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Planning

SUPPORT FOR: REDUCED TRANSPORT MODEL DEVELOPMENT

United Kingdom Atomic Energy Authority

F01: Prior information notice

Prior information only

Notice identifier: 2021/S 000-014589

Procurement identifier (OCID): ocds-h6vhtk-02c070

Published 25 June 2021, 4:36pm

Section I: Contracting authority

I.1) Name and addresses

United Kingdom Atomic Energy Authority

Culham Science Centre

Abingdon

OX14 3DB

Contact

Daniel Brown

Email

daniel.brown@ukaea.uk

Telephone

+44 123546

Country

United Kingdom

NUTS code

UKJ1 - Berkshire, Buckinghamshire and Oxfordshire

National registration number

N/A

Internet address(es)

Main address

<http://www.gov.uk/government/organisations/uk-atomic-energy-authority>

Buyer's address

<https://uk.eu-supply.com/ctm/Company/CompanyInformation/Index/72814>

I.3) Communication

The procurement documents are available for unrestricted and full direct access, free of charge, at

https://uk.eu-supply.com/app/rfq/rwlenrance_s.asp?PID=38526&B=UK

Additional information can be obtained from the above-mentioned address

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Other activity

Fusion Research

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

SUPPORT FOR: REDUCED TRANSPORT MODEL DEVELOPMENT

Reference number

T/DB111/21

II.1.2) Main CPV code

- 73110000 - Research services

II.1.3) Type of contract

Services

II.1.4) Short description

Turbulent core transport in the relevant plasma conditions for STEP (a high beta burning ST) is likely to be dominated by electromagnetic turbulence: by micro-tearing modes (MTM) and kinetic ballooning modes (KBM). This is very different from the character of turbulence found in low β conventional aspect ratio tokamaks. The most advanced reduced core transport models available for integrated scenario modelling, have been constructed or tuned to model the transport arising from electrostatic turbulence. UKAEA are looking for support in the development & exploitation of reduced transport models for: Development of state-of-the-art reduced physics-based transport models, to improve the credibility of transport predictions for high beta burning plasmas that are likely to be dominated by transport from electromagnetic turbulence & MTMs. Running of advanced scenario simulation tools that incorporate these models for scenario predictions supporting STEP, and support & training of such tools.

II.1.5) Estimated total value

Value excluding VAT: £200,000

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 73200000 - Research and development consultancy services
- 73300000 - Design and execution of research and development

II.2.3) Place of performance

NUTS codes

- UKJ1 - Berkshire, Buckinghamshire and Oxfordshire

II.2.4) Description of the procurement

Turbulent core transport in the relevant plasma conditions for STEP (a high beta burning ST) is likely to be dominated by electromagnetic turbulence: by micro-tearing modes (MTM) and kinetic ballooning modes (KBM). This is very different from the character of turbulence found in low β conventional aspect ratio tokamaks. The most sophisticated reduced core transport models available for integrated scenario modelling, have been constructed or tuned to model the transport arising from electrostatic turbulence. UKAEA are looking for expert support in the development and exploitation of reduced transport models for: Development of state-of-the-art reduced physics-based transport models, to improve the credibility of transport predictions for high beta burning ST plasmas that are likely to be dominated by transport from electromagnetic turbulence & MTMs. Running of advanced scenario simulation tools that incorporate these models for scenario predictions in support of STEP, and support & training of such tools.

II.3) Estimated date of publication of contract notice

25 October 2021

Section IV. Procedure

IV.1) Description

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

The procurement is covered by the Government Procurement Agreement: Yes