

+Call for Expertise: エキスパート募集

IO References: IO/26/CFE/10035129/VDY

**"Development of a Spectroscopy Synthetic Diagnostic model "**

(分光シンセティック計測モデルの開発)

IO 締め切り 2026 年 6 月 29 日(月)

概要：

イーター機構（IO）では、上記タスクの支援をいただく作業を ITER 参加極の企業・機関等から募集します。応募を希望される企業・機関等は、所定の期限までに応募書類を直接 ITER 機構の下記担当までご提出下さい。

○ 今回の募集に関する書類は以下の通りです。

- ・ 招待状
- ・ 技術仕様書
- ・ 履歴書（CV）テンプレート
- ・ 見積もり提案書テンプレート
- ・ 誓約書
- ・ 守秘義務に関する誓約書(契約締結時に署名されること)

○ 応募者は、以下の申込用紙を ITER 機構に直接送付願います。

- ・ 履歴書（ITER 機構の招待状と技術仕様書で規定した要求事項と基準を満足していることを示す経験について明記されていること）
  - ・ 誓約書（署名入り）
  - ・ 見積もり提案書
- (※提出書類は pdf ファイル 1 本にまとめて送付願います。)

○ 応募書類の提出先

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## ○はじめに

この事前情報通知 (PIN) は、供給契約の審査および実行につながる公開入札調達プロセスの最初のステップです。この文書の目的は、作業範囲と入札プロセスに関する技術的内容の基本的な概要を提供することです。

## ○背景

ITER プロジェクトは、欧州連合 (EU) (EURATOM を代表とします)、日本、中華人民共和国、インド、韓国、ロシア連邦、米国の 7 カ国が共同出資する国際的な研究開発プロジェクトで、ITER 機構 (IO) の本部 (HQ) があるヨーロッパ、フランス南部のサン・ポール・レ・デュランスで建設されています。

ITER プロジェクトの組織面および技術面の詳細については、[www.iter.org](http://www.iter.org) を参照してください。

## ○作業範囲

この「分光シンセティック計測モデルの開発」と題した本契約の目的は、技術仕様書にの 2026 年 6 月 4 日付 ITER\_D\_FG6KLB v2 (本 PIN 文書の附則 II) に記載されたサービスの提供を調達することです。

## ○調達プロセスと目的

目的は、競争入札プロセスを通じて供給契約を落札することです。

この入札のために選択された調達手続きは公開入札手続きと呼ばれます。

オープン入札手順は、次の 4 つの主要なステップで構成されています。

### ➤ ステップ 1-事前情報通知 (PIN)

事前情報通知は公開入札プロセスの第一段階です。IO は、関心のある候補企業に対し、10 作業日までに担当調達担当官に以下の情報を提出し、競争プロセスへの関心を示すよう正式に要請します。

-候補会社の名称

-登録国

-連絡先の名前、電子メール、タイトル、電話番号。

### **特に注意:**

**関心のある候補企業は、IO Ariba の電子調達ツール「IPROC」に登録してください (まだ登録していない場合)。手順については、<https://www.iter.org/fr/proc/overview> を参照してください。**

Ariba (IPROC) に登録する際には、お取引先様に最低 1 名の担当者の登録をお願いします。この連絡担当者は、提案依頼書の発行通知を受け取り、必要と思われる場合は入札書類を同僚に転送することができます。

➤ ステップ 2-入札への招待

関心のある候補企業の完全登録後、提案依頼書 (RFP) を「IPROC」に掲載します。この段階では、担当の調達担当者に関心を示し、かつ IPROC に登録している関心のある候補企業は、RFP が公表された旨の通知を受けることができます。その後、RFP に詳述されている入札説明書に従って提案書を作成し、提出します。

このツールに登録されている企業のみが入札に招待され、登録されている企業は、自社の名前でのみ提案を提出できます。

➤ ステップ 3-入札評価プロセス

入札者の提案は、IO の公平な評価委員会によって評価されます。入札者は、技術的範囲に沿って、かつ、RFP に記載された特定の基準に従って作業を実施するために、技術的遵守を証明する詳細を提供しなければなりません。

➤ ステップ 4-落札

認定は、公開されている RFP に記載されている、コストに見合った最適な価格または技術的に準拠した最低価格に基づいて行われます。

### ○概略日程

概略日程は以下の通りです：

マイルストーン	暫定日程
IOWeb ページと DA との連絡により 事前指示書 (PIN) の発行	2026 年 6 月 15 日
関心表明フォームの提出	2026 年 6 月 29 日
IPROC での提案リクエスト (REP) の発行	2026 年 7 月 6 日
IPROC で入札提出	2026 年 7 月 27 日
入札評価と契約授与	2026 年 8 月 6 日
契約調印	2026 年 8 月中旬
契約開始	2026 年 8 月

## ○契約期間

予想される契約期間は、12 か月です。

## ○経験

入札者は、IO の技術的要件に沿った期待される支援を提供するにあたり、その知識と経験と能力があることを英語で示す必要があります。ITER での使用言語は英語です。流暢でプロレベルが必要です（スピーキングとライティング共に）。

## ○候補

参加は、個人またはグループ/コンソーシアムに参加するすべての法人に開放されます。法人とは、法的権利及び義務を有し、ITER加盟国内に設立された個人、企業又は機構をいいます。

法人は、単独で、またはコンソーシアムパートナーとして、同じ契約の複数の申請または入札に参加することはできません。共同事業体は、恒久的な、法的に確立されたグループ又は特定の入札手続のために非公式に構成されたグループとすることができます。

コンソーシアムのすべての構成員(すなわち、リーダーと他のすべてのメンバー)は、ITER 機構に対して連帯して責任を負います。

コンソーシアムとして許可されるために、その点で含まれる法人はコンソーシアムの各メンバーをまとめる権限をもつリーダーをもたなければなりません。このリーダーはコンソーシアムの各目メンバーのために責任を負わなければなりません。

指名されたコンソーシアムのリーダーは、入札段階でのカバーレター(入札への招待)で、コンソーシアムのメンバーの構成を説明する予定です。その後、候補者の構成は、いかなる変更も ITER 機構に通知することなく変更してはなりません。かかる認可の証拠は、すべてのコンソーシアムメンバーの法的に授権された署名者が署名した委任状の形式で、しかるべき時期に IO に提出しなければなりません。

どのコンソーシアムメンバーも IPROC に登録する必要があります。

【※ 詳しくは添付の英語版技術仕様書「**Development of a Spectroscopy Synthetic Diagnostic Model**」をご参照ください。】

ITER 機構のウェブサイト

<http://www.iter.org/org/team/adm/proc/overview> からもアクセスが可能です。

「核融合エネルギー研究開発部門」の HP : <http://www.fusion.qst.go.jp/ITER/index.html> では ITER 機構からの各募集 (IO 職員募集、IO 外部委託、IO エキスパート募集) を逐次更新しています。ぜひご確認ください。

# **PRIOR INFORMATION NOTICE (PIN)**

**IO/26/CFE/10035129/VDY**

## **Development of a Spectroscopy Synthetic Diagnostic Model**

Procurement Officer in charge:

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### **Abstract.**

The purpose of this PIN is to provide prior notification of the IO's intention to launch a competitive Call for Expertise process in the coming weeks. This PIN provides some basic information about the ITER Organisation (the "IO"), the technical scope for this tender, and details of the tender process.

## **1 Introduction**

This Prior Information Notice (PIN) is the first step of a Call for Expertise Procedure leading to the award and execution of a Service Contract.

The purpose of this document is to provide a basic summary of the technical content in terms of the scope of work, and the tendering process.

## **2 Background**

The ITER project is an international research and development project jointly funded by its seven Members being, the European Union (represented by EURATOM), Japan, the People's Republic of China, India, the Republic of Korea, the Russian Federation and the USA. ITER is being constructed in Europe at St. Paul–Lez–Durance in southern France, which is also the location of the headquarters (HQ) of the ITER Organization (IO).

For a complete description of the ITER Project, covering both organizational and technical aspects of the Project, visit [www.iter.org](http://www.iter.org).

### 3 Scope of Service

The purpose of this Contract titled “**Development of a spectroscopy synthetic diagnostic model**” is to procure the provision of services described in the Technical Specifications ref. **ITER\_D\_FG6KLB v2 dated 04 Jun 2026** (Annex I to this PIN document).

### 4 Procurement Objective & Process

The objective is to award a Contract through a competitive bidding process.

The procedure is comprised of the following four main steps:

- Step 1 - Prior Information Notice (PIN)  
The Prior Information Notice is the first stage of the process. The IO formally invites interested candidate companies to indicate their interest in the competitive process, within **10 working days**, by returning to the Procurement officer in charge the following information by the date indicated under paragraph 5 below:
  - Name of candidate company
  - Country of registration
  - Point of contact name, email, title, and phone number.

**Special attention:**

**Interested candidate companies are kindly requested to register in the IO Ariba e-procurement tool called “I-PROC”, if not already done so. The process on how to register is described in the following link: <https://www.iter.org/fr/proc/overview>.**

**When registering in Ariba (I-PROC), suppliers are kindly requested to register at least one contact person. This contact person will be receiving the notification of publication of the Request for Proposal and will then be able to forward the tender documents to colleagues if deemed necessary.**

- Step 2 - Request for Proposals  
After the full registration of interested candidate companies, the Request for Proposals (RFP) will be published in “I-PROC”. This stage allows interested candidate companies who have indicated their interest to the Procurement Officer in charge AND who have registered in IPROC to receive the notification that the RFP is published. They will then prepare and submit their proposals in accordance with the tender instructions detailed in the RFP.

**Only companies registered in this tool will be invited to the tender and registered company can only submit a proposal in their name.**

- Step 3 – Tender Evaluation Process  
Tenderers proposals will be evaluated by an impartial evaluation committee of the IO. Tenderers must provide details demonstrating their technical compliance to perform the work in line with the technical scope and in accordance with the particular criteria listed in the RFP.
- Step 4 – Contract Award  
The award will be done on the basis of best value for money as described in the published RFP.

## 5 Procurement Timetable

The tentative timetable is as follows:

Milestone	Date
Publication of the Prior Indicative Notice (PIN) on IO Webpage and communications with DAs	15 June 2026
Deadline for Submission of expression of interest form	29 June 2026
Request for Proposals (RFP) publishing on IPROC	6 July 2026
Tender Submission in IPROC	27 July 2026
Tender Evaluation & Contract Award	06 August 2026
Contract Signature	Middle August 2026
Contract Commencement	August 2026

## 6 Contract Duration and Execution

The estimated contract duration shall be 12 months.

## 7 Experience

The tenderers shall demonstrate their knowledge, experience and capabilities in the implementation of providing expected supports in accordance with the IO technical requirements.

The working language of ITER is English, and a fluent professional level is required (spoken and written).

## 8 Candidature

Participation is open to all legal entities participating either individually or in a grouping/consortium. A legal entity is a company or organization that has legal rights and obligations and is established within an ITER Member State.

Legal entities cannot participate individually or as a consortium partner in more than one application or tender of the same contract. A consortium may be a permanent, legally established grouping, or a grouping which has been constituted informally for a specific tender procedure. All members of a consortium (i.e. the leader and all other members) are jointly and severally liable to the ITER Organization.

In order for a consortium to be acceptable, the individual legal entities included therein shall have nominated a leader with authority to bind each member of the consortium, and this leader shall be authorised to incur liabilities and receive instructions for and on behalf of each member of the consortium.

It is expected that the designated consortium leader will explain the composition of the consortium members in its offer. Following this, the Candidate's composition must not be modified without notifying the ITER Organization of any changes. Evidence of any such authorisation shall be submitted to the IO in due course in the form of a power of attorney signed by legally authorised signatories of all the consortium members.

Any consortium member shall be registered in I-PROC.

## **9 Sub-contracting Rules**

Sub-contracting is not allowed.

**Technical Specifications (In-Cash Procurement)**

**Technical Specifications for development of a  
spectroscopy synthetic diagnostic model**

Technical Specifications for development of a spectroscopy synthetic diagnostic model

## Table of Contents

<b>1</b>	<b>PREAMBLE</b> .....	<b>2</b>
<b>2</b>	<b>PURPOSE</b> .....	<b>2</b>
<b>3</b>	<b>ACRONYMS AND DEFINITIONS</b> .....	<b>2</b>
3.1	Acronyms .....	2
<b>4</b>	<b>APPLICABLE DOCUMENTS &amp; CODES AND STANDARDS</b> .....	<b>3</b>
4.1	Applicable Documents .....	3
4.2	Applicable Codes and Standards.....	3
<b>5</b>	<b>SCOPE OF WORK</b> .....	<b>3</b>
5.1	Requirements to be fulfilled.....	4
5.1.1	Impurity Emission & Transport (Edge→Core) .....	4
5.1.2	Fueling, Isotope Proxies & Edge Thermodynamics .....	4
5.1.3	Divertor State & Detachment Monitoring .....	4
5.1.4	Transient Events, Fast Ions & Protection-Relevant Channels .....	5
5.1.5	CXRS/MSE Performance Assessment & Support to DNB Development.....	5
5.1.6	Calibration, Interoperability & Uncertainty Quantification.....	5
5.1.7	Open Source .....	6
5.2	Tasks to fulfil the requirements .....	6
5.3	Resources provided .....	7
5.4	Estimated Duration .....	7
<b>6</b>	<b>LOCATION FOR SCOPE OF WORK EXECUTION</b> .....	<b>7</b>
<b>7</b>	<b>IO DOCUMENTS</b> .....	<b>7</b>
<b>8</b>	<b>LIST OF DELIVERABLES AND DUE DATES</b> .....	<b>8</b>
<b>9</b>	<b>QUALITY ASSURANCE REQUIREMENTS</b> .....	<b>8</b>
<b>10</b>	<b>SAFETY REQUIREMENTS</b> .....	<b>9</b>
<b>11</b>	<b>SPECIFIC REQUIREMENTS AND CONDITIONS</b> .....	<b>9</b>
11.1	Requirements for the supplier .....	9
11.2	Work Monitoring / Meeting Schedule .....	9
11.3	CAD Design Requirements (if applicable) .....	9

## 1 Preamble

This Technical Specification is to be read in combination with the General Management Specification for Service and Supply (GM3S) – [1] that constitutes a full part of the technical requirements.

In case of conflict, the content of the Technical Specification supersedes the content of [1].

## 2 Purpose

Synthetic diagnostics are recognized as essential tools to ensure consistency between predictive simulations and future measurements, to quantify diagnostic uncertainties, and to support integrated scenario development under ITER-relevant conditions.

The purpose of this call is to deliver a production-grade synthetic diagnostic for visible spectroscopy, an area of high diagnostic and operational relevance, by strengthening the SoS code, ensuring its robustness, interoperability, and IMAS compliance, and by aligning it with ITER synthetic diagnostic practices.

The final product shall support scenario validation, transport and impurity analysis, isotope/fuelling inferences, and shall be used as a prototype for detachment control simulation. It shall also support the assessment of CXRS and MSE diagnostic performance in the context of DNB development.

The tasks (see section 5) cover the following capabilities: IMAS integration, SoS↔CASPER interoperability, non-Gaussian spectral features, MSE & CX(R)S modeling, ML/Bayesian workflows with Minerva, and ongoing consultancy & coordination. The main code to work on is the SoS code, but interaction with other codes, like CASPER and CXSFIT, is expected.

## 3 Acronyms and Definitions

### 3.1 Acronyms

The following acronyms are relevant to this document:

Acronym	Description
<b>C-TRO</b>	Contractor Technical Responsible Officer: responsible for technical content of the contract
<b>C-RO</b>	Contractor Responsible Officer: responsible for the contract administration (can be the same person as the C-TRO)
<b>IO</b>	ITER Organization
<b>IO-TRO</b>	ITER Organization Technical Responsible Officer: responsible for technical content of the contract
<b>IO-CRO</b>	ITER Organization Contract Responsible Officer: responsible for the contract administration (can be the same person as the IO-TRO)
<b>IMAS</b>	Integrated Modelling and Analysis Suite, a set of tools for handling fusion data.
<b>SD</b>	Synthetic Diagnostic, simulation of diagnostic measurements.
<b>SoS</b>	Simulation of Spectra, a SD code to simulate beam induced spectra and associated passive features in the visible spectral range.

<b>CASPER</b>	Camera And SPectroscopy Emission Ray tracer, a SD code that simulates signals of visible spectra diagnostics using IMAS database scenarios as input.
<b>MSE</b>	Motional Stark Effect diagnostic.
<b>DNB</b>	Diagnostic Neutral Beam
<b>CXS</b> <b>CXRS</b>	Charge Exchange Spectroscopy Charge Exchange Recombination Spectroscopy
<b>ML</b>	Machine Learning.
<b>Minerva</b>	Modular scientific modelling framework built on Bayesian probability and graphical models.
<b>CXSFIT</b>	Spectral fitting code.
<b>ITPEA</b>	International Tokamak Physics and Engineering Activity

For a complete list of ITER abbreviations see [4].

## 4 Applicable Documents & Codes and standards

### 4.1 Applicable Documents

It is the responsibility of the Contractor to identify and request access to any documents that are needed to execute this contract, and which have not been transmitted by the IO, including the list of reference documents below.

This Technical Specification takes precedence over the referenced documents. In case of conflicting information, it is the responsibility of the contractor to seek clarification from the IO.

Upon notification of any revision of the applicable document transmitted officially to the contractor, the contractor shall advise within 4 weeks of any impact on the execution of the contract. Without any response after this period, no impact will be considered.

Ref	Title	IDM Doc ID	Version
1	General Management Specification for Service and Supply (GM3S)	82MXQK	1.4
2	The ITER Integrated Modelling Programme	2EFR4K	3.2
3	Quality Classification Determination	24VQES	6.0
4	ITER Abbreviations	2MU6W5	1.19

### 4.2 Applicable Codes and Standards

No Codes and Standards are applicable to this scope of work.

## 5 Scope of Work

This section defines the specific scope of work for the service, in addition to the contract execution requirement as defined in [1]. In the next paragraphs we will provide a list of ITER

requirements to be fulfilled by this contract, and a list of tasks to be executed to fulfil those requirements.

## 5.1 Requirements to be fulfilled

### 5.1.1 *Impurity Emission & Transport (Edge→Core)*

ITER requirements are:

- Identify key impurity species and quantify their concentrations and temporal evolution.
- Estimate transport trends (effective  $D$ ,  $V$ ) from time-resolved line ratios and brightness.
- Localize dominant sources (first wall vs divertor) using multi-view LOS.

SoS delivers:

- Forward modelling of visible line emissivity and spectra using CR models and instrument convolution.
- Line-ratio synthesis for species/charge-state discrimination.
- LOS integration with geometry packs.
- Transient replay for ELMs/bursts.

The synthetic diagnostic requirements are:

- Absolute brightness uncertainty  $\leq 15\%$ .
- Line-ratio uncertainty  $\leq 8\%$ .
- $\leq 1\text{--}5$  ms synthetic cadence for transient studies.
- IMAS-compliant outputs with versioned atomic/optical data.

### 5.1.2 *Fueling, Isotope Proxies & Edge Thermodynamics*

ITER requirements are:

- Track D/T/H proxy signals (Balmer series) and infer neutral source/recycling behaviour.
- Extract edge  $T_e/n_e$  constraints from shapes (Stark/Doppler).

SoS delivers:

- Synthetic Balmer spectra with Doppler/Stark broadening and instrument LSF.
- Configurable neutral backgrounds via EIRENE-linked workflows.
- Ratio/shape features for control-relevant proxies.

The synthetic diagnostic requirements are:

- D/T/H fraction proxy uncertainty  $\leq 10\%$  (model-limited).
- Calibrated wavelength/pixel mapping.
- $< 1$  s per LOS for batch runs.

### 5.1.3 *Divertor State & Detachment Monitoring*

ITER requirements are:

- Detect detachment onset/front location and classify detachment state using Balmer decrement and visible molecular bands (where available).

SoS delivers:

- Balmer decrement synthesis and optional molecular band prediction (Fulcher) when configured.
- Scenario ensembles for high-neutral regimes.
- Surrogate paths for rapid classification.

The synthetic diagnostic requirements are:

- Detachment classification latency < 50 ms for control studies (with surrogates).
- Robustness tests under steep gradients and high opacity scenarios.

#### 5.1.4 *Transient Events, Fast Ions & Protection-Relevant Channels*

ITER requirements are:

- Resolve line wings/tails and asymmetries due to plumes/halos/fast-ion slowing-down.
- Support rapid detection of impurity influxes and shine-through discrimination.

SoS delivers:

- Non-Gaussian extensions (Plume, Halo, Fast-Ion Slowing-Down) for realistic spectral features.
- Optical chain modelling for stray-light mitigation studies.
- Export to CXSFIT for analysis.

The synthetic diagnostic requirements are:

- Protection-channel surrogate latency < 10 ms.
- Validated line-shape libraries with regression tests.
- Documented false-alarm behaviour using synthetic ensembles.

#### 5.1.5 *CXRS/MSE Performance Assessment & Support to DNB Development*

ITER requirements are:

- Assess the expected diagnostic performance of CXRS and MSE diagnostics under reduced or evolving DNB parameters (beam energy, power, geometry).
- Quantify CXRS signal levels, background contributions, polarization fractions (for MSE), spatial resolution, and associated uncertainty margins.
- Support the assessment of operational envelopes and design trade-offs for the DNB system using synthetic diagnostics.

SoS delivers:

- Physics-complete CXRS and MSE forward modelling within SoS, including the Finite-Ion-Grid model and the Marchuk population model.
- Realistic beam-plasma interaction modelling and polarized spectral synthesis.
- Synthetic CXRS and MSE observables generated from IMAS scenarios, enabling parametric scans of DNB configurations.
- Interfaces to CXSFIT for performance assessment.

The synthetic diagnostic requirements are:

- Capability to assess CXRS and MSE performance versus DNB parameters using IMAS-based workflows.
- Quantified signal, polarization sensitivity, spatial resolution, and uncertainty metrics.
- Results suitable for informing DNB design and operational decisions.

#### 5.1.6 *Calibration, Interoperability & Uncertainty Quantification*

ITER requirements are:

- Traceable instrument response (etendue, grating, QE, noise, PSF/LSF), consistent data/model interfaces across EIRENE–SoS/SOLPS/ASTRA, and end-to-end UQ from atomic data to inferred parameters.

SoS delivers:

- IMAS-integrated I/O, instrument/geometry packs, and UQ pipelines (MC or surrogate-based) with Minerva-ready datasets.

The synthetic diagnostic requirements are:

- IMAS schema conformance.
- Uncertainty budgets with coverage calibration.
- Containers/CI with physics & schema regression tests.

### 5.1.7 *Open Source*

ITER requirements are:

Open-source implementation of SoS that can be used and validated across fusion devices.

## 5.2 **Tasks to fulfil the requirements**

In order to fulfill the requirements in section 5.1, the following tasks shall be performed:

1. **Integration & Data Consistency:** Integrate the SoS into IMAS framework to enable seamless data exchange. This task includes verifying and validating the completeness of IDS machine and plasma database fields required for visible spectroscopy modelling, as well as ensuring consistency across EIRENE-SOS, EIRENE-SOLPS, and EIRENE-ASTRA workflows.  
Contributes to all the requirements in section 5.1.
2. **Open-Source Strategy & Code Portability:** Assess and prepare the SoS code (or a Python translation of it) for release under an open-source license. This includes assisting ITER in identifying all stakeholders and contributors to the code and contributing to the process of obtaining Letters of Intent or agreements for open-source release.  
Contributes to requirements 5.1.6 and 5.1.7
3. **Support the creation of a Python implementation of SoS:** Provide physics judgements and semantic information to support the IO in creating a Python implementation of SoS for open-source release. In particular, define test cases to verify the correctness of both implementations.  
Contributes to requirement 5.1.7.
4. **Modelling & Code Development:** Develop MSE modelling, including the Finite-Ion-Grid-Model and the Marchuk population model to produce simulated spectra. Use the CXSFIT tool to undertake charge exchange spectroscopy analysis and determine plasma parameters with their uncertainties.  
Use CXRS and MSE synthetic modelling to assess diagnostic performance under reduced or evolving DNB parameters.  
Contributes to requirement 5.1.1, 5.1.5.
5. **Machine Learning & Inference:** Deliver simulated spectra in the form of IMAS Data Dictionary IDs as training inputs for Bayesian inference and machine learning models.

Develop and deliver SoS scripts for integration with Bayesian inference workflows to enhance automated analysis capabilities.

Contributes to all the requirements in section 5.1.

6. Produce **regular progress reports** that describe the work carried out over the preceding months, discriminating work and progress on the different tasks and requirements detailed above; the reports can refer to external technical reports or presentations of work in progress, if these documents have a permanent storage (eg, IDM). These progress reports shall be the deliverables linked to the invoicing as defined in section 8.

The work described above is expected to be carried out by a spectroscopic expert with experience in both simulating synthetic and analysing measured fusion plasma spectra. See section 11.1 for specific experience requirements.

### 5.3 Resources provided

The IO shall:

- Provide access to computing resources and environment: SDCC cluster;
- Provide IMAS scenario data for input;
- Provide expert support for questions related to the IMAS Data Dictionary and access layer tools in different languages including MATLAB and Python;
- Provide proposals for a Python implementation of SoS for review and feedback;
- Provide access to weekly ITER-hosted meetings on synthetic diagnostics and ITPEA Diagnostics;
- Provide a hot desk for temporary visits to the IO worksite.

### 5.4 Estimated Duration

The duration shall be for 12 months.

## 6 Location for Scope of Work Execution

The work will be carried out at the Contractor's site.

However, at least two annual meetings in person are expected, aligned with the ITPEA Diagnostics TG meetings (Spring and Autumn). The Autumn meeting is at IO and the Spring meeting at one of the DAs. If the contractor can't attend one of the meetings in person, they should propose another schedule for a visit to IO. An estimation of the associated cost for travel and subsistence expenses for the Contractor's personnel should be included in the Contract Cost. The Contractor will take care of all administrative formalities required for the presence of the Contractor's Personnel at the IO site with the authorities concerned (obtaining visas, etc.).

## 7 IO Documents

Under this scope of work and in addition to the documents listed in section 4, IO will make the following documents available to the contractor:

Ref	Title and link to documentation
10	<a href="#">IMAS</a>

11	Access Layer API: <a href="#">MATLAB</a> , <a href="#">Python</a> , <a href="#">Fortran</a>
12	<a href="#">Data Dictionary</a>
13	<a href="#">Synthetic Diagnostic Table</a>
14	<a href="#">ITER data visualization tool user manual</a>

## 8 List of Deliverables and due dates

D #	Description	Due Dates*
D1	Progress Report on Spectroscopic modelling consultancy #01 Completion of task 1 from section 5.2.  Partial progress of other tasks in section 5.2 should be shown.	T0 + 3 months
D2	Progress Report on Spectroscopic modelling consultancy #02 Completion of task 5 from section 5.2.  Partial progress of other tasks in section 5.2 should be shown.	T0 + 7 months
D3	Progress Report on Spectroscopic modelling consultancy #03 Completion of all tasks in section 5.2 should be shown.	T0 + 12 months

\* T0 corresponds to the date of the Kick-off Meeting.

The supplier is requested to prepare their document schedule based on the above and using the template available in the GM3S Ref [1] appendix II ([click here to download](#)).

In addition to the deliverables laid out in the table above, the contractor will additionally supply monthly progress reports containing:

- Summaries of meetings and decisions.
- Drafts of material to be used in final report.
- Issues that have arisen in the course of the work, along with suggested approaches to addressing these issues.

All software developed and delivered as part of this contract shall be stored in the ITER Integrated Modelling software repositories and shall be delivered with detailed user and developer guides and licenses allowing its use on ITER Organization computing facilities by staff and collaborators. For software where the Contractor is not the licensor, the Contractor will support the ITER Organization in obtaining a suitable license.

## 9 Quality Assurance requirements

The Quality class under this contract is Class 4, Ref [1] GM3S section 8 applies in line with the defined Quality Class.

## 10 Safety requirements

No specific safety requirement related to PIC and/or PIA and/or PE/NPE components apply.

## 11 Specific requirements and conditions

Requirement for Ref [1] GM3S section 6 applies.

### 11.1 Requirements for the supplier

The supplier shall have the following expertise:

- Experience in spectroscopic plasma modelling, preferably visible spectroscopy in fusion plasmas.
- Experience with spectroscopic data analysis, preferably visible spectroscopy in fusion plasmas.
- Experience at fusion facilities, preferably JET.
- Experience in global data consistency procedures.
- Experience with scientific data processing software/programming languages, in particular Matlab, Python, and FORTRAN.
- Experience in IMAS: Access Layer, Data Dictionary, and other tools in the suite.
- Experience with creating technical documents and presentations

### 11.2 Work Monitoring / Meeting Schedule

The work will be managed by means of Progress Meetings and through the formal exchange of documents and transmitted by emails which provide detailed progress.

Progress Meetings will be called by the ITER Organization or the C-TRO. They will be held as needed and at least bi-monthly, either on the IO site or via videoconference. Progress meetings will involve C-TRO(s) and the IO-TRO. External experts will be invited – if needed – to discuss technical matters. The C-RO and IO-CRO will be invited in case of contractual discussions.

For all Progress Meetings, minutes, including action items, shall be written by the C-TRO and be stored in the ITER IDM or Confluence in order to ensure traceability.

### 11.3 CAD Design Requirements (if applicable)

This contract does not imply CAD activities.

**Expression of Interest**

To be returned by e-mail to: [vishal.dubey\\_ext@iter.org](mailto:vishal.dubey_ext@iter.org) copy [Jongeun.Lee@iter.org](mailto:Jongeun.Lee@iter.org)  
before 29 June 2026

ITER Organization / ITER Headquarters  
Procurement & Contracts Division  
Route de Vinon-sur-Verdon  
CS 90 046  
13067 St. Paul Lez Durance Cedex  
France

TENDER No.        **IO/26/CFE/10035129/VDY**

TENDER Title:    **CFE - Development of a Spectroscopy Synthetic Diagnostic Model**

Officer in charge: **Vishal Dubey – Procurement & Contracts Division, ITER HQ Building 81/139**

We acknowledge receipt of all tender documents for the above-mentioned tender.  
(In event of missing documents, contact the ITER Officer in charge)

We intend to submit a tender

**Contact Person for this solicitation Process:**

Name: ..... Tel: .....

Position: ..... E-mail address: .....

Signatory Name: .....

Company Stamp

Title: .....

Signature: .....

Date: .....