

Statement of Work (S.O.W) -

Document Number

Title

*Statement of Work for the supply of a 5 axis CNC
milling machine for metal and brittle materials*

Type of tender

Open procedure pursuant to art. 71 of Legislative
Decree March 31, 2023, n. 36, and successive
modifications and integrations

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Art. 1 Definitions and purpose of the document

1.1 Definitions

- Bidder. Any company or other economic operator that submits an offer for the present Call.
- Contracting Authority. INAF - Osservatorio di Brera is the contracting authority for this project.
- Contractor. The company or other economic operator that signs with INAF the contract for this project.
- Functional requirements. Requirements that indicate the purpose and function of the supply.
- Optional Requirements. Requirements that are not mandatory for the acceptance of the proposal but can give additional points in the evaluation.
- Quality and Performance requirements. Requirements that define what performance and level of service the supply must have.
- Technical requirements. Requirements that define the characteristics and technical specifications of the supply.

CNC	Computer Numerical Control
ELT	Extremely Large Telescope
INAF	Istituto Nazionale di Astrofisica
OAB	Osservatorio Astronomico di Brera
PNRR	Piano Nazionale di Ripresa e Resilienza
SKA	Square Kilometre Array
SOW	Statement Of Work
STILES	Strengthening the Italian Leadership in ELT and SKA

In this document and in all other documents of the Call the following convention applies:

- Shall indicates a mandatory requirement.
- Should indicate an optional, desired requirement.
- Will indicate a circumstance expected to happen.

1.2 Purpose of the document

This document describes and specifies the subject of the contract and the relative milestones and deliverables. The technical requirements for the system are described in the Technical Specification document [ADO1] that is an integral part of this Statement of Work, while the contractual and financial aspects are described in the documents "Disciplinare di Gara" and drafted in "Schema di Contratto".

Art. 2 Background, context and vision

The object of the supply concerns the acquisition of a 5-axis automatic numerically controlled (CNC) machining center (or milling machine) to be installed in the mechanical workshop of the observatory at the Merate premises. Such an instrument would complement OAB's capabilities in making high-precision optics. More precisely, the machines currently available in the Merate laboratories are the Zeeko 1200 and the ion-beam facility capable of carrying out the final steps of the precise manufacturing of mirrors and lenses up to approximately 1m in size. The machine object of this purchase would also make it possible to carry out the previous roughing phase, giving OAB an even more prominent and reference role among research institutes for optical processing. This machine must be able to process not only fragile materials such as glass and ceramics, but also conventional materials that can be worked by chip removal such as metals and plastics using commercial milling tools. Therefore, this machine

would also replace the current DMU50T available in the workshop, which is currently subjected to continuous machine downtime due to technical failures due to age. Consequently, the foreseen working time for the different material could be balanced as 70% for classical materials (metals, plastic, etc) and 30% for brittle materials (glass, ceramic, etc).

2.1 Timeline of the project (Phases and Reviews)

Preliminary Design Phase

During this phase a preliminary design is developed whose requirements are defined in the Technical Specification. A draft plan of the installation and commissioning phase is described to verify the check the compliance of the installation in the OAB premises.

Preliminary Design Review (PDR)

The purpose of this review is to scrutinise the compatibility of the preliminary design with the Technical Specification and its applicable documents. During the PDR the overall instrument, the cost, schedule, and risks associated with the activities as well as the status of the documents shall be reviewed.

Final Design Phase

In this phase, the plan for installation and the design shall be finalized, down to the all levels of components. The major technical drawings must be available at the end of this phase.

Final Design Review (FDR)

The purpose of this review is to ensure that the detailed hardware and software design solutions as reflected in the submitted drawing set, the interface design documents, and other relevant documents satisfy the requirements established by the Technical Specification [AD01] and its applicable documents. The review shall also demonstrate that the instrument can be successfully integrated in the defined working position.

Manufacture, Assembly, Integration and Test (MAIT) Phase

The MAIT phase comprises two main phases:

1. The subsystem MAIT, including the construction/procurement of the pieces composing the subsystem, the assembly and integration of such pieces and the test of the integrated subsystem as a stand-alone unit.
2. The system AIT, that involves the assembly and integration of the various subsystems in order to compose and test the full machine. The milling machine will be assembled, integrated, and tested at the Contractor premises

Transport and Incoming Inspection Phase

After assembly the machine is verified according specified standard and then, it must pack in a manner suitable for road and air or sea transport. The transport will be organised by the Contractor.

Once arrived at the Merate's premises the instrument is inspected to verify that it hasn't received any damage during the transport.

Installation and Commissioning Phase

The final installation and commissioning will take place at INAF-OAB, Merate. The functionality of the machine must be restored and verified. The compliance with the conditions specified in the interface document will be the responsibility of INAF-OAB.

Provisional Acceptance (PA)

The PA has the objective to demonstrate that the instrument meets the requirements of the Technical Specifications and its applicable documents, and that all tasks described in this SoW have been satisfactorily fulfilled.

The PA is planned for June 2025 and is followed by a 2-year guarantee period.

Art. 3 Subject of the contract

This SoW applies to the delivery of the machine and will cover:

- the design phase,
- the manufacturing phase, which includes the assembly, integration, and test (MAIT) at Contractor premises,
- the delivery and installation at INAF-OAB, Merate,

The Kick Off Meeting shall mark the official start of project activities. The Kick Off Meeting shall take place within 15 days from contract signature.

Assuming as TO the date of the Kick Off Meeting with the selected contractor, the project shall follow the timeline indicated in Section 4.2.

The Applicable and Reference Documents for this supply are listed below.

3.1 Applicable Documents

The following applicable documents (AD) of the exact issue shown form a part of this document to the extent described herein. In the event of conflict between the documents referenced herein and the contents of this document, the contents of this document are the superseding requirement.

- Technical Specification [AD01]
- Technical drawing [AD02]

3.2 Reference Documents

Not Applicable.

3.3 Definition of Project Items

This project concerns the of a 5-axis automatic numerically controlled (CNC) machining center (or milling machine) and all the related documentation, as specified in the following sections.

The Contractor shall procure and deliver the items specified in art. 4.4 Deliverables.

Art. 4 Contractual Phases, acceptance procedure, deliverables, timeline and milestones

4.1 Contractual Phases

Hereafter the milling machine is the main hardware and the main item subjected to the supply. It is referred as MM1. The project shall comprise the following phases:

MM1 Phase 1

- Design and performance analysis of MM1

MM1 Phase 2

- Procurement and/or construction of the elements needed to build MM1 and their Assembly.
- Integration and Factory Test of MM1
- Delivery to INAF-OAB, On-site Test and commissioning of MM1
- training to INAF personnel

The transition between Phase 1 and the Phase 2 will be subject to internal and external conditions:

INAF accepts the Final Design for that MM1 upon review and conclusion of all the actions of phase 1.

4.2 Acceptance procedure

For MM1 the acceptance procedures shall be as follows:

Phase 1

The acceptance of the Final Design will be done by evaluating the requested documents, as specified in Section 4.3.

Phase 2

For Phase 2 there will be two separate acceptance procedures.

The first acceptance procedure consists in the verification that all components of a MM1 are present at the Contractor premises and have the required characteristics. After this first acceptance the delivery of MM1 can start.

The second acceptance process for the physical equipment (MM1) will be carried out through functionality tests after the installation at the INAF-OAB premises. These test sessions will verify that the MM1 fulfils all the technical specifications. The On-site Acceptance (also referred to as "commissioning") comprises the execution of the On-Site Test and the correction of any non-compliance until the MM1 fulfils all the technical requirements.

4.3 Timeline and Milestones

In the following the high-level project schedule is reported, under the form of tabular form. The date of the Kick Off Meeting of Phase 1 (T0) will be decided at the time of the contract signature and must in any case take place within 15 days from the date of the contract signature.

The start of Phase 2 (T1) will happen when all Action Items arising from MM1 FDR are closed. In the case all the actions are concluded during FDR the Kick Off Meeting for phase 2 could be coincident with FDR.

In the following schedules we have assumed, as a tentative reference, $T1=T0+2$ months. However, T1 could be different from that assumption.

All the dates of milestones are to be considered tentative and will be confirmed at project start, except for the following ones that are fixed:

- the date of MM1 Transfer of Ownership (MM1 Integration Readiness), that is constrained by the rules of the National Fund for Recovery and Resilience (PNRR, the European programme managed by the Italian Research Ministry); this date is fixed to 30th June 2025, unless possible shifts according to PNRR rules.

MM1 Phase 1 (T0 start of activities TBD)			
Activity/Milestone	Start	Stop	Description
MM1 Kick Off Meeting (KOM)	T0		The main objectives of the Kick-Off Meeting are to confirm mutual understanding of the scope of work specified herein, including its applicable specifications. The documents supporting the Kick-Off Meeting shall be submitted to INAF one week before the KOM, for review.
MM1 Preliminary Design	T0	T0+1	The objective of this activity is to carry out the final design of the MM1, in order to be ready to start the Phase 2.
MM1 Preliminary Design Review (PDR)	T0+1		The purpose of this review, is a preliminary check of the design to ensure that the detailed hardware and software design solutions as reflected in the submitted drawing set, the interface design documents, the installation procedure and other relevant documents satisfy the requirements established by the Technical Specification (AD01). The first payment is related to this review.
MM1 Design assessment	T0+1	T0+2	This phase has the objective of reviewing

			the documentation, finalizing the design of items, to assess their maturity and to formally authorise the start the procurements.
MM1 Final Design Review (FDR)	T0+2		<p>The purpose of this review, that closes Phase 1, is to ensure that the detailed hardware and design solutions as reflected in the submitted drawing set, the interface design documents, the installation procedure and other relevant documents satisfy the requirements established by the Technical Specification (ADO1).</p> <p>The FDR is considered successfully closed after the successful implementation of all the relevant actions.</p>

Table 1 - Project schedule of MM1 for Phase 1 in tabular form (Shifts in Months)

MM1 Phase 2			
Activity/Milestone	Start	Stop	Description
MM1 Kick Off Meeting for Phase 2	T1		<p>The objective of this Meeting is to verify the presence of all conditions to start Phase 2.</p> <p>The procurement of all the elements can start after the successful conclusion of this meeting.</p>

MM1 Procurement of elements (Completion of Procurements and of other Procurements) and Assembly	T1	T1+10	This activity has the objective to complete all the procurements and to assemble these elements. At the end of this activity the first-level elements of the MM1 will be ready for Factory Test.
MM1 Factory Acceptance Test (FAT)	T1+10	T1+11	This activity has the objective to verify that the MM1 is working according to its specifications at Contractor's premises
MM1 Factory Acceptance Review (FAR)	T1+11		This review marks the positive acceptance of the MM1 at the Contractor's premises and the consequent authorisation to move it to the INAF-OAB premises.
MM1 delivery and installation phase	T1+11	T1+11.5	This activity includes the transportation and the upload on the OAB premises and installation.
MM1 On-Site Acceptance Test	T1+11.5	T1+12	This activity has the objective to verify that the MM1 continues to work according to its specifications at INAF premises. After the successful completion of the Integration Readiness Test the ownership of the MM1 is transferred to INAF
training to INAF personnel	T1+12	T1+13	During this phase, the knowledge to use MM1 and its software is transferred to INAF personnel.

MM1 On-Site Acceptance (OAR)	T1+13	This milestone marks the positive conclusion of the Test and commissioning at INAF premises and the consequent final acceptance by INAF.
MM1 End of Phase 2	T1+13	

Table 2 - Project schedule of MM1 Phase 2 in tabular form (Shifts in Months)

The test sessions reported in Table 2 are detailed below:

- FAT – Factory Acceptance Review

The FAR - Factory Acceptance Review is the process of provisional acceptance that assesses the proper functioning of the system(s) at the contractor's site. All interfaces are also verified.

Once successfully passed the FAR, the system can be transported to the INAF integration site.

During the FAR all technical requirements and interface requirements described in each MAIT plan that are foreseen to be verified by test will be verified. The result of such tests will be documented in the test reports.

A Test and inspection report (FAR version) will be issued at the end of the test session, signed by the appointed INAF responsible and counter-signed by a contractor's representative.

- OAR – On-site Acceptance Review

In this test session, executed at INAF premises or other place indicated by INAF, the whole set of technical requirements and interface requirements is tested, comprising the tests that couldn't be executed during the FAT.

The tests of the OAR will be executed in the real operational conditions than the ones of the FAR.

Test procedures, modes and timeline of the OAR will be defined in detail in the relevant MAIT Plan.

The contracting authority will verify with its own personnel the compliance of the delivered products with the technical and functional requirements indicated by the contractor at the time of the offer, comparing them with the data sheets associated with each individual product.

The presence of contractor personnel during OAR is required.

A Test and inspection report (OAR version) will be issued at the end of the test session, signed by the appointed INAF responsible and counter-signed by a contractor's representative.

4.4 Deliverables

Types:

D -> Document

M -> 2D/3D Model, Drawing

E -> Equipment

Refer to the table of milestones (Table 1 and Table 2) for delivery dates.

For the definition of "MM1" refer to section 4.1.

Note that the code used hereby is intended only to enumerate and identify the deliverable items, the proper document numbering will be agreed with the consortium at the contract signature.

MM1 Technical Deliverables (Documents)

Code	Title	Type	Description
DEL-02	MM1 Operational manual	D	<p>The Design Report shall contain, as a minimum:</p> <ul style="list-style-type: none"> a. Overview of the design of the MM1. b. Assumptions, such as design constraints, environmental conditions other than specified in technical specification, maintenance concept, access concepts. c. Detailed description of the system design, all relevant components, subsystems and function with reference to every specified requirement specified. d. procedures for working operations e. maintenance f. The handling tools shall be part of the design.
DEL-03	MM1 software manual	D	Referring manual of the controlling software
DEL-04	MM1 Safety manual	D	The document describes the safety Information, the hazard list and risk description in compliance with the fundamental safety and health requirements of the EU machine guideline.
DEL-05	MM1 Interface Control	D	The document describes the

	Document		mechanical, electrical, pneumatic interface with specific technical drawing.
DEL-06	MM1 Installation plan	D	<p>The document describes in detail all the phases after the FAT phase. It shall contain, as a minimum:</p> <ol style="list-style-type: none"> Track type and/or other transport equipment with important information related to the transportation Details related to the physical delivery (the download to the floor at the OAB premises) Details of the procedure to place MM1 at the final defined place
DEL-07	MM1 Parts List/Bill of Materials	D	<p>List of parts composing the system. The part list shall contain as minimum:</p> <ol style="list-style-type: none"> Serial number or code Title or Identification: Name of the item which is shown in manual or drawing. Quantity: number of pieces used in the assembly or subassembly
DEL-08	MM1 Factory Acceptance Test Report	D	<p>The test performed to the factory in order to validate the functionality shall be described in this document. It shall aim to demonstrate how to ensure the compliance of the</p>

			instrument design and the means to verify it.
DEL-09	MM1 On-Site Acceptance Report	D	The test performed to INAF-OAB premises in order to validate the functionality shall be described in this document and confirm the compliance of the requirement tested in FAT and the remaining requirements to be verified directly on site. It includes the Report on Test and Inspection of MM1

Table 3 - Technical documents of MM1

MM1 Technical Deliverables (Hardware)

Code	Title	Type	Description
DEL-01	MM1	E	. The milling machine

Table 4 - Hardware deliverable items of MM1

MM1 Management Documents

Code	Title	Type	Description
MOM-#	MoM	D	Summary of Meeting, including Action Item List for MM1 and schedule of the activities. They refer to each

			<p>review. Intermediate meetings shall be organized to report the activities and update of the schedule under the request of contractor or INAF-OAB</p> <p>INAF-OAB personnel prepare the Minute of the meeting and sent within 3 days after each meeting.</p> <p>For each Action Item it shall contain as a minimum:</p> <ol style="list-style-type: none"> 1. The content of the action 3. The actioner 4. The due date and the closure date
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Table 5 - Management documents of MM1

4.5 Deliverable timeline

For MM1, the deliverables are expected to be delivered at each milestone according to the following table (F stand for Final Issue, D for Draft):

Code	Title	Phase 1			Phase 2		
		KOM	PDR	FDR	IRR	FAR	OAR
Technical Documents							
DEL-02	MM1 Operational manual						F
DEL-03	MM1 software						F

Code	Title	Phase 1			Phase 2		
		KOM	PDR	FDR	IRR	FAR	OAR
	manual						
DEL-04	MM1 Safety manual						F
DEL-05	MM1 Interface Control Document		D	F			
DEL-06	MM1 Installation plan		D	F			
DEL-07	MM1 Parts List/Bill of Materials						F
DEL-08	MM1 Factory Acceptance Test Report					F	
DEL-09	MM1 On-Site Acceptance Report						F
HW							
DEL-01	MM1						F
Management Docs							
MOM-#	MoM	At each meeting.					

Table 6 - Deliverable items expected at each milestone for MM1

4.6 Meetings

Describe hereafter the location and the objectives of the main project meetings.

Kick-off meetings

Location:

The Kick-off meetings (for all Phases) shall take place at INAF premises (Italy, exact location TBD).

Objectives:

The purpose of the meetings is to verify the presence and adequacy of all the foreseen documentation and to assess the preparedness of the company to start the activities foreseen in the phase.

Process:

The Contractor sends to INAF all the requested documentation 3 working days before the meeting.

During the meeting the documents are commented on and discussed. Actions can be taken in order to correct errors, insert missing information or improve the quality of the documents.

Approval conditions:

The meeting is considered successfully completed if:

- all the KOM documentation is delivered on time and has the expected level of completeness and quality.
- the project team is ready and adequate for the work to be started.
- all critical actions taken during the review are successfully closed.

Reviews

Location:

Reviews may take place alternatively at the Contractor's premises, at INAF premises or by teleconference.

Objectives:

The purpose of Reviews is to formally assess the preparation of the expected deliverable items, at the level of completeness foreseen at that stage of the project. The Reviews are identified as such in Table 2.

Agenda items of Reviews shall include but not necessarily be limited to

1. Presentation of the deliverables due for that Review.
2. Status of pending Action Items.
3. Outcome of the Review.
4. Recommendations.

Process:

The Contractor sends to INAF all the requested documentation with due advance with respect to the meeting date (in any case not less than 1 weeks).

INAF representatives read the documentation and prepare comments and indications under the form of RIXs (Review Item Comments or Discrepancies), During the meeting the RIXs are discussed and closed, as much as possible. Actions can be taken in order to correct non-compliances, insert missing information or improve the quality of the documents.

Approval conditions:

Reviews are considered successfully completed if:

- all the deliverable items have the expected level of completeness and quality.
- all critical actions taken during the review are successfully closed.

The Contractor's personnel shall attend, if invited, reviews with partners, at their premises or at INAF premises. The costs of these missions will be in charge to the contractor.

The partners are allowed to send representatives to attend any project milestone meeting.

The Factory Acceptance Test will take place at the Contractor's premises.

The On-Site Acceptance Test will take place at the INAF premises.

Additional meetings may be requested either by INAF or the Contractor. With due notice to the Contractor, INAF reserves the right to invite Third Parties to meetings to facilitate information exchange. Third Parties can include, for example, INAF personnel not directly involved in the project, external experts in technical or management/administrative matters.

For each meeting the requester shall propose an agenda in electronic form and shall compile and distribute any presentation given at the meeting.

INAF may request, with at least 15 days in advance, access to the integration laboratories and support to make extra measurements directly on the units.

Access to laboratories may be requested at any time during Phase 2, whenever deemed necessary by INAF.

The best time slot will be agreed into a reasonable amount of time.

Art. 5 Supporting Tasks

5.1 Project Management

The Contractor shall implement a centralised Project Management System and will nominate a Project Manager.

The Contractor's Project Management Office shall coordinate and control the project, the partners, all technical and commercial activities, and manage all activities required to successfully complete the Contract.

The Contractor's Project Manager shall be the principal point of contact and have full authority to deal with all matters related to the contract, including but not limited to technical matters.

Progress reports shall provide a brief account of the progress of the work done by the Contractor, encompassing all aspects within the reporting period.

Progress Reports shall be communicated to the INAF point of contact in electronic format (e.g., as email) with a frequency of not less than every 4 months.

Management deviations, impacting project scope/quality, time or cost, shall be reported to INAF, as change request or request for waiver for approval. Once approved by INAF and by the Contractor, the change will be formalised in a contract amendment. If the change comprises schedule shift or other variations that would imply penalties, such penalties can be waived by mutual agreement in the updated contract.

Technical deviations, that do not have impacts on scope/quality, time or cost, may be proposed by both parties and discussed in the first available Progress Meeting (or in a dedicated Meeting in case of urgency). Once agreed by INAF and by the Contractor, these deviations will become part of the technical baseline and shall be reported in detail in the project documentation.

5.2 Product Assurance

The general approach concerning the fulfilment of all specified PA requirements (including quality assurance, RAMS, Configuration Management, and Software Product Assurance) shall be described in the Product Assurance Plan. The detailed tasks to be performed during the individual project phases shall be included as all other project activities in the project planning.

If the contractor is not ISO9001 certified, under request of the project PA manager it shall provide evidence that the production and service provision proceed under controlled conditions, thus assuring that manufacturing and procurement processes are under adequate control and monitoring.

In addition to the specified safety requirements foreseen by ISO9001 and where not explicitly stated otherwise, the Contractor shall comply with all relevant National safety laws and legislation applicable to the design, development, manufacturing, installation and operation of the contracted item.

Art. 6 Commercial guarantee and technical assistance

A standard warranty of 2 years after the final acceptance of the MM1 shall be provided by the Contractor.

The extension of the warranty beyond the 2 years will be considered a useful plus and will give additional points in the proposal evaluation.

The baseline for the warranty shall be the repair on-site of the defective piece.

The Contractor responsibilities will cover all costs consecutive to shipment of equipment and personnel travel necessary in case of on-site repair.

If this is not possible, the Contractor will be responsible (and cover the expenses) for the pick-up, the change or repair and the shipment back of the product that showed defects in use. In this case INAF can dismount the defective product from the instrument and making it available for pick-up only after authorization by the Contractor . INAF will be responsible for the remounting of the changed or repaired part on the instrument.

The Contractor responsibilities extend as well to all costs related to the shipment back and forth of the defective product for factory repair or product exchange, if this is the case.

When a defect is reported, INAF will give formal notice of the defect to the Contractor specifying if the need arises:

- for a change/repair at the operating location
- for the defective product sent to the Contractor (and the corresponding working product sent back to INAF).

The Contractor is released from its financial obligations, only where a mis-utilisation (i.e. not compliant with its specifications) of the product is proven. In such cases the Contractor shall anyway provide technical support upon specific agreement with INAF.

All manufacturing tools and equipment shall be kept in usable condition for a duration of 2 years. It shall be possible to re-manufacture a deliverable item or some of its components without important additional delivery time or cost with regards to the initial production.

- After-sales technical assistance to be provided.
 - 1) *times for replacement of defective products / spare parts.* The defective component must be replaced within 30 calendar days from the notification in case of on-site replacement. If the defective component is shipped to the Contractor.
 - 2) *mode that will be used to notify the malfunction.* The contracting authority will communicate the malfunction to the contractor using an agreed e-mail address.
 - 3) *charges for replacement of spare / malfunctioning parts.* During the warranty period the replacement of the non-functioning product will be borne by the contractor both for the collection of the defective part and for the delivery of the replacement part. The replacement operation in the MM1 will be conducted by Contractor's personnel or, as a second choice, by the contracting authority remotely assisted by the contractor.

Art. 7 Delivery

- Transport insurance policy. Insurance on transport is mandatory and shall be paid by the Contractor.
- Packing method. Care and responsibility of the contractor shall be to choose high quality external materials, rigid and in good conditions. The boxes must be new and must not have been used beforehand. The size of the boxes shall be based on the final size of the products, avoiding semi-empty packages. The packing must guarantee the maximum safety of the goods by the transport company. Care shall be taken of the internal packaging, which provides

protection for the goods during transport and during delivery. The internal packaging must be able to protect the product from shocks and vibrations. All possible openings shall be sealed, using high quality resistive products. The contractor shall insert on the outer edges of the box plastic or cardboard protectors that distribute the pressure evenly and avoid damage to the outer casing.

Transport shall be carried out with means (trucks, trains, ships, airplanes) that guarantee the absorption of vibrations and bumps, in order not to cause damages to the transported goods. Transport means shall also ensure that the products are kept within the acceptable range of temperature and humidity.

- Responsibilities and support.

Delivery at final destination shall be under the responsibility of the Contractor, who shall give at least two weeks advance notice of the Estimated Time of Arrival of the concerned item.

Logistic support shall be provided by INAF according to plans and requirements set in the Design and in the AIT Phases, as explained in the MM1 Installation plan (DEL-06)

Where INAF manpower is required to support delivery tasks, the Contractor shall provide all necessary manuals and instructions for such manpower to safely perform its tasks according to requirements.

- Location and delivery times.

The MM1 must be delivered to the following locations:

- V. Bianchi 46, 23807, Merate (LC), IT, building B, entrance 1

Alternate delivery locations must be agreed with due advance.

Detailed information will be provided at the time of shipping.

- Shipping methods.

Shipment will be done in accordance with the terms INCOTERMS DDP -

Delivered Duty Paid. In the DDP mode the contractor covers all costs and risks of the shipment and of import/export.

- Method of unloading goods.

Unloading will be on the ground floor, by the courier appointed by the Contractor, under the Contractor responsibility.

Personnel of the Contractor shall oversee the unloading and perform the unloading inspection to check that no damage was done during the transportation (data logger, shock witnesses, etc.). The placement in the working position follows the plan described into MM1 Installation plan (DEL-06). For the technical drawing of the working place refer to the attached tender documentation, the Technical specification [AD01] and Technical drawing [AD02].

- Installation.

The Installation will be performed under Contractor responsibility, by Contractor's personnel following the plan described into MM1 Installation plan (DEL-06).

Art. 8 General Conditions

8.1 Quality System

The Contractor shall implement a quality system based on the ISO 9001 standard.

The certification of the Contractor with ISO 9001 standard is considered a plus. Alternatively, the Contractor should be able to demonstrate the existence and the use of an equivalent internal quality system.

8.2 Audits

INAF is authorised to perform audits at the Contractor premises during all the duration of the contract in order to validate and evaluate the contractor quality system, as well as the progress of the contract execution.

INAF will inform the contractor of its intention to perform an audit for a given date at least 15 days in advance. The contractor shall answer to this request by an acceptance of the proposed date or by an alternative proposition of date(s) within more or less than ... days from the initial proposed date.

8.3 Personnel Safety

The contractor shall respect all Italian laws and regulations relative to personnel safety and working conditions. The Contractor is fully liable for the safety of its personnel.

The contractor shall formally notify to INAF before implementation any use of known or potential harmful material (including, but not limited to, radioactive, bio-hazardous, chemically dangerous materials) during the manufacturing process or included in the delivered product. In that case, an official acceptance from INAF of this (these) material(s) is mandatory prior to its implementation.

The contractor shall formally notify to INAF of any potential risk or danger linked with the use or the handling of its products. In that case, safety measures shall be transmitted to INAF and accepted before any delivery.

8.4 Traceability

The contractor shall ensure the traceability and the recording of the product's main components, materials or sub-contracted operations. The rules and conventions for the tracing components and elements of the system will be detailed in the relevant documentation produced by the contractor (Parts List/ Bill of Materials and CIDL).

The list of these items shall be agreed with INAF before manufacturing. For each delivered product and for each of the identified item the following information shall be available:

- Item manufacturer or sub-contractor
- Identification number
- Batch or serial number
- Manufacturing or service date

8.5 Documentation

All deliverable documents produced during the project shall be written in English language and will be transmitted under electronic format.

Applicable associated file formats are:

- Word, Excel and PDF under ISO A4 size for textual documents
- PDF, Autocad DWG, Inventor IDW under ISO A0 to A4 size for drawings
- Zemax ZMX for optical design files
- STEP, IGES, Inventor IAM and IPT for 3D models

Other formats must be agreed between the Contractor and INAF.

Templates for Change Request, Request for Waiver and Discrepancy Note will be provided and will be applicable.

All internal or deliverable documentation related to the present Statement of Work associated contract shall be archived and recoverable during the duration of ... years after the end of the manufacturing phase.

The contractor is responsible for verifying all documentation made available by INAF for the contract execution including the present Statement of Work and its applicable documents. The contractor shall give notice to INAF of any errors, discrepancy, or missing information in this documentation. The contractor shall not modify documents made available by INAF. In case of errors, discrepancy or missing information, the correct information will be provided by INAF.

8.6 Confidentiality

Both parties undertake to ensure confidentiality of information communicated by the terms of the present contract and not to publish it, divulge it to third parties (apart from partners) for use or for any other purpose than those stated in the present contract, and the parties agree to do so for the entire duration of the contract and for a period of five years following expiry or termination of the contract. Confidential information must be sent only by registered letter with recorded delivery.

Art. 9 Modification Management

9.1 Change Request

During contract execution, the Contractor and INAF can propose modifications to the contract. Such proposals shall be addressed to the other party by means of a formal change request.

This change request shall include detailed motivation and explanation of the proposed change. It will identify clearly all the documents and products impacted by the change. When issued by the Contractor, it shall also include all potential impacts positive or negative in terms of quality, performance, schedule and cost. When issued by INAF, this information will be given by the Contractor in reply to the change request.

Each Change Request shall be identified by a unique identifier, which shall be used in all subsequent correspondence.

Provided the input is complete, the receiving party shall respond (change approved or rejected) to any such Change Request within 4 weeks of its receipt, or in the case of complex changes inform the other party on the expected completion date within 6 weeks of its receipt. If the input is not complete, the receiving part shall ask for the missing information within two weeks.

If the change of scope is significant an amendment of contract conditions may be agreed. INAF will provide a template for Change Request at Kick Off Meeting.

9.2 Request for Waiver

A request for waiver is an official request from the Contractor to INAF to release or use a non-compliant product. A request for waiver is limited to specific individual products or limited in time before repair. If this limitation does not apply, a change request shall be issued.

A request for waiver shall include detailed motivation and explanation of the waiver requested. It will identify clearly all the products impacted and if relevant the foreseen date of repair. It shall also include all potential impacts positive or negative in terms of quality, performance, schedule and cost. INAF will pronounce the acceptance decision of

the request within 4 weeks after reception of the completed request. If the change of scope is significant an amendment of contract conditions may be agreed.

INAF will provide a template for Request for Waiver at Kick Off Meeting.

9.3 Non-Conformances

In case where a non-conformance or discrepancy of any kind is detected during the project execution, the Contractor shall give notice to INAF by means of a Non-Conformance Report within 1 week after detection. These Reports can refer to any technical, manufacturing, schedule and quality aspect, particularly in cases where a detected non-conformance may lead to a late delivery of products.

9.4 Contract Amendment

In case of a contract amendment consecutive to a change or a waiver, the financial conditions revision will be based on the cost breakdown given at the contract signature.

Art. 10 Obligations of the contractor

- Appointment and duties of the Contract Manager. The Contractor shall indicate its own Contract Manager with whom the Contracting Authority will be able to interact, for contractual matters, until the issue of the certificate of conformity (test certificate) of the supply.
- Appointment and duties of the Project Manager of the supply. The Contractor shall indicate its own project manager of the supply that will ensure the effective and timely completion of the contract. The Contractor's Project Manager, supported by other internal personnel, as needed, shall coordinate and control the project and manage all activities required to successfully complete the Contract. The project manager shall implement a more detailed, product-oriented, Work Breakdown Structure based on the Work Breakdown Structure described in this document. Work Packages shall be clearly identified, with appointed Work Package Managers, Work Package input / output,

milestones and timelines.

- Appointment and duties of the Technical Manager of the supply. The contractor shall indicate its own Technical Manager of the supply with which the contracting authority will be able to interact, for technical matters, until the issuing of the certificate of conformity of the supply. The figures of Contract Manager, Project Manager and Technical Manager of the supply may coincide.