

**Finland-Aalto: Astronomical and optical instruments**  
**OJ S 117/2023 20/06/2023**  
**Contract award notice**  
**Supplies**

**Legal Basis:**

Directive 2014/24/EU

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**Section I: Contracting authority**

**I.1. Name and addresses**

Official name: Aalto University Foundation sr  
National registration number: 2228357-4  
Postal address: P.O. Box 11000  
Town: AALTO  
NUTS code: FI1B1 Helsinki-Uusimaa  
Postal code: 00076  
Country: Finland  
Contact person: Aino Huhma  
E-mail: [aino.huhma@aalto.fi](mailto:aino.huhma@aalto.fi)  
**Internet address(es):**  
Main address: <http://www.aalto.fi/en/>

**I.4. Type of the contracting authority**

Body governed by public law

**I.5. Main activity**

Education

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**Section II: Object**

**II.1. Scope of the procurement**

**II.1.1. Title**

Simultaneous three-band mm-wavelength receiving system for the Aalto University Metsähovi Radio Observatory 13.7-metre radio telescope  
Reference number: D/451/01.01.04.00/2021

**II.1.2. Main CPV code**

38630000 Astronomical and optical instruments

**II.1.3. Type of contract**

Supplies

**II.1.4. Short description**

The Aalto University Foundation sr, operating as Aalto University (business ID 2228357-4) invites tenders for a Simultaneous three-band mm-wavelength receiving system for the Aalto University Metsähovi Radio Observatory 13.7-metre radio telescope in accordance with this invitation to tender and its terms and annexes. Aalto University is a non-profit public entity and therefore must follow mandatory public procurement procedure in the procurement. The object of contract is described in detail in Annex 1 Statement of Work.

#### **II.1.6. Information about lots**

This contract is divided into lots: no

#### **II.1.7. Total value of the procurement**

Value excluding VAT: 1 602 845,00 EUR

### **II.2. Description**

#### **II.2.3. Place of performance**

NUTS code: FI1B1 Helsinki-Uusimaa

#### **II.2.4. Description of the procurement**

Aalto University is inviting tenders for a cryogenic radio astronomical triple-band receiver able to simultaneously operate at the frequencies of 22, 43 and 86 GHz. The triple-band receiver will be installed in the radome-enclosed 13.7-m radio telescope at the Aalto University Metsähovi Radio Observatory, located in Kirkkonummi, Finland.

The receiver must satisfy the scientific requirements of

- a) making simultaneous 22, 43, and 86 GHz very long baseline interferometry (VLBI) mode measurements in co-operation with other antennas having similar systems, and
- b) carrying out multi-frequency total flux density and linear polarization measurements in the single-dish mode simultaneously at 43 and 86 GHz (and if feasible, at 22 GHz) of variable and transient celestial radio sources including active galactic nuclei, microquasars, masers and the Sun.

Simultaneous observations are essential both to the studies of the variable radio sources in the single-dish mode and to the phase-calibration of the data in the VLBI mode. Optical path length fluctuations due to turbulent wet troposphere are the main source of phase noise in VLBI at short mm-wavelengths and removing them by transferring phase calibration from 22 GHz to higher frequencies significantly increases the coherence time — and consequently sensitivity — of the 43 GHz and especially 86 GHz VLBI measurements making new science possible. Phase-transfer between the simultaneously observed bands also allows accurate astrometric registration of the data at different frequencies, which is important for many science applications.

#### **II.2.5. Award criteria**

Quality criterion - Name: Project plan / Weighting: 40

Quality criterion - Name: Project team's technical expertise / Weighting: 50

Price - Weighting: 10

#### **II.2.11. Information about options**

Options: no

#### **II.2.13. Information about European Union funds**

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

#### **II.2.14. Additional information**

### **Section IV: Procedure**

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#### **IV.1. Description**

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

Competitive procedure with negotiation

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

#### **IV.1.8. Information about the Government Procurement Agreement (GPA)**

The procurement is covered by the Government Procurement Agreement: yes

#### **IV.2. Administrative information**

##### **IV.2.1. Previous publication concerning this procedure**

Notice number in the OJ S: [2022/S 108-304227](#)

##### **IV.2.8. Information about termination of dynamic purchasing system**

##### **IV.2.9. Information about termination of call for competition in the form of a prior information notice**

### **Section V: Award of contract**

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#### **Title:**

Simultaneous three-band mm-wavelength receiving system for the Aalto University Metsähovi Radio Observatory 13.7-metre radio telescope

A contract/lot is awarded: yes

#### **V.2. Award of contract**

##### **V.2.1. Date of conclusion of the contract**

03/03/2023

##### **V.2.2. Information about tenders**

Number of tenders received: 2

Number of tenders received from SMEs: 0

Number of tenders received from tenderers from other EU Member States: 1

Number of tenders received from tenderers from non-EU Member States: 1

Number of tenders received by electronic means: 2

The contract has been awarded to a group of economic operators: no

##### **V.2.3. Name and address of the contractor**

Official name: Max-Planck Institut für Radioastronomie

National registration number: DE129517720

Postal address: Auf dem Hügel 69

Town: Bonn

NUTS code: DEA22 Bonn, Kreisfreie Stadt

Postal code: 53121

Country: Germany

The contractor is an SME: no

##### **V.2.4. Information on value of the contract/lot**

Initial estimated total value of the contract/lot: 1 602 845,00 EUR

Total value of the contract/lot: 1 602 845,00 EUR

##### **V.2.5. Information about subcontracting**

### **Section VI: Complementary information**

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### **VI.3. Additional information**

### **VI.4. Procedures for review**

#### **VI.4.1. Review body**

Official name: The Market Court

Postal address: Radanrakentajantie 5

Town: Helsinki

Postal code: 00520

Country: Finland

E-mail: [markkinaoikeus@oikeus.fi](mailto:markkinaoikeus@oikeus.fi)

Telephone: +358 295643300

Internet address: <http://www.oikeus.fi/markkinaoikeus>

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

15/06/2023