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Contract

Awarded ITT - Supply of Frequency Comb Systems

National Physical Laboratory

F03: Contract award notice

Notice identifier: 2021/S 000-007162

Procurement identifier (OCID): ocds-h6vhtk-0290e2

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Section I: Contracting authority

I.1) Name and addresses

National Physical Laboratory

Hampton Road

Teddington

TW11 0LW

Email

charley.choules@npl.co.uk

Country

United Kingdom

NUTS code

UK - UNITED KINGDOM

Internet address(es)

Main address

www.npl.co.uk

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Other activity

Scientific research

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Awarded ITT - Supply of Frequency Comb Systems

II.1.2) Main CPV code

- 38000000 - Laboratory, optical and precision equipments (excl. glasses)

II.1.3) Type of contract

Supplies

II.1.4) Short description

The combs will be part of future national time scale infrastructure, as well as test and evaluation facilities and services being set up as part of the UK quantum technologies programme. For this reason, they must be able to operate independently and continuously (24/7) with minimal downtime for maintenance.

The purpose is to enable greater flexibility and agility in NPL's frequency measurement and characterisation services, while simultaneously developing the new infrastructure required to support a future redefinition of the second.

The setups need to work in tandem with ultrastable laser systems, optical lattice clocks and fibre networking capability in the AQML to support international collaborations and so must be compatible with these technologies. A full and detailed specification of our requirements for each individual comb is provided in separate lots as outlined in the ITT

documents.

II.1.6) Information about lots

This contract is divided into lots: Yes

II.1.7) Total value of the procurement (excluding VAT)

Value excluding VAT: £941,770

II.2) Description

II.2.1) Title

Lot No

4

II.2.2) Additional CPV code(s)

- 38000000 - Laboratory, optical and precision equipments (excl. glasses)

II.2.3) Place of performance

NUTS codes

- UK - UNITED KINGDOM

II.2.4) Description of the procurement

The National Physical Laboratory (NPL) is seeking to procure 4 separate frequency comb systems for our recently constructed Advanced Quantum Metrology Laboratory (AQML), where they will sit at the heart of a new optical frequency metrology capability.

The individual combs will be used to perform different tasks. The requirements for each therefore differ, and they should be quoted separately as a result. A general overview of the purpose and requirements for each of these systems are:

1) Synthesizer comb: The first frequency comb shall be appropriate for transferring the stability of a state-of-the-art ultrastable laser at 1542 nm to lasers operating at other wavelengths. These lasers include probe lasers for Yb and Sr optical lattice clocks as well as lasers used for frequency transfer over optical fibre links. It shall also be appropriate for measuring the absolute frequencies of these lasers and the optical frequency ratios between them.

2) Flexible measurement comb: The second frequency comb shall be more flexible, and

appropriate for measuring optical frequencies (and the ratios between them) anywhere in the range from 500 nm to 2000 nm. It shall be possible to stabilise this comb to the same ultrastable laser at 1542 nm.

3) Backup comb: The third frequency comb will be used to provide continuous monitoring of the performance of the first two combs. As such it shall combine the capabilities of both these combs.

4) Microwave comb: The fourth frequency comb will be used in the near infrared for the generation of ultra-stable microwave signals. Comb light should be generated in the C-band.

II.2.5) Award criteria

Cost criterion - Name: Technical / Weighting: 80%

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

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Open procedure

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

The procurement is covered by the Government Procurement Agreement: No

IV.2) Administrative information

IV.2.1) Previous publication concerning this procedure

Notice number: [2021/S 000-002427](#)

Section V. Award of contract

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

16 March 2021

V.2.2) Information about tenders

Number of tenders received: 11

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

V.2.3) Name and address of the contractor

Menlo Systems GmbH

Am Klopferspitz 19a, Martinsried

Bayern

82152

Country

Germany

NUTS code

- DE - GERMANY

The contractor is an SME

Yes

V.2.4) Information on value of contract/lot (excluding VAT)

Total value of the contract/lot: £941,770

Section VI. Complementary information

VI.4) Procedures for review

VI.4.1) Review body

NPL Management Ltd

Hampton Road

Teddington

TW11 0LW

Country

United Kingdom