

## **Minutes of European ALMA Board Meeting held on 20 February 2003 at ESO Garching**

### Present:

P. van der Kruit	Chairman
R. Booth	Sweden
J. Cernicharo	Spain
C. Cesarsky	ESO
I. Corbett	ESO
E. van Dishoeck	The Netherlands
R. Kurz	ESO
T. Lago	Portugal
S. Lilly	Switzerland
A. Neves	ESO
M. Steinacher	Switzerland
G. Tofani	Italy
L. Vigroux	France
C. Waelkens	Belgium

### Unable to attend:

T. Henning	Germany
H. Jorgensen	Denmark

### Participating by telephone, joining during Item 3:

R. Wade	United Kingdom
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### Attending for Item 6 only :

S. Stanghellini	ESO
G. Han Tan	ESO

1. The Board **adopted** the Terms of Reference agreed by Council. These are attached for reference, with the date of adoption noted.
2. The Board **agreed** the Agenda EAB 2/03
3. Notes of meeting on 11 November 2002 (EAB 1/02)
  - (a) The Board **agreed** the notes as previously circulated.
  - (b) Actions  
The membership of ESAC as agreed by Council was tabled. The Board noted the membership. (This is available on the EAB web site).
  - (c) Oral report from ESAC

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Ewine van Dishoeck, Chair of ESAC, gave a presentation which is on the web site. Among the points made were:

- the ALMA day on 08 November had attracted about 100 people;
- a questionnaire on the RSC concept, software plans, baseline enhancements and future ALMA meetings had been distributed;
- the results had been analysed and taken into account in the ESAC recommendations

(d) ESAC Recommendations Summarized

- ESAC endorses the RSC model with strong degree of concentration;
- the RSC model and functions need further development and the relationship between the RSCs and the development of data reduction software needs to be clarified;
- the RSCs need to stay in close contact with ALMA operations;
- concerns about AIPS++ must be addressed;
- capabilities of Early Science Operations must not be oversold;
- scientific priorities for enhancements are in line with ASAC recommendations but the community favours higher frequencies;
- merging Bands 4 + 5 into a single band should be investigated;
- there should be regular workshops and community-wide ALMA meetings every 12-18 months

The EAB **noted** the ESAC recommendations.

(e) ESAC members are working on the EU-FP6 proposal organization:

- networking with Opticon and Radionet
- preparing with ALMA construction proposal
- encouraging Marie Curie – RTN proposals

(f) the organigram displayed showed how ‘technical’ astronomers are involved in ALMA

In the subsequent discussion it was agreed that Terms of Reference for ESAC would be prepared for approval by EAB, that the relationship between ESAC and STC needed to be defined, and that ESO would now formally appoint the ESAC members.

4. Report from December Council EAB 03/03.

This was **noted** without further comment.

5. Update on situation in France

L. Vigroux reported on recent discussions. It would not be possible to lift the ‘ad ref’ before the Committee of Council on 12 March but a formal response could be expected before the June Council meeting.

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## 6. European Project Manager's Report

- a) R. Kurz gave a presentation, copies of which are on the EAB web site under the 'ESO Wide Review'. Among the matters covered were:
- the ALMA managerial structure + recruitment of staff;
  - the European ALMA structure, the ESO ALMA Division and the work being done in ESO;
  - the division of tasks in Europe;
  - the cost and staffing projections;
  - the Phase 2 contracts with European institutions
- b) In the discussion it was noted that ALMA should benefit from lessons learned with the VLT instrumentation programme. The Board expressed concern over the management of the Phase 2 contracts, in both development and production phases, and suggested that ESO might consider strengthening the management by providing managers for some of the key elements. Posts could be found by a re-distribution of effort within the ALMA work packages.
- c) Stefano Stanghellini outlined progress in the procurement and testing of the prototype antennas. The Board noted that the shipping of components of the AEC antenna to New Mexico had commenced. Key milestones reported included:
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|--|----------|
| - Last batch of panels completed           | 16 April |
| - Preliminary acceptance (+ documentation) | 18 April |
| - Antenna assembled                        | 31 May   |
| - Provisional acceptance                   | July     |
- d) Test and evaluation of the VertexRSI antenna will start early March. Test and evaluation of both antennas should be complete by end 2003 if the AEC schedule is maintained.
- e) R. Kurz gave a presentation on the proposed strategy for the procurement of the production of 63(+1 refurbished) antennas. The basic goal is to procure the antennas to a single design which has been tested and evaluated, although circumstances could force the acceptance of two designs. The JAO would prepare a CFT/RFP package which would be submitted to AUI and ESO in August 2003. Bids would be due by December 2003 (at which point testing and evaluation of the prototypes should be completed). The bids would be evaluated by February and the earliest possible date for signing the production contracts would be ~May 2004.
- f) In the subsequent discussion Board members expressed concern over agreeing to the possibility of two antenna designs and agreed that it would be premature to accept this possibility now. There were strong technical and scientific, as well as cost arguments in favour of a single design.
- g) The Board **endorsed** the principle of a competitive process in late 2003 with evaluation early in 2004 and contracts placed in mid-2004. A decision on accepting two designs should only be taken after the two prototypes have been

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evaluated and the scientific and financial impact of procuring two designs have been carefully evaluated.

#### 7. Progress in Chile

- a) Daniel Hofstadt gave a brief update on Installation Progress Report #7, noting that steady and satisfactory progress was being made in all areas other than in the ratification of the ESO Supplementary Agreement. He noted that this was now on the critical path and the project's target of access to the ALMA land by 01 April could not be met if the Agreement had to be ratified by Parliament.
- b) The Board reviewed the options for the site of the ALMA Santiago Office, namely on land made available by the University of Chile at Cerro Calan, at ESO Vitacura in a rented or purchased building near Vitacura, or land purchased in Vitacura or elsewhere. Arguments were advanced in favour of locating the office in close proximity to other astronomers, and in broad terms the Board favoured ESO Vitacura.

#### 8. Project Plan 10 February

This was **noted**. In discussion it was explained that the financial tables were based on the 'delivered value' of items drawn from a common baseline in year 2000 USD or EUR, and so were not affected by USD/EUR exchange rates. The numbers in the revised ESO LRP to be produced for June Council would be compatible with those in the Project Plan.

#### 9. NAOJ (Japan) Proposal

- a) The final NAOJ proposal had been received on 12 February, and there had not been time for the JAO to prepare an assessment. The basic elements were as seen before: the compact array plus four 12m antennas in support, Bands 10, 8 and 4, and the Second Generation Correlator. The costs appeared high and the schedule incompatible with that of baseline ALMA.
- b) While there remained very strong scientific support for the enhancements that NAOJ participation could bring, the Board repeated its concern over the impact on the Bilateral project of integrating the Japanese enhancements, and on the demands it would place on JAO. Serious face-to-face negotiating meetings should only take place with NAOJ when the JAO had evaluated the NAOJ proposal and its potential impact on the Bilateral project, and the ALMA Board had met to consider the JAO conclusions and recommendations. This implied a meeting with NAOJ could only take place after the May ALMA Board.
- c) There was serious European interest in an enhanced correlator, with development over the period to 2009, as opposed to a full 'second generation' delivered at an early stage. A compromise programme with NAOJ might be

possible and so the NAOJ proposal for a second generation correlator should not be rejected out of hand.

10. Membership of AMAC and ASAC

The Board agreed that the current membership of AMAC and ASAC would be retained for their next meetings. ESAC would then select the new ASAC members at its meeting on 03 April.

11. Director

The Board noted the recommendation to be made to the ALMA Board on 24 February.

12. Next Meetings

16 May and 30 October in Garching, starting at 09:00