



AGREEMENT

No. 87603/CFP/ESO/18/88584/ASP

for the production of 73 Cold Cartridge Assemblies for ALMA Band 2

BETWEEN

the **European Organisation for Astronomical Research in the Southern Hemisphere**, having its Headquarters at Karl-Schwarzschild-Straße 2, D-85748 Garching bei München (Germany), hereafter referred to as **ESO**, represented by Xavier Barcons, ESO Director General,

on the one hand,

AND

Nederlandse Onderzoekschool Voor Astronomie (NOVA), NOVA Office, J.H. Oort Building, Niels Bohrweg 2, 2233CA Leiden, The Netherlands, legally represented by the Universiteit Leiden (UL), hereafter referred to as **Contractor** represented by its executive director at interim of NOVA, Dr. Frank Helmich,

on the other hand,

on behalf of the **Consortium of NOVA, GARD and INAF**, coordinated by **NOVA** hereafter referred to as the **Consortium**, consisting of:

- **Nederlandse Onderzoekschool Voor Astronomie (NOVA)**, NOVA Office, J.H. Oort Building, Niels Bohrweg 2, 2233CA Leiden, The Netherlands, legally represented by the Universiteit Leiden (UL), hereafter referred to as Contractor represented by its executive director of NOVA, Dr. Ronald Stark,;
- **Group for Advanced Receiver Development (GARD)**, the instrumentation division of Onsala Space Observatory, Swedish National Radio Astronomy Facility, Gothenburg, Sweden, legally GARD OSO is represented by Chalmers University of Technology (Gothenburg) and supported by the Swedish Research Council;



- **INAF:** the Osservatorio di Astrofisica e Scienza dello Spazio di Bologna (INAF-OAS) and INAF-OAA – Osservatorio Astrofisico di Arcetri, under the scientific responsibility of Fabrizio Villa, senior researcher at INAF-OAS, and legally represented by INAF (Istituto Nazionale di AstroFisica), the Italian National Institute for Astrophysics in the person of President of INAF, Prof. Nicolò D’Amico.

being liable to ESO jointly and severally for the obligations arising under the Agreement

IT IS AGREED AS FOLLOWS:

ARTICLE 1. SCOPE OF THE AGREEMENT

ESO entrusts to the Contractor/Consortium to supply 73 Cold Cartridge Assemblies for ALMA Band 2 (the “**Work**”) in accordance with the following documents in the order of precedence:

- 1.1 the provisions of the present Agreement;
- 1.2 the “*General Conditions of ESO Contracts, Munich, December 2014*” (“**GCEC**”. Annex 1).
- 1.3 the “Statement of Work”, Doc. No. FEND-40.02.02.00-0061-SOW, Version A dated 15.06.2018 (“**SOW**”, Annex 2);
- 1.4 the “Technical Specification”, Doc. No. FEND-40.02.02.00-0060-SPE, Version A dated 15.06.2018 (Annex 3);
- 1.5 A document higher on the priority list shall always take precedence over a document lower on the list.
- 1.6 The present Contract constitutes the entire Agreement between the parties in relation to the subject matter of the Contract and replaces and supersedes all other communications or understandings of any kind, either written or oral, between the parties in this respect.

ARTICLE 2. PRICE

- 2.1 The price for the performance of the Work (the “**Price**”) specified in Article 1 of the Contract is summarized in the table below:

PRICE ELEMENT	NOVA [Euro]	GARD [SEK]	INAF [Euro]
Labour and Operations Phase 1 (firm fixed price)	1,224,200	10,924,400	730,900
Third Party Supplies Phase 1 (estimated price)	280,200	0	0
Total contract price Phase 1	1,504,400	10,924,400	730,900
Labour and Operations Phase 2 (firm fixed price)	1,039,700	600,900	289,500
Third Party Supplies Phase 2 (estimated price)	1,835,800	0	0
Total Contract Price Phase 2	2,875,500	600,900	289,500
Total Contract Price Phase 1 + 2	4,379,900	11,525,300	1,020,400
Option: Spare Parts for 2 years (Labour and Operations)	5,700	0	0
Option: Spare Parts for 2 years (Third Party Supplies)	54,800	0	0
Total Spare Parts Option	60,500	0	0

- 2.2 ESO has the option to cancel the Agreement at no extra cost after the gate review to be held after Phase 1 as detailed in chapter 2 of the SOW. In this case ESO only has to pay the agreed cost related to Phase 1.



- 2.3 The Labor and Operations components of the Contract price shall at all times be deemed to be firm and not subject to revision. Labor and Operations include external manpower, travel, transportation and any other item not being a material procured from a third party for the fulfilment of this Agreement
- 2.4 Third Party Supplies are all materials procured from a third party required to be able to produce the Cold Cartridge Assemblies for ALMA Band 2. These Third Party Supplies shall be paid by ESO on a cost reimbursement basis upon presentation of the corresponding invoices, under the condition that the Contractor shall seek ESO's prior authorization to place a Contract or a Purchase Order:
- 2.3.1) for procurements which were not included in the Contractor's proposal, or which deviate from the value included in the Contractor's proposal (except if the deviation is a reduction in the price of the supply);
 - 2.3.2) for procurements which exceed 50,000 EUR (fifty thousand euros);
 - 2.3.3) for amendments to existing Contracts or Purchase Orders.
- 2.5 Supplies for the use of ESO are exempt from customs duty. With regard to taxes and levies, there are special arrangements for ESO and the Contractor is required to become conversant with such arrangements. Accordingly Prices shall be quoted net and free of tax. Where VAT is applicable, these taxes shall be shown clearly on the invoice. Save in respect of possible exemption from VAT arising from the special fiscal conditions which apply to ESO, the Contractor shall in no way be released from his obligation to pay any taxes which may normally be due.
- 2.6 Annex 5 to the Agreement provides a detailed breakdown of the Labor and Operations part of total Agreement price , distributed yearly over the duration of the Agreement.
- 2.7 Annex 6 to the Agreement provides a detailed breakdown of the Third Party Supplies part of the total Agreement Price, distributed yearly over the duration of the Agreement.
- 2.8 Annex 7 to the Agreement provides a detailed breakdown of the Spare Parts needed for 2 years of operation.

ARTICLE 3 CONTRACTUAL TIME LIMITS FOR DELIVERY - PAYMENT

- 3.1 The agreed delivery dates for the deliveries from the Contractor to ESO are detailed in the table in Annex 3 (abbreviations to be found in the SOW, Annex 2)
- 3.2 The agreed delivery dates for the deliveries from ESO to Contractor are detailed in Chapter 9 of the SOW (Annex 2)
- 3.3 ESO shall pay to the Contractor the firm fixed price for the Labour and Operations price element specified in Article 2 according to the following Milestone Payment Plan defined in Annex 3 after successful completion of the corresponding Milestones.



3.4 Consistent with Article 20.1 of the "General Conditions of ESO Contracts", invoices shall be submitted with relevant supporting documentation, as follows:

3.4.1) For invoices which relate to Third Party Supplies, the Contractor shall certify that the work triggering the payment requested by the Subcontractor or supplier has indeed been completed to his full satisfaction and in total compliance with the relevant Subcontract or Purchase Order. In addition, the Contractor shall attach to his own invoice the invoice submitted by this Subcontractor or Supplier, including any and all supporting evidence accompanying such invoice.

3.4.2) For invoices, which relate to the Labour and Operations element of the price, the Contractor shall attach to his invoice a Milestone Achievement Certificate duly signed by himself and by the ESO technical representative identified in Article 10 of the Agreement, together with any relevant documentation which the parties may agree to attach to such Milestone Achievement Certificate.

3.5 Articles 20.3 and 21.1 of the General Conditions of ESO Contracts, Munich, December 2014 (Annex 1) are not applicable.

3.6 The contractor shall send his invoices bearing the Agreement reference:

Either per postal mail to:

ESO

Karl-Schwarzschild-Strasse 2,
D-85748 Garching bei München (Germany)
Attn. Invoice Controller

Or per e-mail to: invoice-control@eso.org

ARTICLE 4 TRANSPORT

The Contractor shall deliver the Cold Cartridge Assemblies to the ALMA Observations Support Facility (OSF) in Chile. ESO provides on a best effort basis, without charge to the Contractor,

the use of the regular truck service between the ALMA Office in Santiago and ALMA OSF for the transportation of the receiver cartridges. If for whatever reasons this truck service is stopped, or is not suitable any more, the parties will agree on an alternative cost effective solution for the transport between the ALMA Office in Santiago and ALMA OSF. In this case the extra cost for the transportation will be borne by ESO. The insurance of the goods during the transport to the final destination, ALMA OSF, is and remains the responsibility of the Contractor in all cases.



ARTICLE 5 PROVISIONAL AND FINAL ACCEPTANCE

- 5.1 Provisional Acceptance shall be granted by ESO per Cold Cartridge Assembly after successful acceptance in accordance with section 5.2.1.3 of the SOW (Annex 2).
- 5.2 Paragraph 15.1 of the GCEC is complemented as follows:
The Contractor shall submit to ESO a Request for Provisional Acceptance, using the attached Form 1.
Provisional Acceptance shall be granted upon the date mentioned on the Certificate of Provisional Acceptance, using the attached Form 2, which shall be provided by ESO to the Contractor.
- 5.3 If Provisional Acceptance cannot be granted by ESO, the Contractor must devote his full and immediate attention to modifying or finishing the works (Corrective Work) which are subject to reservation, within the time-limit then agreed between the parties.
- 5.4 Upon expiry of the time-limit, or before if it becomes apparent that the Contractor shall not be able to complete the Corrective Work by the time limit specified, ESO shall be free to entrust this Corrective Work to another supplier, and the parties shall negotiate in good faith how the Agreement may be amended.
- 5.5 All information, tools, materials and supplies developed, procured or manufactured by the Contractor and paid by ESO under the Agreement shall be the property of ESO, even if they have not been handed over officially to ESO and the Provisional Acceptance has not been granted.
- 5.6 Final Acceptance shall, provided that the Contractor has met all its obligations under this Agreement, be granted by ESO no later than 6 months after Provisional Acceptance of the last Cold Cartridge Assembly.
To that effect, the Contractor shall submit to ESO a Request for Final Acceptance, using the attached Form 3.
A certificate of Final Acceptance shall be drawn up by ESO, using the attached Form 4, and provided to the Contractor."

ARTICLE 6 OPTIONS

- 6.1 ESO has the option to procure additional spare parts and consumables to cover 20 years of continuous operation. The Contractor shall submit a binding quotation to ESO before the Manufacturing Readiness Review (MRR) meeting. Not later than six weeks after the completion of the MRR, ESO may place the service equipment order (see also section 5.6 of the SOW).
- 6.2 ESO has the option to procure service equipment to be used after Provisional Acceptance. A final list of service equipment together with a binding quotation shall be submitted to ESO before the MRR meeting. Up to six weeks after the MRR meeting, ESO may place the service equipment order (see also section 5.7 of the SOW).



ARTICLE 7. GUARANTEE

7.1 Article 16 of the General Conditions of ESO Contracts (Annex 2) is amended as follows:

- Third Party costs incurred by the Contractor in relation to his Guarantee obligations under this article 16 shall be met by ESO subject to their prior approval by ESO.
- The Guarantee period ends at Final Acceptance of all delivered Cold Cartridge Assemblies. The Contractor must be notified of Cold Cartridge Assemblies that require repair or re-work under Guarantee within this period. The Contractor shall receive the Cold Cartridge Assemblies for repair or re-work at its premises not later than 6 months after the guarantee period end.

ARTICLE 8. INTELLECTUAL PROPERTY AND PATENT RIGHTS OF THE SUPPLIES

8.1 Paragraph 23.1 of the General Conditions of ESO Contracts, is replaced as follows:

Newly developed data, information and knowledge:

The data, information and knowledge developed newly under or in consequence of the Work performed under this Agreement (the "Results") will be owned by the party, whose staff and/or employees developed it. The Contractor/Consortium agrees, that ESO is hereby granted an irrevocable, non-commercial, and unvarying license, free of any charge, to use, copy and disseminate any such data, information and knowledge supplied by the Contractor/Consortium in satisfaction of the requirements of the Agreement, for its own requirements in the field of scientific research and its application. For the purpose of using, maintaining and upgrading the instrument ESO is entitled to transfer the above Results to third parties working for ESO in the Member States of the Organisation. The above-mentioned third parties have the right, to use the Results in question free of charge, and allow the data in question to be used, free of charge, by third parties for the purpose of using, maintaining and upgrading the Instrument.

All rights and obligations as defined in this Article shall remain fully valid and applicable for all legal successors or assignees of the Contractor/Consortium and its consortium partners owning the relevant data, information and knowledge. The Contractor/Consortium is obliged to include the rights and obligations as defined, in any contract or agreement of transfer or further licensing of the data, information and knowledge to any third party, including the provision that those third parties shall be required to bind their respective successors in the same way.

8.2 Paragraph 23.2 of the General Conditions of ESO Contracts is replaced as follows:

The rights and obligations as described in Article 1 above shall be applicable to any intellectual property title that the Contractor/Consortium or any consortium partner decides to take out regarding the newly developed data, information and knowledge owned by it.

8.3 Paragraph 23.3 of the General Conditions of ESO Contracts is replaced as follows:



If ESO requires data, information or knowledge owned by the Contractor/Consortium or consortium members and already existing prior to the signing of the Agreement ("Background Information") to use or modify any Work or Supplies, the Consortium will grant ESO a non-exclusive and free of charge license to use this Background Information, including the right to sublicense it under sufficient confidentiality restrictions to third parties, for the use, maintenance and upgrade of the instrument. The Contractor/Consortium shall provide the data, information and knowledge in sufficient details to enable ESO to exercise the above rights.

8.4 Paragraph 23.4 of the General Conditions of ESO Contracts is replaced as follows:

In order to prevent claims from third parties that would restrict the use, maintenance and upgrade of the Instrument the Contractor/Consortium shall deliver all supplies to ESO free from any restrictions arising from third party rights that could limit any of ESO's rights, except if expressly accepted by ESO in writing. The Agreement price shall be deemed to include all fees and royalties for the use of third party rights.

8.5 Paragraph 23.5 of the General Conditions of ESO Contracts is amended as follows:

The parties to the Agreement are encouraged to make publicly available the Results of their research. Before either party submits a paper or abstract for publication or otherwise intends to publicly disclose information about confidential or proprietary/patentable matter, the other party shall be provided 30 days to review the proposed publication or disclosure to assure that proprietary/confidential information is protected.

The publication or other disclosure shall be delayed for up to 90 additional days upon written request by any party as necessary to preserve patent or other intellectual property right. If any objection with regard to the value of confidentiality or other commercial interests is raised by any party against a project-related publication, the parties will make all efforts to find a mutually acceptable solution within three months after the objection was raised, by making appropriate text modifications in the document.

ARTICLE 9. CONFIDENTIALITY

9.1 Paragraph 11.1 of the General Conditions of ESO Contracts is amended as follows:

The above disclosure and use limitations shall not extend to Confidential Information when and as far as this is or has become public knowledge, or has already been lawfully in the possession of the receiving party before the Confidential Information was passed on to him by the disclosing party or as far as such Confidential Information is lawfully acquired by him from third parties or has to be revealed due to mandatory national law or court order.



ARTICLE 10. LIABILITY

10.1 Paragraph 28 of the General Conditions of ESO Contracts is amended as follows:

A party's aggregate liability towards the other parties collectively shall be limited to the total value of 100 000 EURO (one hundred thousand Euro).

ARTICLE 11. AMENDMENTS TO THIS AGREEMENT

11.1 Any additions to or modifications of the content of this Agreement must be mutually agreed upon between the parties to this agreement and be confirmed in the form of a written amendment to this Agreement.

11.2 Paragraph 12.2 of the General Conditions of ESO Contracts is amended as follows:

ESO may at any time, by registered letter, terminate the Agreement in whole or in part, with payment of full compensation to the Contractor of reasonable costs, expenditures and liabilities incurred by him in the performance of his obligations under the Agreement up to the moment of termination, the amount of which shall not exceed, in the aggregate, the value of the Agreement. No compensation shall be paid for loss of profit .

Either party may terminate this Agreement in the event:

- A party commits a material breach of any provision of this Agreement and fails to remedy the breach within thirty (30) days after written notification providing details of the breach by the party not in breach, the party not in default shall have the right to terminate this Agreement by written notice to that effect.
- In the event of ESO or Contractor becomes insolvent, being declared bankrupt or ceasing business, the other party not in default may terminate this Agreement forthwith.

ARTICLE 12. LANGUAGE

12.1 Any communication and correspondence between the parties shall be in the English language.

ARTICLE 13. PUBLICITY & PUBLICATIONS

13.1 Paragraph 23.5 of the General Conditions of ESO Contracts is replaced as follows:

Parties may not, for publicity purposes, use the name, emblem or images of the other party or any of the names under which a party is known, unless he has first obtained



the party's permission in writing. Any permission may be withdrawn at any time without any compensation due and shall expire automatically on the date of Final Acceptance of the Supplies.

Press releases, advertising, broadcasting, programs, exhibitions, news bulletins or any other publications by the Contractor related or referring to the Contract shall be drawn up in consultation with ESO.

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ARTICLE 14. CONTRACT MANAGEMENT, REPRESENTATION AND ADDRESSES FOR CORRESPONDENCE

14.1 FOR ESO

The accredited representatives in charge of the follow-up of the performance of the Agreement are:

On technical and managerial matters:

Pavel Yagoubov
ESO, Karl-Schwarzschild-Str. 2, D-85748 Garching
Phone: +49.89.32.00.6203
E-mail: pyagoubo@eso.org

On contractual and commercial matters:

Alexandra Specht, Contracts and Procurement
ESO, as above
Phone: +49.89.32.00.6391
E-mail: aspecth@eso.org

14.2 FOR AND ON BEHALF OF THE CONSORTIUM technical and managerial matters:

Ir. Joost Adema
NOVA, Kapteyn Instituut RUG, Landleven 12, NL-9747 AD Groningen
e-mail: j.adema@astro.rug.nl
Phone: +31 50 363 4035

On contractual and commercial matters :

Dr. Ir. Michiel Rodenhuis
NOVA, Sterrewacht Leiden, Niels Bohrweg 2, NL-2333CA Leiden
Phone: +31 71 527 5805
e-mail: rodenhuis@strw.leidenuniv.nl

ARTICLE 15. DISPUTES – STATUS – APPLICABLE LAW

- 15.1. In case of disputes arising from this Agreement, the parties agree to enter into negotiations with the aim of reaching an amicable settlement. Failing such an amicable settlement of any dispute, the Consortium. and ESO shall resort to arbitration under the conditions described in Chapter VIII, Articles 29 of the *General Conditions of ESO Contracts* (Annex 1).
- 15.2. The status of ESO and the law applicable to ESO are described in Chapter VIII, Articles 30 and 31 of the *General Conditions of ESO Contract* (Annex 1).



ARTICLE 16. GENERAL CONDITIONS OF ESO CONTRACTS

- 16.1 Except to the extent that they have been modified or amended by the above Articles, the provisions of the “General Conditions of ESO Contracts, Munich, December 2014” (Annex 1), shall apply to the execution of this Agreement

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LIST OF ATTACHMENTS:

Annex 1: the “*General Conditions of ESO Contracts, Munich, December 2014*”;

Annex 2: the “Statement of Work”, Doc. No. FEND-40.02.02.00-0061-SOW, Version A dated 15.06.2018;

Annex 3: the “Technical Specification”, Doc. No. FEND-40.02.02.00-0060-SPE, Version A dated 15.06.2018;

Annex 4: Payment Plan

Annex 5: detailed breakdown of the Labor and Operations part of total Contract price;

Annex 6: detailed breakdown of the Third Party Supplies part of total Contract price;

Annex 7: detailed breakdown of the Spare Parts part of total Contract price.



Done in four originals.

Done at Garching, on

European Organisation for Astronomical Research in the Southern Hemisphere – ESO

.....
Xavier Barcons
Director General

Done at, on

The Netherlands Research School for Astronomy – NOVA (consortium lead)

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Name, Function

Consortium co-signatures:

Done at, on

Done at, on

For GARD:

For INAF

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Name, Function

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Name, Function



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