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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): ocids-h6vhtk-0290e2

Published 7 April 2021, 10:56pm

### **Section I: Contracting authority**

#### **I.1) Name and addresses**

National Physical Laboratory

Hampton Road

Teddington

TW11 0LW

#### **Email**

[charley.choules@npl.co.uk](mailto:charley.choules@npl.co.uk)

#### **Country**

United Kingdom

#### **NUTS code**

UK - UNITED KINGDOM

## **Internet address(es)**

Main address

[www.npl.co.uk](http://www.npl.co.uk)

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

Body governed by public law

## **I.5) Main activity**

Other activity

Scientific research

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## **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

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## **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](#)

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## **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

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## **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