

**Netherlands-Zwolle: Astronomical and optical instruments**

OJ S 202/2013 17/10/2013

Contract notice

Supplies

Directive 2004/18/EC

**Section I: Contracting authority**

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**I.1. Name and addresses**

Official name: The Netherlands Research School for Astronomy, NOVA, represented by het NIC BV

Postal address: Dr. Stolteweg 60-66

Town: Zwolle

Postal code: 8025AZ

Country: Netherlands

Contact person: Het NIC BV

For the attention of: Mr. H.J. Schutten

E-mail: [henk.schutten@hetnic.nl](mailto:henk.schutten@hetnic.nl)

Telephone: +31 384563210

Fax: +31 384563250

**Internet address(es):**

General address of the contracting authority: <http://www.astronomie.nl>

**Additional information can be obtained from:**

the abovementioned address

**Specifications and additional documents (including documents for competitive dialogue and a dynamic purchasing system) can be obtained from:**

the abovementioned address

**Tenders or requests to participate must be submitted:** the abovementioned address

**I.2. Type of the contracting authority**

Body governed by public law

**I.3. Main activity**

Education

Other: Frontline research

**I.4. Contract award on behalf of other contracting authorities**

The contracting authority is purchasing on behalf of other contracting authorities: no

**Section II: Object of the contract**

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**II.1. Description****II.1.1. Title attributed to the contract by the contracting authority**

Tender for the supply of Cryogenic Low Noise Amplifiers for the band 5 receiver cartridge for the Atacama Large Millimeter Array (ALMA). Project for which no dedicated CPV code can be found.

**II.1.2. Type of contract and place of performance or delivery**

Supplies

Purchase

Main site or place of performance: Groningen, the Netherlands.

NUTS code NL11 Groningen

### **II.1.3. Information about a framework agreement or a dynamic purchasing system**

The notice involves a public contract

### **II.1.4. Information about framework agreement**

### **II.1.5. Short description of the contract or purchase(s)**

The contracting authority is the Nederlandse Onderzoekschool voor Astronomie, NOVA, legally represented by the University Leiden. The billing address is the NOVA Office, located in Leiden. NOVA Office University Leiden J.H. Oort Building Niels Bohrweg 2 2333 RA Leiden, The Netherlands. The delivery of the goods for the purpose of this contract shall be at: University of Groningen, C/o Kapteyn Institute, Kapteynborg NOVA-ALMA Group Landleven 12 Entrance J1, Zernike Campus 9747 AD Groningen, The Netherlands. 1. Nederlandse Onderzoekschool voor Astronomie, NOVA English name: The Netherlands Research School for Astronomy NOVA is a federation of the astronomical institutes at the universities of Amsterdam, Groningen, Leiden and Nijmegen, legally represented by the University Leiden. NOVA's mission is to carry out frontline astronomical research in the Netherlands, and to train young astronomers at the highest international level. As part of this mission, NOVA's instrumentation program aims to strengthen the technical expertise at the universities, and to develop and construct new instrumentation for world-class observatories. Development and production of the ALMA Band 5 Receiver Cartridge for the Atacama Large Millimeter / submillimeter Array (ALMA) is an important part of this instrumentation program. 2. The Atacama Large Millimeter / Submillimeter Array (ALMA) The Atacama Large Millimeter /submillimeter Array (ALMA), an international astronomy facility, is a partnership of Europe, North America and East Asia in cooperation with the Republic of Chile. ALMA is funded in Europe by the European Organization for Astronomical Research in the Southern Hemisphere (ESO), in North America by the U.S. National Science Foundation (NSF) in cooperation with the National Research Council of Canada (NRC) and the National Science Council of Taiwan (NSC) and in East Asia by the National Institutes of Natural Sciences (NINS) of Japan in cooperation with the Academia Sinica (AS) in Taiwan. ALMA operations are led on behalf of Europe by ESO, on behalf of North America by the National Radio Astronomy Observatory (NRAO), which is managed by Associated Universities, Inc. (AUI) and on behalf of East Asia by the National Astronomical Observatory of Japan (NAOJ). The Joint ALMA Observatory (JAO) provides the unified leadership and management of the construction, commissioning and operation of ALMA. ALMA is a single instrument composed of 66 high-precision antennas located in the II Region of Chile, in the District of San Pedro de Atacama, at the Chajnantor altiplano, 5,000 metres above sea level. ALMA's primary function is to observe and image with unprecedented clarity the enigmatic cold regions of the Universe, which are optically dark, yet shine brightly in the millimetre portion of the electromagnetic spectrum. 3. The ALMA Band 5 Receiver Cartridge Project In the past years, NOVA has developed and produced the ALMA Band 9 Receiver Cartridges, covering the frequency range between 602-720 GHz. NOVA is presently producing the ALMA Band 5 Receiver Cartridges in collaboration with its Swedish partner GARD. This is a cryogenic heterodyne receiver offering state-of-the-art sensitivities at signal frequencies between 163-211 GHz. A consortium of two institutes executes the work: - The ALMA/NOVA group within the Kapteyn Institute, the Astronomy department of the University of Groningen in the Netherlands, and - GARD group within Chalmers University of Technology, Gothenburg, Sweden NOVA leads in the project and performs this work under contract to ESO. The challenging science goals, large scope, and remote location of the ALMA

project, combined with the Receiver Cartridges' cryogenic operating temperatures (as low as 3 K or 269°C), place high demands on the performance and reliability of the Band 5 Receiver Cartridges and their components.

4. GARD group at the Chalmers University of Technology, Gothenburg, Sweden The Group for Advanced Receiver Development (GARD) is a research and engineering group working on Terahertz scientific instrumentation. GARD research focuses on superconducting electronics, material science and thin-film processing. The results and experience from these fields facilitate development and building of state-of-the-art instruments used in radio astronomy and environmental science. During 2006- 2011, under EC FP6 ALMA Enhancement Project, GARD completed development, production and tests of six Band 5 Receiver Cartridge Pre-Production Assemblies. All produced Band 5 Receiver Cartridges demonstrate state-of-the-art performance (the noise temperature of about 5 times quantum noise  $hf/k$ ). The first produced Band 5 receiver has been integrated with ALMA antenna s/n 01 since October 2011. The ALMA Band 5 covers the frequency range 163 - 211 GHz. The para-H<sub>2</sub>O (313-220) line at 183 GHz lies in the middle of Band 5 frequency band. It is one of a few water lines that can be observed from the Earth at the excellent atmospheric conditions at the ALMA site. The GARD group has about fourteen staff members.

5 The European Organisation for Astronomical Research in the Southern Hemisphere (ESO) ESO, the European Southern Observatory, is the foremost intergovernmental astronomy organisation in Europe and the world's most productive astronomical observatory. ESO provides state-of-the-art research facilities to astronomers and is supported by Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Italy, the Netherlands, Portugal, Spain, Sweden, Switzerland and the United Kingdom. Brazil is expected to become a member soon (ratification by parliament pending). Several other countries have expressed an interest in membership. ESO's main mission, laid down in the 1962 Convention, is to provide state-of-the-art research facilities to astronomers and astrophysicists, allowing them to conduct front-line science in the best conditions. The annual member state contributions to ESO are approximately 131 million Euros and ESO employs around 730 staff members. By building and operating a suite of the world's most powerful ground-based astronomical telescopes enabling important scientific discoveries, ESO offers numerous possibilities for technology spin-off and transfer, together with high technology contract opportunities and is a dramatic showcase for European industry. Whilst the Headquarters (comprising the scientific, technical and administrative centre of the organisation) are located in Garching near Munich, Germany, ESO operates, in addition to the Santiago Centre, three observational sites in the Chilean Atacama desert. The Very Large Telescope (VLT) is located on Paranal, a 2600 m high mountain south of Antofagasta. At La Silla, 600 km north of Santiago de Chile at 2400 m altitude, ESO operates several medium-sized optical telescopes. The third site is the 5,000+ m high Llano de Chajnantor, near San Pedro de Atacama. Here a new submillimeter telescope (APEX) is in operation for several years, and a giant array, The Atacama Large Millimeter /submillimeter Array (ALMA), has been inaugurated in March 2013. ALMA, the largest ground-based astronomy project in existence, is a revolutionary facility for world astronomy. ALMA comprises an array of 66 giant 12-metre and 7-metre diameter antennas observing at millimetre and submillimetre wavelengths. Construction of ALMA started in 2003 and scientific observations have commenced since 2011. Preparing the future, ESO is currently engaged in design studies for an Extremely Large optical/near-infrared Telescope for Europe's astronomers (E-ELT). ESO is a member of the EIROforum, the partnership of the seven European intergovernmental research organisations that operate major research infrastructures. See also the selection guidelines. These selection guidelines can be applied for by e-mail at Het NIC BV, BU Noord in Zwolle, the Netherlands.

#### II.1.6. CPV code(s)

38630000 Astronomical and optical instruments, 32500000 Telecommunications equipment and supplies

**II.1.7. Information about the Government Procurement Agreement (GPA)**

The procurement is covered by the Government Procurement Agreement: yes

**II.1.8. Lots**

This contract is divided into lots: no

**II.1.9. Information about variants**

Variants will be accepted: no

**II.2. Scope of the procurement**

**II.2.1. Total quantity or scope**

The aim of the Contracting Authority of this tender procedure is to conclude in a transparent way a contract with 1 contracting party on the terms and conditions of the Contracting Authority, for the supply to NOVA of Cryogenic 50 Ohm Coaxial Semi-Rigid Cable Assemblies (pre-formed cable with attached connectors) that shall: - Cover the operating frequency range of 3 – 9 GHz; Designed for use at temperatures between 3 and 300 Kelvin; Be used for at least 20 years in a high vacuum and at cryogenic temperatures of less than 5 Kelvin; and Be produced according to customer supplied drawings and a customer supplied Procurement Specification, with requirements that include a maximum insertion loss and maximum input and output return reflections. Be electrically characterized over the operating frequency range. Part of the project is not only delivery but also qualification of the cable manufacturing process and qualification of the reproducibility of the cables.

**II.2.2. Information about options**

Options: no

**II.2.3. Information about renewals**

**II.3. Duration of the contract or time limit for completion**

**Section III: Legal, economic, financial and technical information**

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**III.1. Conditions related to the contract**

**III.1.1. Deposits and guarantees required**

If applicable, see selection guidelines.

**III.1.2. Main financing conditions and payment arrangements and/or reference to the relevant provisions governing them**

See the selection guidelines.

**III.1.3. Legal form to be taken by the group of economic operators to whom the contract is to be awarded**

See the selection guidelines.

**III.1.4. Contract performance conditions**

The performance of the contract is subject to particular conditions: no

**III.2. Conditions for participation**

**III.2.1.**

## **Suitability to pursue the professional activity, including requirements relating to enrolment on professional or trade registers**

List and brief description of conditions: See the selection guidelines.

### **III.2.2. Economic and financial ability**

List and brief description of conditions: See the selection guidelines.

Minimum level(s) of standards possibly required: Recent policy of professional liability insurance and business liability insurance or a statement from an insurance company, showing coverage relating to professional liability and business liability as referred to in Article 47 of Directive 2004/18/EEC (Public Procurement Act Article 2.90 up to 2.92). The minimum coverage must be EUR 500,000 per occurrence, per year and per insurance respectively. Sufficient creditworthy; able to submit a Graydon or an extended Dunn & Bradstreet report within 14 calendar days upon the first demand of the Tendering Authority, or able to submit a statement of your bank or an audit certificate concerning the creditworthy of your company.

### **III.2.3. Technical and professional ability**

List and brief description of conditions:

See the selection guidelines.

Minimum level(s) of standards possibly required:

A reference for the supply of the goods as mentioned in this tender, which have been successfully completed in the last 3 years.

### **III.2.4. Information about reserved contracts**

#### **III.3. Conditions specific to services contracts**

##### **III.3.1. Information about a particular profession**

Execution of the service is reserved to a particular profession: no

##### **III.3.2. Information about staff responsible for the performance of the contract**

## **Section IV: Procedure**

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### **IV.1. Type of procedure**

#### **IV.1.1. Type of procedure**

Restricted

#### **IV.1.2. Information about the limits on the number of candidates to be invited**

Envisaged number of candidates: 5

#### **IV.1.3. Information about reduction of the number of solutions or tenders during negotiation or dialogue**

### **IV.2. Award criteria**

#### **IV.2.1. Award criteria**

The most economically advantageous tender in terms of Price is not the only award criterion and all criteria are stated only in the procurement documents

#### **IV.2.2. Information about electronic auction**

An electronic auction will be used: no

### **IV.3. Administrative information**

**IV.3.1. File reference number attributed by the contracting authority**

P121038/01

**IV.3.2. Previous publication concerning this procedure**

no

**IV.3.3. Conditions for obtaining specifications and additional documents or descriptive document**

Payable documents: no

**IV.3.4. Time limit for receipt of tenders or requests to participate**

20.11.2013 - 14:00

**IV.3.5. Estimated date of dispatch of invitations to tender or to participate to selected candidates**

**IV.3.6. Languages in which tenders or requests to participate may be submitted**

English. Dutch.

**IV.3.7. Minimum time frame during which the tenderer must maintain the tender**

**IV.3.8. Conditions for opening of tenders**

**Section VI: Complementary information**

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**VI.1. Information about recurrence**

This is a recurrent procurement: no

**VI.2. Information about European Union funds**

The procurement is related to a project and/or programme financed by European Union funds:  
no

**VI.3. Additional information**

To receive more information about this tender, you must register your interest to this tender on the following site: [https://eu.eu-supply.com/app/rfq/rwlentrance\\_s.asp?PID=114822&B=CTMSOLUTION](https://eu.eu-supply.com/app/rfq/rwlentrance_s.asp?PID=114822&B=CTMSOLUTION) Or send an email to: Mr. H.J. Schutten, [henk.schutten@hetnic.nl](mailto:henk.schutten@hetnic.nl) or Mr. H.J. Siersema, [henk-jan.siersema@hetnic.nl](mailto:henk-jan.siersema@hetnic.nl) The information shall be submitted by the Applicants in 3-fold as follows: - 2 hard copies of the application - 1 application electronically, as PDF's on a memory stick In case of a combined expression of interest by a group of Applicants, every single Applicant shall submit the information requested under III.2.2) to III.2.3). The minimum requirements, information and statements together with the procedure for the Qualitative Selection are described in the Selection Guidelines (see also IV.3.2). Also the assessment procedure for the different members of a combination is described in the Selection Guidelines.

**VI.4. Procedures for review**

**VI.4.1. Review body**

Official name: Rechtbank Leiden

Postal address: P.O. Box 11171

Town: Leiden

Postal code: 2301 ED

Country: Netherlands

Internet address: <http://www.rechtspraak.nl/organisatie/rechtbanken/den-haag/>

**VI.4.2. Review procedure**

Precise information on deadline(s) for review procedures: Within 20 calendar days following the dispatch of the notification letters concerning the award decision.

**VI.4.3. Service from which information about the review procedure may be obtained**

**VI.5. Date of dispatch of this notice**

15.10.2013