

**Atacama
Large
Millimeter
Array**

ALMA Phase 2 Procurement Strategy

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ESO Finance Committee

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ALMA Project

Role of ESO in ALMA

- Provide overall leadership and draw on the European mm-wave community for much of the technical expertise required for ALMA
 - Approach followed from the inception of the Project, through Phase 1, and to be continued in Phase 2
 - Overall management of the European ALMA activities is ESO's key responsibility



ALMA Project

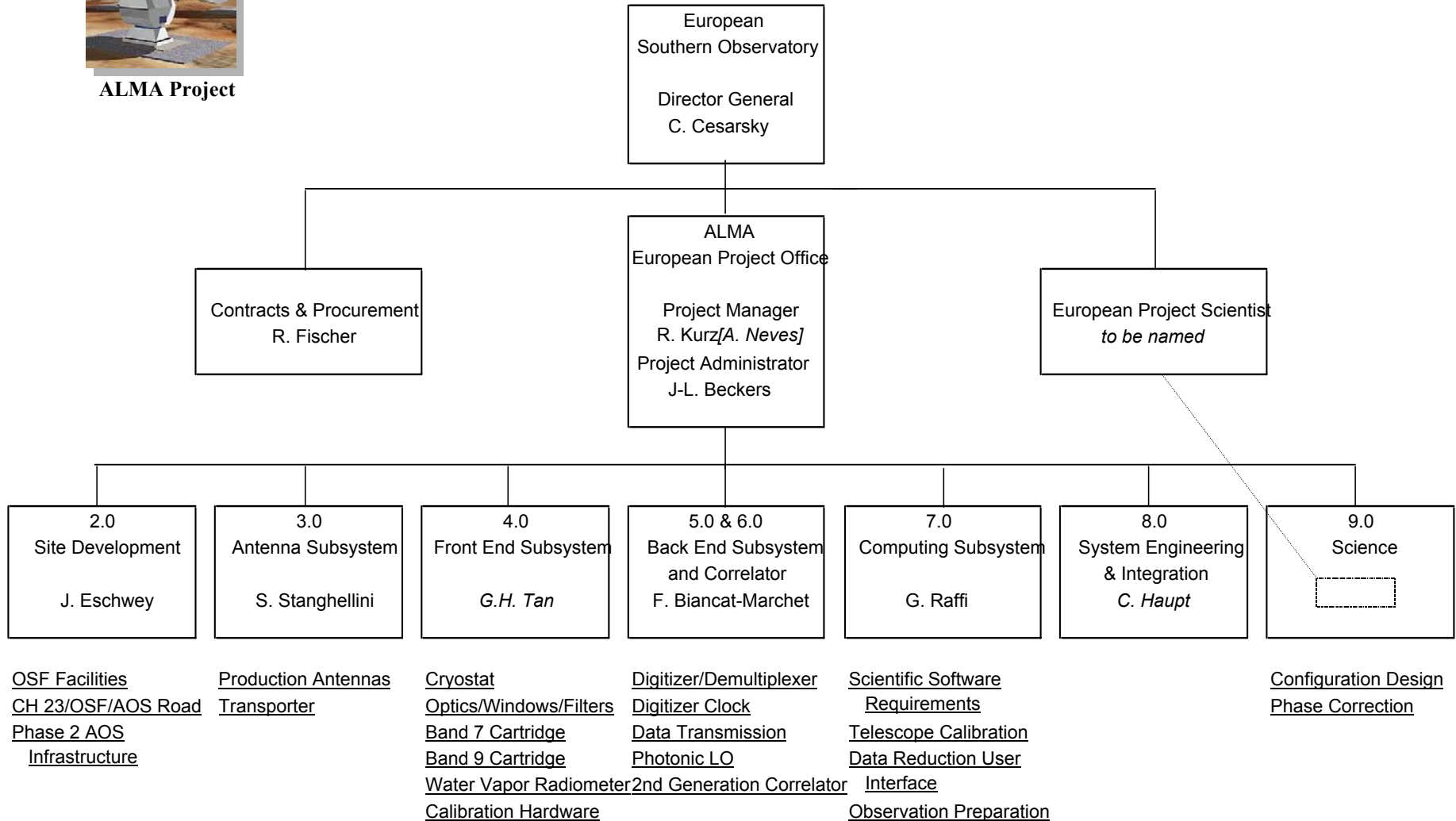
Procurement Approach for each Technical Area

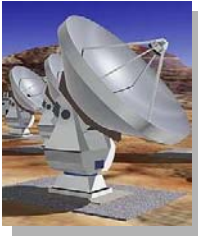
- Site Development - ESO contracts with industry
- Antenna - ESO contracts with industry
- Front End, Back End, and Correlator - ESO contracts with institutions that in turn subcontract with industry
- Computing - ESO performs plus contracts with institutions
- System Engineering - ESO performs
- Science - ESO performs plus contracts with institutions



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ESO Management Team





ALMA Project

Management and Control

- **Contracts**
 - Technical Specifications
 - Statement of Work
 - Contractual Terms and Conditions
- **Technical and Schedule Control**
 - Close monitoring and communication
 - Regular reporting
 - Standard reviews
- **Cost Control**
 - Industry - fixed price contracts
 - Institutions - fixed price for labor and operations and actual cost reimbursement for capital



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Prototype Antennas

VertexRSI Antenna

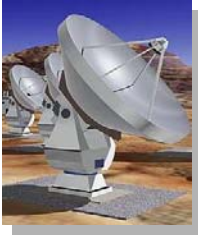
- Foundation completed in August 2001
- Currently erected at ALMA Test Facility (ATF) - Socorro, NM
- Joint outfitting of antenna/software testing started in November 2002
- Provisional Acceptance completed in April 2003



Alcatel/EIE Consortium (AEC) Antenna

- Foundation completed in January 2003
- Mount being erected at ATF and CFRP to be shipped in May 2003
- Preliminary acceptance scheduled for July 2003
- Provisional acceptance scheduled for August 2003

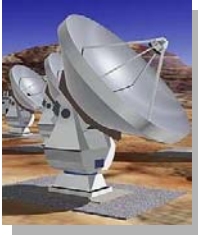




ALMA Project

Antenna Procurement

- What are we doing to encourage the broadest possible involvement of European companies in ALMA antenna production?
 - Implement open and competitive procurement in accordance with ESO procedures
 - Solicit expressions of interest (June 2003)
 - Put out a letter describing the anticipated procurement process to all potential suppliers in the member states and Spain
 - Solicit answers informing ESO if, and in what they are interested (Prime, Subcontractor, etc.)



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Antenna Procurement (cont'd)

- Distribute the database of companies expressing interest to all respondents
- Organize an Industry Briefing prior to issuing the Call for Tenders (September 2003)
 - All respondents will be invited to attend
 - Detailed information on the Call for Tenders will be provided