

This CONSORTIUM AGREEMENT is made on 8 April, 2009

BETWEEN

- (1) the European Organization for Astronomical Research in the Southern Hemisphere (ESO), Karl-Schwarzschild-Straße 2, D-85748 Garching, Germany,**
- (2) Chalmers Tekniska Högskola AB, SE-41296 Gothenburg, Sweden,**
- (3) the Institute de Radioastronomie Millimétrique (IRAM), 300 Rue de la Piscine, F-38406 St. Martin d'Heres, France,**
- (4) the Chancellor, Master and Scholars of the University of Cambridge, Old Schools, Trinity Lane, Cambridge, CB2 ITN, United Kingdom,**
- (5) the Department of Astronomy (DAS), Universidad de Chile, Santiago, Camino El Observatorio 1515, Las Condes, Santiago, Chile, and**
- (6) the Science and Technology Facilities Council (STFC), Polaris House, North Star Avenue, SN2 1SZ, Swindon, United Kingdom**

hereinafter, jointly or individually, referred to as "Parties" or "Party" relating to the Project entitled

Enhancement of ALMA Early Science

in short

ALMA Enhancement

WHEREAS:

- (A) The Parties, having considerable experience in the field concerned, have been granted a Contract for a Specific Support Action in Structuring the European Research Area as part of the Sixth Research and Technological Development Framework Programme.**
- (B) The Parties wish to specify or supplement, between themselves, the provisions of the Contract in accordance with Article 1.4 of the Contract.**

NOW THEREFORE, IT IS HEREBY AGREED AS FOLLOWS:

Section 1: Definitions

1.1 Contract Definitions

Words defined in the Contract or in the annexes of the Contract have the same meaning in this Consortium Agreement.

1.2 Additional Definitions

"Advisory Group" assists the Project Co-ordinator and each member of the group is invited to make recommendations to the Project Co-ordinator for decision. The Advisory Group shall comprise all Parties of the Consortium.

"Allocated Work" shall mean the research work and the related activities and services allocated to any of the Parties in accordance with Contract, Annex I and the subsequent Implementation Plan.

"Compensating Party" means a Party, other than the "Defaulting Party", from whom the Commission claims reimbursement due to financial collective responsibility in accordance with Contract, Annex II.18.

"Contract" means the Contract No. 515906 (including its Annexes) for the undertaking by the Parties of the Project. Contract also means, as applicable, any Contract amendment.

"Defaulting Party" means a Party breaching its obligations of the Contract and/or of this Consortium Agreement.

"Deliverables" means reports, including progress reports and certified audit reports, as well as Hardware and Software referred to in the Contract and in this Consortium Agreement that have to be delivered to the Project Co-ordinator and/or the Commission.

"Implementation Plan" means the annual extrapolation and adjustment of the project plan with respect to work share, changes and budget allocations to be prepared annually for submission to and approval by the Commission in accordance with the conditions of the Contract, Annex II.

"Joint Budget" is the binding internal agreement concerning the Project Budget and financial Project Shares of each Party for the whole duration of the Project. The Project Budget and the Project Shares are defined in the Contract, Annex I.

"Party" or "Parties" means a party or the parties to this Consortium Agreement.

"Project" means all the work referred to in Annex I of the Contract.

"Project Share" means for each Party that Party's share of the total cost of the Project as shown in the Contract.

"Software" means software programmes being sequences of instructions to carry out a process in, or convertible into, a form executable by a computer and fixed in any tangible medium of expression. For the avoidance of doubt, Software may be Knowledge or Pre-existing Know-how.

"Work Packages" means the Work Packages as listed in connection with the work breakdown structure in the Contract, Annex I and any sub-project created by decision of the Project Co-ordinator in accordance with the provisions of this Consortium Agreement.

1.3 Further Understandings

In order to clarify certain ambiguities appearing in the provisions of the Contract, the Parties have agreed on the following interpretations:

(a) **"Fair and Non-discriminatory Conditions"** means fair market conditions.

- (b) **“Pre-existing Know-how”** means the Know-how accumulated and developed solely within the specific research group, research department, or research institute of each party directly involved in carrying out the Project.

Section 2: Purpose, Nature and Duration of the Agreement

2.1 Purpose

The purpose of this Consortium Agreement is to facilitate the fulfilment of the work and activities allocated to the Parties under the Contract (and as described in more detail in Contract, Annex I) by setting forth the terms and conditions pursuant to which the Parties agreed to function and cooperate in the performance of their respective tasks under the Contract.

2.2 Nature of the Agreement

Each Party shall act as an independent Contractor and not as the agent of any of the other Parties.

Nothing contained in this Consortium Agreement shall be construed as constituting or organising the sharing of profits or losses arising out of the efforts of any other Party hereunder.

In case of conflict between this Consortium Agreement or parts of it and the Contract, the latter will have precedence.

2.3 Duration

- (1) This Consortium Agreement shall come into force as of the date of its signature by the Parties, but shall have retroactive effect from the date of the Contract Signature by the Project Co-ordinator and shall continue in full force and effect until terminated in accordance with Section 14 or until complete discharge of all obligations for carrying out of the Project undertaken by the Parties under the Contract and under this Consortium Agreement, whichever is earlier.
- (2) For new Parties acceding to this Consortium, this Agreement shall come into force as from the date of signature of the Declaration of Accession to the Consortium.

Section 3: Project Organisation and Management Structure

3.1 General Structure

The organisation structure of the Consortium shall comprise the following:

- (a) the **Project Co-ordinator** as the intermediary to the Commission. He/she is authorised to execute the project management under the conditions set forth in Section 5.6.
- (b) the **Project Scientific Officer** who, among others, ensures communications to the ALMA Science Committees and the scientific community. He/she shall report and be accountable to the **Project Co-ordinator**.

- (c) the **Work Package Project Managers** who lead the activities of the two technical groups of the Programme (the Band 5 Group and the Software Development Group) in close collaboration with the representatives of the participating Project Partners. They shall report and be accountable to the **Project Co-ordinator** under the conditions set forth in Sections 5.4 and 5.5.
- (d) the **Advisory Group** assisting the **Project Co-ordinator** in managing the Consortium. The composition, the mandate and the responsibilities of the group are described in Section 5.3.

3.2 The Parties' Representatives

Each Consortium Partner agrees to nominate representatives to the different technical groups and decision-making bodies with due authorisation to discuss, negotiate and decide on actions proposed by the corresponding Chairperson of the decision-making body, or to accept recommendations made by the bodies within the frame of their responsibilities.

The representatives of the Consortium Partners to the Advisory Group should be of senior management level or other persons with authority as required above.

Section 4: Responsibilities of Each Party

4.1 General Responsibilities

Each Party hereby undertakes with respect to the other Parties to use all reasonable endeavours to perform and fulfil, promptly, actively and on time, all of its obligations under the Contract and this Consortium Agreement, including in particular the submission to the Commission of the deliverables pursuant to the Contract, Article 7 and Annex II.7.

4.2 Responsibilities towards the Project Co-ordinator

Each Party undertakes reasonable endeavours to supply promptly to the Project Co-ordinator all such information or documents as the Project Co-ordinator needs to fulfil obligations pursuant to this Consortium Agreement, the Contract and upon request of the Commission.

In particular, information and documents required by the Contract, Annex II.3 and 7 shall be submitted via the Project Co-ordinator.

4.3 Obligations of the Parties towards each other

(a) Each Party undertakes reasonable endeavours:

- to notify the Project Co-ordinator and each of the Parties promptly of any significant problem and delay likely to affect the success of the Project;
- to inform other Parties of relevant communications it receives from third parties in relation to the Project.

(b) Each Party shall use reasonable endeavours to ensure the accuracy of any information or materials it supplies hereunder or under the Contract and promptly to correct any error therein of which it is notified. The recipient Party shall be entirely responsible for the use to which it puts such information and materials.

- (c) In addition to the obligations specified in the Contract, Annex II.3, each Party agrees not to use knowingly, as part of a deliverable or in the design of such deliverable or in any information supplied hereunder or under the Contract, any proprietary rights of a third party for which such Party has not acquired the right to grant licences and user rights to the other Parties in accordance with the Contract, unless all of the other Parties have accepted such use in writing, such acceptance not to be unreasonably withheld.

Section 5: Organisation, Responsibilities and Authority

5.1 The Work Packages of the ALMA Enhancement Programme

The ALMA Enhancement Programme consists of six different Work Packages (cf Annex 1 to contract 515906, Version B, chapter 3.5):

Work Package No.	Descriptive Title	Lead Participant	Short Description of the task(s)
WP1	Programme and technical management	ESO	Overall management of hardware and software tasks
WP2	Band 5 receiver design and prototyping	Chalmers University	Building prototype 1.8 mm receiver for ALMA
WP3	Band 5 receiver Production	Chalmers University	Building six production 1.8 mm receivers for ALMA
WP4	Assembly, Integration and Verification of Band 5 Receivers	Dept. of Astronomy, Universidad de Chile	Support the testing, check outs and (if need be) repair of receiver cartridge for 1.8 mm receivers in Chile
WP5	Advanced radiometric Phase Calibration Techniques	Cambridge University	Construct software for correcting interferometer phases for fluctuations caused by the earth's atmosphere
WP6	On-the-Fly Observing	IRAM	Construct software for allowing imaging of fields much larger than the primary beam

5.2 Work Package Managers and their Responsibilities

Each Work Package is led by a Work Package Manager. The Work Package Managers shall be responsible for the development, extrapolation and harmonisation of the Project Management Plan of their Work Package(s) in line with the Contract, Annex I. Details of the organisation and procedures for the six Work Packages are defined in the following sections.

5.2.1 Appointments of the Project Co-ordinator, Project Scientific Officer and Work Package Managers and Their Primary Tasks

The Project Co-ordinator is appointed by the ESO Management. The Project Co-ordinator shall establish and maintain the interactions and links between the Programme and the European Commission and the ALMA Project, respectively. Within ESO he reports to the European ALMA Project Manager and shall interface directly with him in order to ensure good communication and links between the Programme and the ALMA Project and Management. The Project Co-ordinator shall also organize the timely submission of all kinds of documents related to the progress of the Programme, regular reporting, reviews, etc. Details of the responsibilities and functions of the Project Co-ordinator are described in sections 5.3 and 5.6.

The Project Scientific Officer is appointed by the ESO Management, upon recommendation of the Project Co-ordinator. The Project Scientific Officer establishes links between the various groups of the ALMA Enhancement Programme and organizes efforts to optimize the overall performance of the ALMA Enhancement Programme for the Joint ALMA Observatory. In particular, the Project Scientific Officer shall establish and maintain the interactions and links between the Programme and the scientific committees of the ALMA Project and the scientific community interested in the ALMA Observatory, respectively.

The Work Package Managers are appointed by the ESO Management, upon recommendation of the Project Co-ordinator. The Work Package Managers are responsible for all matters related to the design, construction, installation, implementation and operation of their particular project. Details of the responsibilities and functions of the Work Package Managers are described in section 5.4 and section 5.5 respectively.

5.3 The Management Work Package (WP1)

This Work Package is led by the Project Co-ordinator. He/she is the intermediary to the Commission and is authorised to execute the project management under the conditions set forth in Section 5.6. The Project Co-ordinator is assisted by the Advisory Group (cf. section 5.3.1), who shall provide information and proposals for decisions to the Project Co-ordinator.

5.3.1 The Advisory Group

The Advisory Group is chaired by the Project Co-ordinator. The Advisory Group advises the Project Co-ordinator, who is responsible for directing the programme and for drawing up policy. All important matters of scientific, technical, organizational and financial nature shall be discussed in the Advisory Group, either through its own initiative or upon request of the Work Package Managers.

The Advisory Group may suggest to the Project Co-ordinator holding special meetings dedicated to internal reviews on the status of the various Work Packages. The Project Co-ordinator will appoint Reviewers for each of the Work Packages. These could be members

of the ALMA Project, provided they are not directly involved with the Work Packages under review.

The Project Co-ordinator represents the FP6 Programme on ALMA Enhancement in dealing with the European Commission and the ALMA Project. He/she shall also report on the views of all Consortium Partners, in particular, to the ESO Management and the European ALMA Project Manager, as appropriate. These views shall be communicated to the Project Co-ordinator through the respective institute's delegate in the Advisory Group.

The Project Scientific Officer represents the FP6 Programme on ALMA Enhancement in dealing with scientific committees, e.g. the ALMA European Scientific Advisory Committee (ESAC) and the ALMA Scientific Advisory Committee (ASAC), as well as the scientific community. He/she shall also report on the views of all Consortium Partners, as appropriate. These views shall be communicated to the Project Scientific Officer through the respective institute's delegate in the Advisory Group.

The Advisory Group supports the Project Co-ordinator in preparing responses to all technical, scientific and financial reviews conducted by or on behalf of the European Commission and/or ESO and/or the Joint ALMA Observatory which are required to monitor the progress of the ALMA Enhancement. In order to fulfil this responsibility, all scientific documents and reports prepared by the Work Package Managers for this purpose shall be forwarded, for advice, to the members of the Advisory Group.

5.3.2 Members

At present, the members of the Advisory Group are:

- the Project Co-ordinator
- the Project Scientific Officer
- one person representing Chalmers University, Gothenburg (Sweden)
- one person representing IRAM, Grenoble (France)
- one person representing Cambridge University, Cambridge (UK)
- one person representing DAS, Santiago (Chile)
- one person representing STFC/RAL (UK)
- the Work Package Manager for Band 5 Cartridges
- the Work Package Manager for Software Development

The members representing the Consortium Partners in the Advisory Group are selected by the corresponding Consortium Partners. These selections shall be endorsed by the Project Co-ordinator. The members of the Advisory Group representing their Institution shall consult regularly with the Management and the staff of their Institution in order to convey the views of their Institution and their staff to the Project Co-ordinator.

The Project Co-ordinator may consider modifications of the composition or the number of members of the Advisory Group, in order to reflect possible modifications of responsibilities and/or contributions.

The present composition of the Advisory Group is illustrated in Annex A and the persons currently holding these positions are listed in Annex B.

5.3.3 Ordinary Meetings

At present, four Advisory Group meetings per year are foreseen. Three of these meetings shall be held by either video- or telephone-conference; one meeting per year shall be held face to face.

The members of the Advisory Group shall normally attend the Board meetings. In case of absence this member may nominate a replacement for a particular meeting and shall inform the Project Co-ordinator about this replacement at least one day prior to the meeting in writing (usually by e-mail).

5.3.4 Extraordinary Meetings

Should urgent matters arise, additional meetings may be called by the Project Co-ordinator. In such a case the members of the Advisory Group must be informed at least three days prior to the meeting.

Members of the Advisory Group may send a request for an extraordinary meeting of the Advisory Group to the Project Co-ordinator. He/she, in consultation with other members of the Advisory Group, will decide to convene such a meeting. In such a case the members of the Advisory Group must be informed at least three days prior to the meeting.

5.3.5 Decisions

The Advisory Group is a consulting body supporting the Project Co-ordinator in making decisions related to the Programme. The Project Co-ordinator shall try to reach consensus by the Advisory Group to any of his/her decisions.

No decision can be enforced if it violates any of the pertaining rules and regulations of the EC or any of the Consortium Partners affected by such a decision.

5.3.6 Minutes of Meetings

Minutes of the meetings of the Advisory Group shall be submitted by the Project Co-ordinator to all members of the Advisory Group, by e-mail, as soon as possible. The minutes shall be considered as accepted by the Advisory Group if, within ten calendar days from receipt, no member of the Advisory Group has objected in a traceable form to the Project Co-ordinator.

5.4 The Band 5 Receivers Work Packages (WP2, WP3, and WP4)

These Work Packages are led by the Work Package Manager for Band 5. The Work Package Manager chairs all meetings of the Band 5 Group. He/she is responsible for various interactions between the Consortium Partners involved in these Work Packages and the Project Co-ordinator (cf also Annex A). The Work Package Manager shall regularly report and make recommendations to the Project Co-ordinator for decision. ESO, Chalmers University (Sweden), STFC/RAL (UK) and DAS (Chile) are participating in these Work Packages.

5.4.1 Responsibilities of the Band 5 Group

The Band 5 Group, led by the Band 5 Work Package Manager, is responsible for organizing, planning, executing, supervising and reporting the work to be done and delivering the equipment to be supplied to the ALMA Enhancement Programme within the technical requirements, budget and schedule, as set out in the Contract, in particular in Annex I.

The organization, execution and supervision of activities carried out under these Work Packages shall be reported to and endorsed by the Project Co-ordinator. Should controversial matters arise within this Work Package, these should be brought to the Project Co-ordinator for resolution.

All important matters of scientific, technical, organizational and financial nature shall be discussed within the Band 5 Group, either through initiatives of the group itself, or upon request of the Project Co-ordinator.

The Band 5 Group Work Package Manager may decide to hold special meetings dedicated to internal reviews on the status of the Band 5 Work Packages. The Band 5 Work Package Manager will appoint the Reviewers. These could be members of the ALMA Project, provided they are not directly involved with the Band 5 Work Packages.

The Band 5 Group prepares and timely submits responses to all technical, scientific and financial matters raised by the Project Co-ordinator which are required for the ALMA Enhancement Programme.

5.4.2 Members

At present, the members of the Band 5 Group are:

- the Band 5 Work Package Manager (ESO)
- technical / scientific staff from Chalmers University, Gothenburg (Sweden)
- technical / scientific staff from DAS (Chile)
- technical / scientific staff from STFC/RAL (UK)

The technical / scientific staff in the Band 5 Group is selected by the corresponding Consortium Partners. These selections shall be endorsed by the Band 5 Work Package Manager.

The Band 5 Work Package Manager may propose modifications to the composition of the Band 5 Group, in order to reflect possible modifications of responsibilities, schedule changes, and/or Work Package activities.

5.4.3 Ordinary Meetings

At present, at least four Band 5 Group meetings per year are foreseen. Most of these meetings shall be held by either video- or telephone-conference; but at least one meeting per year shall be held face to face.

The members of the Band 5 Group are expected to attend the meetings.

5.4.4 Extraordinary Meetings

Should urgent matters arise, additional meetings may be called by the Band 5 Work Package Manager. In such a case the members of the Band 5 Group must be informed at least three days prior to the meeting.

Members of the Band 5 Group may send a request for an extraordinary meeting of the Band 5 Group to the Band 5 Work Package Manager. He/she, in consultation with other members of the Band 5 Group and/or the Project Co-ordinator, will decide to convey such a meeting. In such a case the members of the Band 5 Group must be informed at least three days prior to the meeting.

5.4.5 Decisions

The Band 5 Group is supposed to support the Band 5 Work Package Manager in making decisions related to the Programme. The Band 5 Work Package Manager shall try to reach consensus by the Band 5 Group to any of his/her decisions. In case of serious dissent, the Band 5 Work Package Manager shall seek advice from the Project Co-ordinator.

No decision can be enforced if it violates any of the pertaining rules and regulations of the EC or any of the Consortium Partners affected by such a decision.

5.4.6 Minutes of Meetings

Minutes of the meetings of the Band 5 Group shall be submitted by the Band 5 Work Package Manager to all members of the Band 5 Group, by e-mail, as soon as possible. The minutes shall be considered as accepted by the Band 5 Group if, within ten calendar days from receipt, no member of the Band 5 Group has objected in a traceable form to the Band 5 Work Package Manager.

5.5 The Software Development Work Packages (WP5, and WP6)

These Work Packages are led by the Work Package Manager for Software Development. The Work Package Manager chairs all meetings of the partners involved in the two Work Packages. He/she is responsible for various interactions between the Consortium Partners involved in these Work Packages and the Project Co-ordinator (cf also Annex A). The Work Package Manager shall regularly report and make recommendations to the Project Co-ordinator for decision. ESO, IRAM (France) and University of Cambridge (UK) are participating in these Work Packages.

5.5.1 Responsibilities of the Software Development Group

The Software Development Group, led by the Software Development Work Package Manager, is responsible for organizing, planning, executing, supervising and reporting the work to be done and delivering the equipment to be supplied to the ALMA Enhancement Programme within the technical requirements, budget and schedule.

The organization, execution and supervision of activities carried out under this Work Packages shall be reported to and endorsed by the Project Co-ordinator. Should controversial matters arise within this Work Package, these should be brought to the Project Co-ordinator for resolution.

All important matters of scientific, technical, organizational and financial nature shall be discussed within the Software Development Group, either through initiatives of the group itself, or upon request of the Project Co-ordinator.

The Software Development Group Work Package Manager may decide to hold special meetings dedicated to internal reviews on the status of the Software Development Work Packages. The Software Development Work Package Manager will appoint the Reviewers. These could be members of the ALMA Project, provided they are not directly involved with the Software Development Work Packages.

The Software Development Group prepares and timely submits responses to all technical, scientific and financial matters raised by the Project Co-ordinator which are required for the ALMA Enhancement Programme.

5.5.2 Members

At present, the members of the Software Development Group are:

- the Software Development Work Package Manager (ESO)
- technical / scientific staff from University of Cambridge (UK)
- technical / scientific staff from IRAM (France)

The technical / scientific staff in the Software Development Group is selected by the corresponding Consortium Partners. These selections shall be endorsed by the Software Development Work Package Manager.

The Software Development Work Package Manager may propose modifications to the composition of the Software Development Group, in order to reflect possible modifications of responsibilities, schedule changes, and/or Work Package activities.

5.5.3 Ordinary Meetings

At present, at least four meetings per year are foreseen; each meeting will normally address a single Work Package. Most of these meetings shall be held by either video- or telephone-conference; but at least one meeting per year shall be held face to face.

The representatives of the relevant Work Package are expected to attend the meetings that concern them.

5.5.4 Extraordinary Meetings

Should urgent matters arise, additional meetings may be called by the Software Development Work Package Manager. In such a case the members of the Software Development Group must be informed at least three days prior to the meeting.

Members of the Software Development Group may send a request for an extraordinary meeting of the Software Development Group to the Software Development Work Package Manager. He/she, in consultation with other members of the Software Development Group and/or the Project Co-ordinator, will decide to convey such a meeting. In such a case the members of the Software Development Group must be informed at least three days prior to the meeting.

5.5.5 Decisions

The Software Development Group is supposed to support the Software Development Work Package Manager in making decisions related to the Programme. The Software Development Work Package Manager shall try to reach consensus by the Software Development Group to any of his/her decisions. In case of serious dissent, the Software Development Work Package Manager shall seek advice from the Project Co-ordinator.

No decision can be enforced if it violates any of the pertaining rules and regulations of the EC or any of the Consortium Partners affected by such a decision.

5.5.6 Minutes of Meetings

Minutes of the meetings of the Software Development Group shall be submitted by the Software Development Work Package Manager to all members of the Software Development Group, by e-mail, as soon as possible. The minutes shall be considered as accepted by the Software Development Group if, within ten calendar days from receipt, no member of the Software Development Group has objected in a traceable form to the Software Development Work Package Manager.

5.6 The Project Co-ordinator

5.6.1 Responsibilities of the Project Co-ordinator

The Project Co-ordinator is the single point of contact between the European Commission and the Consortium. In this function the Project Co-ordinator shall sign the Contract with the Commission. Pursuant to the Contract, the Project Co-ordinator is responsible for the following tasks and functions

- (a) overall management of the Project,
- (b) chairing Advisory Group meetings,
- (c) timely collection and, with the support of the Work Package Managers and the Advisory Group, preparation of statements, including financial and audit certificates, from the Parties for transmission to the Commission,
- (d) timely collection of all hardware, software and data identified as deliverable items in the Contract or requested by the Commission for reviews and audits, including the results of the financial audits prepared by independent auditors, from the Parties for transmission to the Commission.

Concerning activities internal to the Consortium, the Project Co-ordinator shall inform the Advisory Group about any proposed change proposals concerning technical requirements, performance, budget or schedule, to be confirmed by the Parties concerned.

5.6.2 No power of Representation

The Project Co-ordinator shall not be entitled to act or to make legally binding declarations on behalf of any other Party.

5.6.3 Submitting Deliverables

If one or more of the Parties is late in submitting Project deliverables, the Project Co-ordinator may submit the other Parties' Project deliverables to the European Commission.

5.6.4 Specific Authorisation of the Project Co-ordinator

In general, the Project Co-ordinator has the right to retain any payment to a Party if

- (a) this Party is late in submitting or refuses to provide deliverables as defined in Section 4.3 of the Consortium Agreement and Contract, Annex II.7,
- (b) such Party has not yet spent the payment of the previous period,

except if the Party concerned can show that there are reasonably justified grounds for delay.

Section 6: Costs - Payments

6.1 General Principles

In general, each Party shall bear its own costs incurred in connection with the performance of the Contract and this Consortium Agreement, carrying out of the Project work and implementation of the Project, except where reasonably justified otherwise.

The financial contribution of the Commission will be distributed according to the Contract.

If a decision of the Project Co-ordinator and the Consortium Partner concerned to change the budget has been taken, but has not yet been implemented into the manifestation of the Project budget in the Contract, Annex I, the Project Co-ordinator has the right to nonetheless distribute payments following the budget allocation newly agreed via the Project Co-ordinator's decision.

6.2 Payments

The Project Co-ordinator shall receive all payments made by the Commission.

The Project Co-ordinator will transfer, in accordance with the Contract and the budget allocations, the appropriate sums to the respective Parties. The respective Parties shall, after successfully achieving the relevant payment milestone(s) (defined in the Contract or mutually revised in writing by the Project Co-ordinator and the respective Party) send a request for payment to the Work Package Manager concerned. After confirmation of the successful achievement of payment milestones the Work Package Managers will request from the Project Co-ordinator that the respective payment(s) be made to the Party concerned.

Parties who spend less than their respective share of the budget will be funded only in respect of the actual amount spent. Parties who spend more than their respective share of the budget will be funded only up to their share.

Payments by ESO to the Parties are contingent on ESO having received the corresponding funds from the Commission.

6.3 Financial planning and reporting data

- (1) The Parties shall deliver all relevant financial data including, but not limited to, the application of the budget use and received payments needed for financial planning, its execution and accountability towards the Project and towards the Commission, based upon their financial system as provided in the Contract and this Consortium Agreement.
- (2) The format of these data has to comply with the requirements of the Commission.
- (3) Each Party shall be solely liable for its financial data. No other Party, including the Project Co-ordinator or his/her representatives acting within the scope of this Consortium Agreement may change these data without express written permission of the Party concerned.

Section 7: Confidentiality

7.1 Principles

With respect to all information of whatever nature or form as is

- (a) disclosed to a Party in connection with the submission to the Commission of the proposal for this Project under the Sixth Framework Programme pending the signing of the Contract;
- (b) disclosed to a Party in connection with the Project after the signing of the Contract, but which

- (i) is clearly marked "confidential";
- (ii) if disclosed orally, was at the time of disclosure indicated to be "confidential" and within thirty (30) calendar days reduced to physical form and marked "confidential" by the discloser,
- (iii) is obviously of a confidential nature, which means that, given the nature of the information disclosed and the circumstances of the disclosure, a reasonable person would believe such information disclosed to be the confidential information of the disclosing party (the failure of the disclosing party to provide a follow-up tangible form thereby not affecting the confidential nature of the information)

the terms of this Section shall apply.

7.2 Obligations

Each Party agrees that such information is communicated on a confidential basis and its disclosure may be prejudicial to the owner of the information, and undertakes that:

- (a) it will not during a period of five (5) years from the date of disclosure to the Party or during a period of three (3) years after the end of the Project – whichever occurs later - use any such information for any purpose other than in accordance with the terms of the Contract and of this Consortium Agreement; and
- (b) it will during the period of five (5) years from the date of disclosure to the Party or during a period of three (3) years after the end of the Project – whichever occurs later - treat the same as (and use reasonable endeavours to procure that the same be kept) confidential and not disclose the same to any other third party without the prior written consent of such owner in each case; provided always that such agreement and undertaking shall not extend to any information which the receiving Party can show:
 - (1) was at the time of disclosure to the Party published or otherwise generally available to the public, or
 - (2) has after disclosure to the Party been published or become generally available to the public otherwise than through any act or omission on the part of the receiving Party, or
 - (3) was already in the possession of the receiving Party, without any restrictions on disclosure, at the time of disclosure to the Party, or
 - (4) was rightfully acquired from others without any undertaking of confidentiality, or
 - (5) was developed independently of the work under the Contract by the receiving Party.

7.3 Communication of Information

Each Party agrees that nothing shall prevent the communication of information as is needed to be communicated to comply with applicable laws or regulations or with a court or administrative order provided that insofar as legally and reasonably possible the complying Party shall have informed the owner of the information of such need and shall have complied with such owner's reasonable instructions designed to protect the confidentiality of such information;

Section 8: Liabilities

8.1 Liability of the Parties towards each other

As regards any claims or damages arising in connection with the preparation and performance of the Progress Reports and Red Flag Reports as defined in Annex I to the Contract, the following liability provisions shall apply:

- (1) In respect of information or materials provided by one Party to another hereunder or under the Contract, the supplying Party shall be under no obligation or liability other than as stated in Section 4.3 (b) and no warranty condition or representation of any kind is made, given or to be implied as to the sufficiency, accuracy or appropriateness for purpose of such information or materials, or, subject to Section 4.3 (c), the absence of any infringement of any proprietary rights of third parties by the use of such information and materials and the recipient Party shall in any case be entirely responsible for the use to which it puts such information and materials.
- (2) No Party shall be responsible to another Party for indirect or consequential loss or damages such as, but not limited to, loss of profit, loss of revenue or loss of Contracts.

8.2 Indemnification

8.2.1 Indemnification in the event of claims between the Parties, without Commission claims

Each Party shall indemnify each of the other Parties in respect of acts or omissions of itself and of its employees, agents and Subcontractors constituting a breach of any obligation under this Consortium Agreement, provided always that such indemnity shall not extend to claims for indirect or consequential loss or damages such as, but not limited to, loss of profit, revenue, contract or the like; the total limit of liability of that Party to all of the other Parties collectively in respect of any and all such claims shall not exceed once that Party's Project Share excluding its equipment and instrument costs.

The provisions of this section shall not be construed as limiting the Parties' liability with regard to any acts or omissions beyond the ones constituting a breach of any obligation under this Consortium Agreement, such as indemnity for damage to physical health of humans and/or to property.

8.2.2 Indemnification by the Defaulting Party in the event of claims from the Commission

In any case where the Commission claims reimbursement in accordance with the Contract, Annex II.18, from Parties other than the Defaulting Parties, the Compensating Parties shall be entitled to seek full indemnification by the Defaulting Party. However, for the avoidance of doubt, under article 13 2 of Annex II, where a Party is an international organisation, a public body or a legal entity whose participation where the indirect action is guaranteed by a Member State or an associated State, that Party shall be solely responsible for its own debt and shall not bear the debt of any other Party.

8.3 Liability towards Third Parties

Subject always to such other undertakings and warranties as are provided for in this Consortium Agreement and the Contract, each Party shall be solely liable for any loss, damage or injury to third parties resulting from the execution of its assigned tasks in the Project and from its Use of Knowledge and/or Pre-existing know-how.

8.4 Third Parties

- (a) Each Party shall be fully responsible for the performance of any part of its share of the Project, or other Contract obligations, in respect of which it enters into any contract with a third party (e.g. a Subcontractor) and shall ensure
 - (i) such contracts enable fulfilment of the Contract;
 - (ii) the other Parties' Access-rights are the same as would have been the case had the contracting Party performed its share of the Project and/or those obligations itself; and
 - (iii) the third party shall not have access to any other Party's Knowledge or Pre-Existing Know-How without that Party's prior written consent.
- (b) each Party shall inform the Project Co-ordinator (who will consult the Advisory Group) in writing asking for a decision, if it intends to enter into a contract with a third party (giving the rationale therefore) if such an event has not been detailed in the Contract, Annex I and the contract is other than for less than ten (10) percent of its share of the Project.
- (c) each Party shall ensure that it can grant Access-rights and fulfil the obligations under the Contract notwithstanding any rights of its employees, or persons it engages to perform part of its share of the Project, in the Knowledge or Pre-existing Know-how they create after the Project Commencement Date.

Section 9: Force Majeure

Each Party will notify the other Parties in writing of any Force Majeure (Contract, Annex II.4) as soon as possible. The Parties shall discuss in good faith the possibilities of a transfer of tasks affected by the event. Such discussions shall commence as soon as reasonably possible. If such Force Majeure event is not overcome within 6 weeks after such notification, the transfer of tasks shall be carried out.

Section 10: Intellectual Property Rights

10.1 General Provisions

The Parties agree to respect their individual Intellectual Property Rights.

10.2 Protection of Knowledge

10.2.1 Joint Invention

If, in the course of carrying out work on the Project, a joint invention, design or work is made - and more than one Party is contributor to it - and if the features of such joint invention design or work are such that it is not possible to separate them for the purpose of applying for, obtaining and/or maintaining the relevant patent protection or any other Intellectual Property Right, the Parties concerned agree that they may jointly apply to obtain and/or maintain the relevant right together with any other Parties.

The Parties concerned shall seek to agree amongst themselves arrangements for applying for, obtaining and/or maintaining such right on a case-by-case basis. As long as any such right is in force, each Party concerned shall be entitled to use and to license such right without the consent of the other Parties, provided that the Party concerned shall be

informed in advance of any licensing to third parties. In case of licensing to third parties, appropriate financial compensation shall be given to the other Parties concerned.

10.2.2 Application for a Patent

In respect of a country either specified by the Commission or agreed upon by the Parties, a Party shall notify the other Parties (via the Project Co-ordinator, if this is practical) if it does not intend to seek adequate and effective protection (as required by the Contract) of certain of its Knowledge from the Project or if that Party intends to waive such protection. If another Party (or Parties) informs the notifying Party in writing within one calendar month of such notice that it wishes to obtain or maintain such protection, the notifying Party shall assign to such other Party(ies) all rights necessary to obtain or maintain such protection.

Such assignment shall ensure that the Access-rights of all Parties will be unaffected. For the avoidance of doubt, the Party which assigned its rights shall have at least the same Access-rights as the non-involved Parties.

10.3 Exclusion of Access-Rights to Pre-Existing Know-How

In accordance with Contract, Annex II.35.1.d, each Party is limited and / or restricted to grant access rights to the following Pre-existing know-how:

- (1) Pre-Existing know-how that has been and/or will be created and developed by personnel and/or scientists and/or students at the Party not directly involved in the ALMA Project;
- (2) Pre-Existing know-how generated by personnel and/or scientists and/or students at the Party that are directly involved in the ALMA Project, which is outside the scope of the tasks to be performed by the Party under the ALMA Project; and
- (3) Pre-Existing know-how that has been, and/or will be derived outside of the ALMA Project which the Party due to third party rights are not able to grant access rights to.

10.4 Access-rights

10.4.1 General Principles

All Access-rights granted in accordance with this Section are granted on a non-exclusive basis, expressly exclude any rights to sub-license and shall be made free of any transfer costs.

Access-rights shall be granted in accordance with and subject to the Contract, Annex II.35. Knowledge and Pre-existing Know-how shall be used only for the purposes for which Access- rights to it have been granted and only for so long as is necessary for those purposes.

In relation to the granting of Access-rights "needed" or "need" shall mean that, without the grant of such Access-rights:

- In the case of Access-rights granted for the execution of the Project, carrying out the tasks assigned to the recipient Party under the Implementation Plan (as amended from time to time) would be impossible, significantly delayed, or require significant additional financial or human resources.

- In the case of Access-rights granted for Use, the Use of a defined and material element of the recipient Party's own Knowledge would be technically or legally impossible.

The burden of proof in relation to a claimed need for Access-rights shall be on the requesting Party. This Party shall provide such proof to the owning Party on a written request.

According to Contract, Annex II.35.1.a the Parties shall conclude a specific agreement for granting Access-rights.

The parties shall endeavour to reconcile any dispute concerning the need for Access-rights through the Project Co-ordinator, taking advice from the Advisory Group.

Should the Advisory Group have been already dissolved, the Parties concerned shall have recourse to the Settlement of Disputes procedures as provided for in Section 16 of this Consortium Agreement.

Any grant of Access-rights not covered by this Section shall be at the absolute discretion of the owning Party and subject to such terms and conditions as may be agreed between the owning and receiving Parties.

10.4.2 Access-rights for carrying out the Project

Access-rights to Knowledge and Pre-existing Know-how needed for the execution of the Project shall be granted on a royalty-free basis only upon written request specifying the scope and duration of their application. In case of Pre-existing Know-how, Access-rights shall be granted only after conclusion of a bilateral agreement between the Parties concerned.

10.4.3 Access-rights for Use

Subject to Section 10.4.1, Access-rights to Knowledge and Pre-existing Know-how both needed for Use of a Party's own Knowledge shall be granted upon bilateral agreement between the Parties concerned.

Access-rights to Knowledge shall be granted on preferential conditions, Access-rights to Pre-existing Know-how shall be granted on Fair and Non-discriminatory Conditions. The granting of Access-rights shall be made conditional on to the following principles:

- (i) the access to Pre-existing Know-how is limited to the field of application being identified as pertaining to the objectives, content and goals of the Project and necessary for the Use of own Knowledge of the recipient Party.
- (ii) the access to Knowledge is limited to the field of application being identified as the objectives and goals of the Project.
- (iii) Access rights must be requested in writing within 24 months after the end of the Project.
- (iv) subject to (i) and (ii) access has to be granted within 6 months after written request by the potential user to the owning Party.

10.4.4 Access-rights for using Knowledge in subsequent Research Activities

Recognising the Parties' obligations to act in good faith and in accordance with Section 7.2.b, the Parties agree that the Access-rights for using Knowledge in subsequent research activities are to be as follows:

As of the date set out in the Contract, Article 4, Parties are deemed to be granted, a right to use free of charge Knowledge from the Project for:

- (a) internal research;
- (b) third-party research, provided the third party does not have direct access to confidential Knowledge from the Project generated by other Parties (as examples)
 - producing research results which are available to the third party but which contain hermetically sealed Knowledge from the Project;
 - using Knowledge from the Project for in-house testing or diagnosis purposes in doing research;
 - joint publications.

10.4.5 Access-rights for Affiliates

Each Party hereby grants Access- rights to all Affiliates of any other Party as if such Affiliates were Parties provided all such Affiliates grant Access-rights to all Parties (and their Affiliates) and (without prejudice to the Parties' obligations to carry out the Project and to provide Project Deliverables) fulfil all confidentiality and other obligations accepted by the Parties under the Contract or this Consortium Agreement as if such Affiliates were Parties.

Upon cessation of the control of an Affiliate, any Access-rights granted to such Affiliate in respect of Knowledge or Pre-existing Know-how shall lapse, provided however that information that is Knowledge which has been incorporated into the products, processes, software or services of such Affiliate or which has been amalgamated with such Affiliate's own information may continue to be used (in the manner it was then being used) by such Affiliate, if it is not practical to do otherwise. In such an event, at the request of such Affiliate, each requested Party shall grant to such Affiliate non-exclusive licences under that Party's intellectual property rights which are Knowledge against terms and conditions to be agreed, provided that no Legitimate Interests of such Party oppose the grant of such licences. Upon such cessation of control, Access-rights granted by such Affiliate shall continue in full force and effect.

10.4.6 Access-rights for Parties joining or leaving the Project

Parties joining the Project after the date of the Contract will be granted the Access-rights as from the date of their signature of the Declaration of Accession.

For Parties leaving the Project in accordance with the provisions of Section 8.5.2 hereof, the following will apply:

Defaulting Parties are obliged to continue to grant Access-rights pursuant to the Contract and this Consortium Agreement, but the Access-rights granted to the Defaulting Party pursuant to this Consortium Agreement shall cease immediately upon termination of the participation of the Defaulting Party in the Contract.

Termination of the Contract or this Consortium Agreement and/or cessation of licenses granted to the Defaulting Party in accordance with Section 8.5.2 shall not

terminate any sublicenses granted or agreed upon to be granted or offered by the Defaulting Party in accordance with Sections 10.4.3 and 10.4.8.3 prior to the date on which such termination of this Consortium Agreement and/or cessation of licenses becomes effective, provided that the Party or Parties which generated the Knowledge or Pre-existing Know-how so sublicensed shall have the right to have an assignment of the Defaulting Party's rights under such sublicenses.

Any Party leaving voluntarily from the Project has access to Knowledge as this exists at the date its membership of the Consortium expires provided that the 24 month period to request Access Rights shall start on the date of leaving the Project.

The Access Rights granted to a Party eliminated by decision of the General Assembly shall terminate at the date of elimination without further notice.

10.4.7 Access-rights for Third Parties

Notwithstanding the provisions of this Section the provisions as set out in Contract, Annex II.35, each Party may enter into a technical co-operation or licensing arrangement with a third party in respect of its own Knowledge, including, but not limited to, the carrying out of research on behalf of a third party, even if there are minor amounts of Pre-existing Know-how and Knowledge owned by another Party, unavoidably incorporated into or amalgamated with such own Knowledge. In such circumstances and upon request of the party entering into the co-operation or arrangement, the other Party shall grant non-exclusive rights to permit such co-operation or arrangement against terms and conditions to be agreed upon, provided that no Legitimate Interest of the other Party opposes the grant of such rights.

Section 11: Publications, Press Releases and Reports to the Commission

11.1 Publications of own Knowledge

For the avoidance of doubt, each Party shall have the right to publish or allow the publishing of data which constitutes such Party's Knowledge, Pre-existing Know-how or confidential information it owns in accordance with the Contract, Annex II.33.3.

11.2 Procedure

In addition to Annex II.33.3 each publication or communication related to the Project, whether written or oral, is required to have obtained the consent of the Parties concerned. To this end, a brief description and the subject of the proposed publication or communication shall be submitted to the Project Co-ordinator and the Advisory Group.

If none of the Parties objects to the publication within 30 calendar days from the date of referral, consent shall be deemed to be given.

Any objection shall include:

- a) a request for modifications, specifically if information contained in the proposed publication or communication is likely to impair the industrial and commercial Use of Knowledge; or

- b) a request that the publication or communication shall be postponed if the information contained in the proposed publication or communication is the subject matter of intellectual property protection.

If a dispute regarding a publication cannot be settled amicably within 30 calendar days the Project Co-ordinator, after consulting with the Advisory Group, shall decide the issue. However, none of the Parties concerned may withhold its consent to publication or communication upon the expiry of a period of three (3) calendar months following the first submission of the proposed publication or communication.

It is understood that any publication or communication made pursuant to this Section is required to indicate the contribution made by each of the Parties.

11.3 Disclaimer and marking of confidential information provided to the Commission

In addition to the Contract, Annex II.12:

- (a) All information provided to the Commission, publications and press releases shall have a disclaimer saying "The information in this document is provided as is and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability."
- (b) Confidential information provided to the Commission will be marked stating the information is confidential and may be used only for information purposes by Community Institutions to whom the Commission has supplied it.

11.4 Publication to qualify for a degree

Where a person carrying out work on the Project on behalf of a Party (the "Relevant Party") needs to include Pre-existing Know-how or Knowledge of another Party in a publication to qualify for a degree, this requires the written approval for the Use for publication from the appropriate Party owning such rights or affected by the Use for publication.

To ensure that the planned date of publication can be met the approval of the relevant Parties shall be sought at least three months before the latest date on which (pursuant to the qualification procedures) the contents of the planned publication can be altered.

Section 12: No Partnership or Agency

Nothing in this Consortium Agreement shall constitute or be deemed to constitute either a formal business organisation, or a legal entity, or a partnership or an agency between the Parties.

Section 13: Assignment

No Party shall, without the prior written consent of the other Parties, partially or totally assign or otherwise transfer any of its rights and obligations under this Consortium Agreement. Such consent shall not be unreasonably withheld.

Section 14: Accession and Termination

14.1 Accession to the Contract

Accession to the Contract entails that the entering Party agrees to adhere to the Contract and this Consortium Agreement and the decisions of the bodies established under this Consortium Agreement. The accession to this Consortium Agreement shall be approved by signature to an agreement by the existing Parties and the new Party.

14.2 Rules for Termination

No Party shall be entitled to withdraw from this Consortium Agreement and/or participation in the Project unless:

- (a) that Party has obtained the prior written consent of the other Parties (such consent not to be unreasonably withheld), and also of the Commission, to the withdrawal from, or termination of, the Contract; or
- (b) that Party's participation in the Contract is terminated by the Commission pursuant to the provisions of the Contract, Annex II.15; or
- (c) the Contract is terminated by the Commission for any reason whatsoever,

provided always that a Party shall not by withdrawal or termination be relieved from

- (a) its responsibilities under this Consortium Agreement or the Contract in respect of that part of that Party's work on the Project which has been carried out (or which should have been carried out) up to the date of withdrawal or termination; or
- (b) any of its obligations or liabilities arising out of such withdrawal or termination.

14.3 Termination by the Commission

If any Party's participation in the Contract is terminated by the Commission pursuant to the provisions of the Contract, Annex II.15, or a Party withdraws from the Project, then, without prejudice to any other rights of the other Parties, the provisions of Section 4.3(c) shall apply correspondingly.

14.4 Termination due to Bankruptcy or Liquidation

If any Party enters into bankruptcy or liquidation or any other arrangement for the benefit of its creditors, the other Parties shall, subject to approval by the Commission, be entitled to take over the fulfilment of such Party's obligations and to receive subsequent payments under the Contract in respect thereof. In such event all rights and obligations under the Contract and this Consortium Agreement shall in good faith be redistributed among the remaining Parties and the affected Party on the basis of the work performed by the affected Party prior to the occurrence of the above circumstance.

14.5 Continuance of Regulations

The provisions of Sections 1, 4.3.(c), 7, 8, 10, 14 and 15 shall survive the expiration or termination of this Consortium Agreement to the extent needed to enable the Parties to pursue the remedies and benefits provided for in those Sections.

14.6 Continuance of Sublicenses

Termination of the Consortium Agreement and/or cessation of licences granted to the Defaulting Party shall not terminate any sublicenses granted or agreed to be granted or offered by the Defaulting Party in accordance with Section 10 prior to the date on which such termination of the Consortium Agreement and/or cessation of licences becomes effective, provided that the Party or Parties which generated the Knowledge or Pre-existing Know-how so sublicensed shall have the right to have an assignment of the Defaulting Party's rights under such sublicenses.

Section 15: Settlement of Disputes

15.1 Arbitration

All disputes or differences arising in connection with this Consortium Agreement which cannot be settled amicably shall be finally settled by arbitration in Brussels under the rules of arbitration of the International Chamber of Commerce by one or more arbitrators to be appointed under the terms of those rules. In any arbitration in which there are three arbitrators, the chairperson shall be of juridical education.

The award of the arbitration will be final and binding upon the parties concerned.

The Parties may instead elect to resolve by mediation a dispute or difference arising in connection with this Consortium Agreement which cannot be settled amicably.

Section 16: Language

This Consortium Agreement is drawn up in English, which language shall govern all documents, notices and meetings for its application and/or extension or in any other way relative thereto.

Section 17: Applicable Law

This Consortium Agreement shall be construed according to and governed by the law provided in the Contract, Article 12.

Section 18: Entire Agreement – Amendments / Severability

Should any provision of this Consortium Agreement prove to be invalid or incapable of fulfilment, or subsequently become invalid or incapable of fulfilment, whether in whole or in part, this shall not affect the validity of the remaining provisions of this Consortium Agreement. In such a case, the Contractors shall be entitled to demand that a valid and practicable provision be negotiated which mostly fulfils the purpose of the invalid or impracticable provision.

This Consortium Agreement, the Contract and - when such exist(s) - Complementary Contract(s), constitute the entire agreement between the Parties in respect of the Project, and supersede all previous negotiations, commitments and writings concerning the Project

including any memorandum of understanding between the Parties (whether or not with others) which relate to the Project or its proposal to the Commission.

Amendments or changes to this Consortium Agreement shall be valid only if made in writing and signed by an authorised signatory of each of the Parties.

Section 19: Accession to the Contract

All Parties declare that they have taken notice of all provisions of the Contract and its Annexes, which they have approved and have taken notice of all Sections of this Consortium Agreement.

Therefore, through signature of this Consortium Agreement, the parties are obliged to accede to the Contract by submission of their Forms A or B to the Project Co-ordinator.

Section 20: Counterparts

This Consortium Agreement may be executed in any number of counterparts, each which shall be deemed an original, but all of which shall constitute one and the same instrument.


SIGNATURES

AS WITNESS the Parties have caused this Consortium Agreement to be duly signed by the undersigned authorised representatives the day and year first above written.


Authorised to sign on behalf of the European Organization for Astronomical Research in the Southern Hemisphere (ESO)

Signature(s) 
Name(s) Patrick Geeraert
Title(s) Head of ESO Administration Division

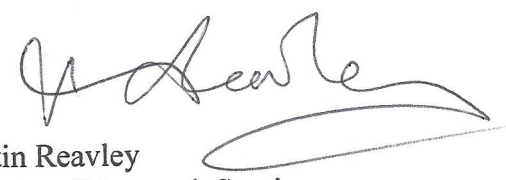
Authorised to sign on behalf of the Chalmers Tekniska Högskola AB

Signature(s) 
Name(s) Professor Dr. Hans Olofsson
Title(s) Director of Onsala Space Observatory, Chalmers University


Authorised to sign on behalf of the the Institute de Radioastronomie Millimétrique (IRAM)

Signature(s) 
Name(s) Dr. Pierre Cox
Title(s) Director of IRAM


Authorised to sign on behalf of the Chancellor, Master and Scholars of the University of Cambridge

Signature(s) 
Name(s) Martin Reavley
Title(s) Director of Research Services

Authorised to sign on behalf of the Department of Astronomy, Universidad de Chile, Santiago

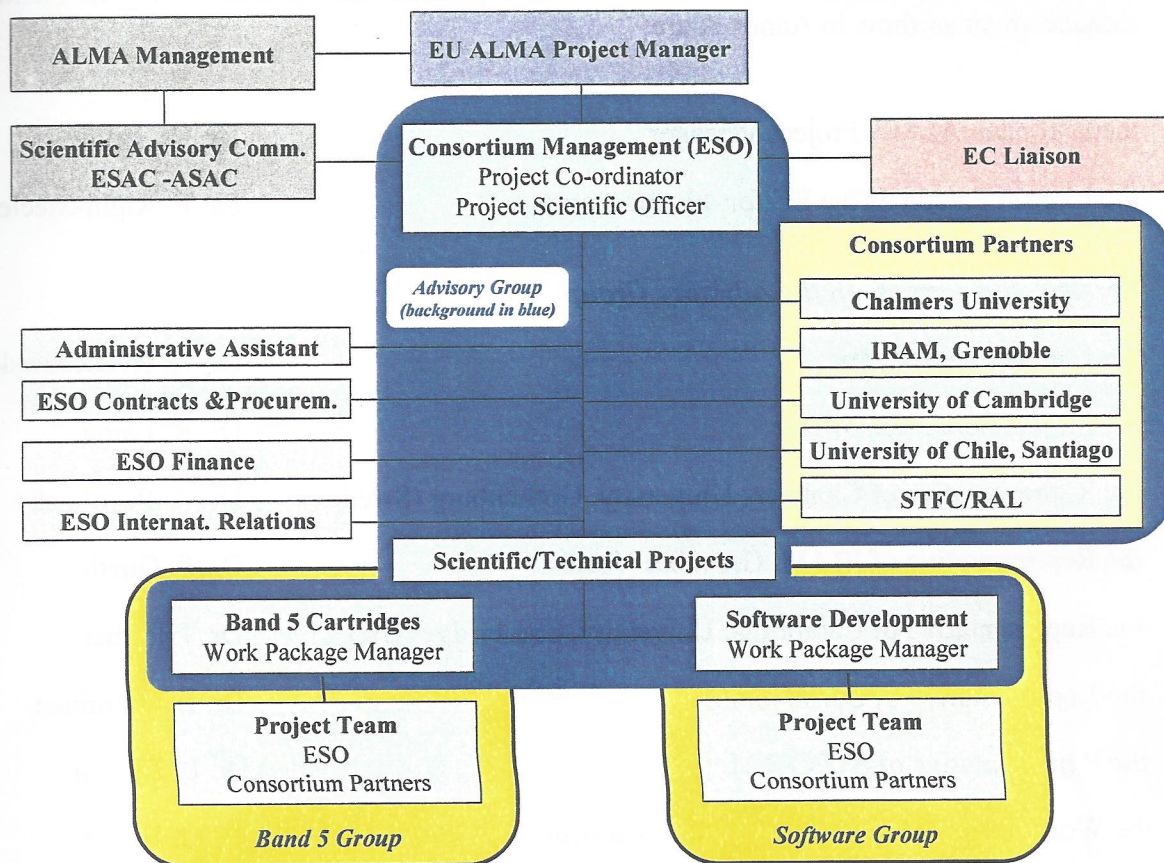
Signature(s) 
Name(s) Dr. Mario Hamuy
Title(s) Director, Department of Astronomy

Authorised to sign on behalf of the Science and Technology Facilities Council (STFC)

Signature(s) 
Name(s) Tony Wells
Title(s) Senior Sales Contacts Manager

ANNEX A: Organisational Structure

ALMA Enhancement FP6 Program



ANNEX B: Names of Persons Currently Involved in the Organisational Structure

At present, the members involved in the organisational structure of the ALMA Enhancement as show in Annex A are:

the European ALMA Project Manager	Dr. W. Wild
the Liaison Person of the EC for this Programme	Dr. E. Righi-Steele

Persons also serving on the Advisory Group

the Project Co-ordinator	Dr. H. Rykaczewski
the Project Scientific Officer	Dr. R. Laing
the Representative of Chalmers University, Gothenburg (Sweden)	Dr. A. Pavolotsky
the Representative of IRAM, Grenoble (France)	Dr. F. Gueth
the Representative of Cambridge University, Cambridge (UK)	Dr. J. Richer
the Representative of DAS (Chile)	Dr. L. Bronfman
the Representative of STFC/RAL (UK)	Dr. B. Ellison
the Work Package Manager for Band 5 Cartridges	Dr. G. H. Tan
the Work Package Manager for Software Development	Dr. J. Schwarz

Administrative and Logistics Support at ESO

Administrative Assistant	Mrs. E. Zuffanelli
Contracts and Procurements	Dr. E. Patkos
Finance	Mrs. R. Brunner
International Relations	Dr. E. Patkos

Reference Documents

- [RD1] Contract No. 515906 – Project ALMA Enhancement,
signed by the Commission on 19 October, 2005
- [RD2] Amendment No. 1 to Contract No. 515906 – Project ALMA Enhancement,
signed by the Commission on 8 October, 2008
- [RD3] Contract No. 515906, revised Annex I, Description of Work, Version B,
Released 30 January, 2008
- [RD4] Contract No. 515906, Annex II, General Conditions,
(annex-ii-general-conditions_en.pdf)
approved by the Commission on 23 October, 2003
Decision C (2003)3834 dated 23.10.03
- [RD5] Contract No. 515906, Annex III, Integrated Projects
approved by the Commission on 23 October, 2003
Decision C (2003)3834 dated 23.10.03
- [RD6] Contract No. 515906, Form A,
Accession to the contract,
a) signed by Chalmers Tekniska Högskola AB on 19 October, 2005
b) signed by Institut de Radioastronomie Millimétrique on 17 October, 2005
c) signed by the University of Cambridge on 22 September, 2005
d) signed by Department of Astronomy, Universidad de Chile (Santiago) on 9
November, 2005
- [RD7] Contract No. 515906, Form B,
Request for accession of a new contractor to the contract,
signed by STFC / RAL on 3 August, 2007