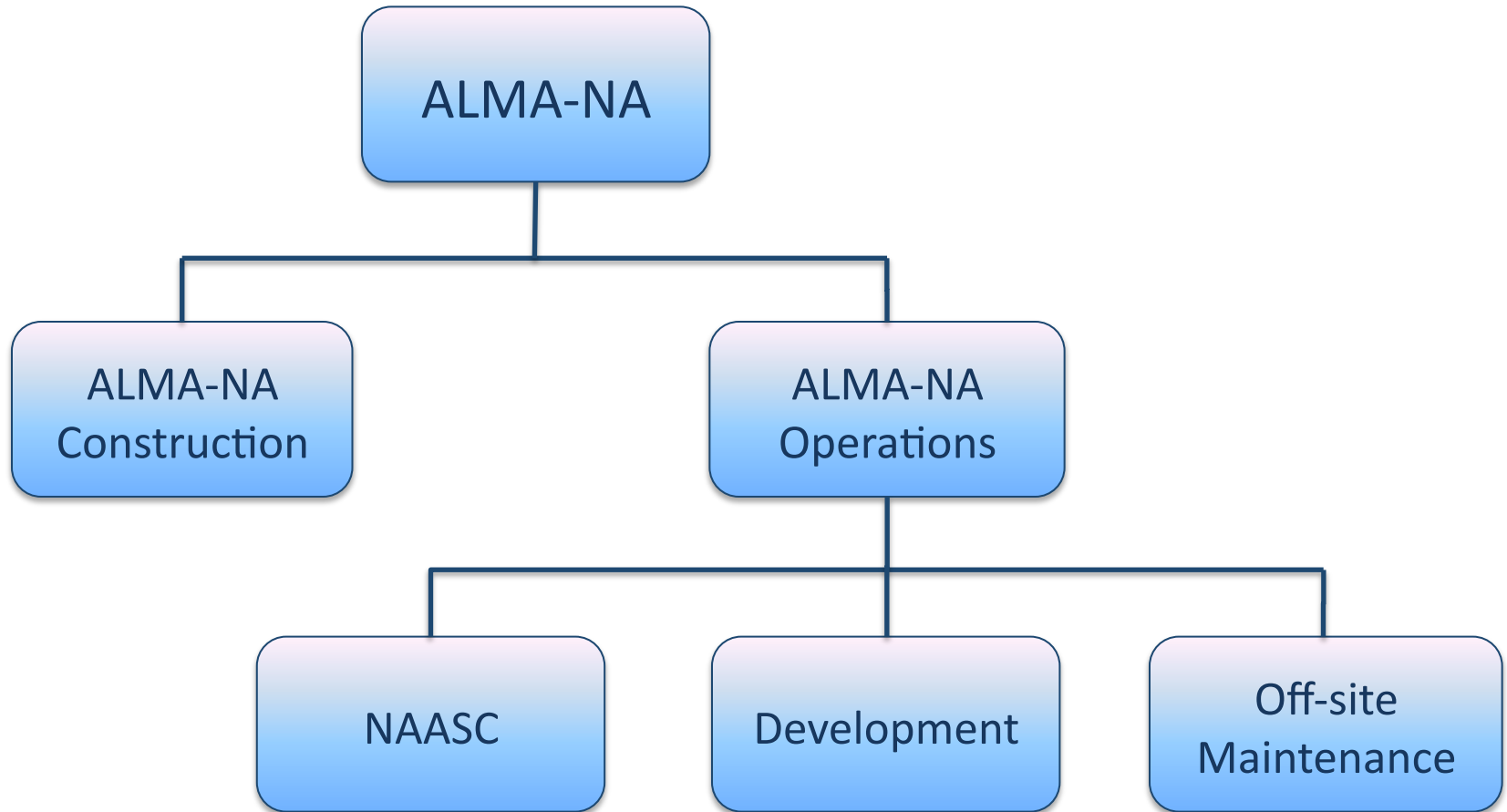
# Outline

- Aims of development studies
  - Development in ALMA-NA
  - Proposal requirements, evaluation, and guidelines
  - Program management: conformance to ALMA procedures and standards
- 
- Details can be found in the *Call for Studies: Development Upgrades of the Atacama Large Millimeter/sub-millimeter Array (ALMA) and the ALMA-NA Development Management Plan - Conditions Governing the Call for Proposals*

# Aims of Development Studies

- Give groups in North America the opportunity to propose ALMA upgrades that may be implemented as part of the ALMA Development Plan
- Support development of conceptual and detailed designs for ALMA upgrades
- Encourage relevant, long-term, research and development

# Organization of ALMA North America



# Development Funding

Calendar Year	Total Funding, K USD (2006)	NA Share, K USD (2006)	NA Share, K USD (of yr)
2011	1,500	562	661
2012	3,000	1,125	1,368
2013	5,000	1,875	2,360
2014	8,600	3,225	4,201
2015	10,800	4,050	5,460

NA share is 37.5% of total

# Proposal Requirements

- Deliverable is a scientific-technical-management proposal, 15 pages maximum in length, that includes the following:
  - Outline of main scientific drivers and significance for ALMA
  - Technical description of proposed upgrade
  - Description of interfaces to ALMA systems that will be studied
  - List of proposed deliverables for the study
  - Names and curriculum vitae of key staff
  - Description of relevant experience of the institutes and staff
  - Functional diagram of the consortium organization with explanation of roles of personnel
  - Status or final disposition of studies that have received NRAO financial support within the past five years.

# Proposal Evaluation Criteria

- Proposal selection will be based on the following evaluation criteria
  - Strength of scientific case
  - Quality of upgrade conceptual design
  - Readiness for production
  - Strength of consortium organization
  - Qualifications of key personnel in the study
  - Technical expertise, past experience, and facilities of involved institutes
  - Assessment of risk inherent in the design
  - Strength of scientific team supporting the study
  - Level of support guaranteed by the institutes
  - Cost of the study

# Evaluation Committee

- Evaluation will be conducted by a committee of non-NRAO reviewers with advice of the NRAO's Observatory Technical Council
  - Members of these groups involved with development proposals will be excused from considering their own or closely-related proposals



# Guidelines for Proposers

- Studies to begin in 2011
- Collaborations are encouraged
- Studies expected to be funded at levels up to \$50K/year
- Proposers who do not require financial support are also invited to apply
- If proposal selected, study deliverable is a final report that addresses topics listed in the call

# Schedule for Call for Proposals

Milestone	Date
Release of call for proposals	T1
Teleconference for questions	T1 + 7 days
Acknowledgement of receipt	T1 + 14 days
Deadline for questions	T1 + 5 weeks
Closing date	T1 + 9 weeks
Validity date of proposals	T1 + 11 months
Study completion date	June 30, 2012

T1 = soon

# Program Management (I)

- Development projects need to conform to ALMA requirements & procedures
  - Standards\*
    - Product assurance
    - Electromagnetic compatibility
    - Safety standards
  - Policies\* for design reviews
  - Schedule (for assessing progress and coordinating delivery)
  - Specifications for deliverable
  - Interface control documents
  - Technical manuals (e.g. assembly, installation, testing, maintenance, repair)
  - Acceptance requirements (e.g. procedures, test readiness, PAI, PAS)
  - Technical data (e.g. schematics, firmware, code) for future reference

## Program Management (2)

- NRAO will support development projects in management and technical tasks with staff familiar with ALMA requirements
  - Project manager to oversee contract, provide management expertise, and assist with interface to ALMA staff in Chile
  - Technical support in system engineering, product assurance, safety, and integration
  - Technical support in ALMA hardware and software to ensure deliverables meet requirements and integrate smoothly into ALMA