ANNOUNCEMENT OF OPPORTUNITY

For

Engaging Contractor for
Third Party Inspection of SSA & Actuators

Project - Thirty Meter Telescope

May, 2019

Indian Institute of Astrophysics
India TMT Co-ordination Centre
Koramangala, Bengaluru - 560034
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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ARIES</td>
<td>Aryabhatta Research Institute for Observational Sciences</td>
</tr>
<tr>
<td>ASME</td>
<td>American Society of Mechanical Engineers</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer Aided Design</td>
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<tr>
<td>CMM</td>
<td>Coordinate Measuring Machine</td>
</tr>
<tr>
<td>CV</td>
<td>Curriculum Vitae</td>
</tr>
<tr>
<td>GD&amp;T</td>
<td>Geometric Dimensioning &amp; Tolerancing</td>
</tr>
<tr>
<td>IIA</td>
<td>Indian Institute of Astrophysics</td>
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<tr>
<td>ISO</td>
<td>International Standards Organization</td>
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<tr>
<td>ITCC</td>
<td>India-TMT Co-ordination Centre</td>
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<tr>
<td>IUCAA</td>
<td>Inter-University Centre for Astronomy and Astrophysics</td>
</tr>
<tr>
<td>M1CS</td>
<td>M1 Control System</td>
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<tr>
<td>NABL</td>
<td>National Accreditation Board for Testing and Calibration Laboratories</td>
</tr>
<tr>
<td>PMA</td>
<td>Polished Mirror Assembly</td>
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<tr>
<td>R.H.</td>
<td>Relative Humidity</td>
</tr>
<tr>
<td>SSA</td>
<td>Segment Support Assembly</td>
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<tr>
<td>TIO</td>
<td>TMT International Observatory</td>
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<tr>
<td>TMT</td>
<td>Thirty Meter Telescope</td>
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<tr>
<td>VMM</td>
<td>Video Measuring Machine</td>
</tr>
<tr>
<td>VMS</td>
<td>Vision Measuring System</td>
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<tr>
<td>WH</td>
<td>Warping Harness</td>
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</table>
Applicable Documents

1. TMT.PMO.MGT.10.009.CCR04 - GUIDELINES FOR SUPPLIER QUALITY REQUIREMENTS
   (https://itmtiapiap-my.sharepoint.com/:b:/g/personal/ssa3_itmtiapiap_onmicrosoft_com/ESUShDjmFkBk4PEull wllB6fdS8-JpYzS-pN-ch8_zGA?e=HYioxO)

2. TMT.PMO.MGT.10.008.CCR09 - QUALITY ASSURANCE PLAN
   (https://itmtiapiap-my.sharepoint.com/:b:/g/personal/ssa3_itmtiapiap_onmicrosoft_com/EdPBGW9JxBHsmFW9 a7sMecBfnldxtCNFJXr2aZVlyAoDiQ?e=URHdw0)

3. SSA Drawings, CAD Models and Inspection Report Formats
   (https://itmtiapiap-my.sharepoint.com/:f:/g/personal/ssa2_itmtiapiap_onmicrosoft_com/Ep7u7-yjOPJOniuQKx5fsw5ds0XYRJMXImWA14OPE_hU_eQ?e=qWwwhX)

4. Actuator Drawings, CAD Models and Inspection Report Formats
   (https://itmtiapiap-my.sharepoint.com/:f:/g/personal/actuator1_itmtiapiap_onmicrosoft_com/EpOlzNJ7S1FEnExEl 33gULibNUAXp6uXtZcqU6Z0ykskRLRg?e=3SGBpK)

5. SSA and Actuator Inspection Part List
   (https://itmtiapiap-my.sharepoint.com/:f:/g/personal/ssa3_itmtiapiap_onmicrosoft_com/EviLT9cHozxLjAxAHo6UB t0Bp7CFuWfJi_53G6oTzhzow?e=UdfpF1)

6. Daily Report Format
   (https://itmtiapiap-my.sharepoint.com/:f:/g/personal/ssa3_itmtiapiap_onmicrosoft_com/EiNRxy_xqpoEiEQ3503caRMBEBFHiHM_bp6i9hB0zaCLlg?e=sXV1RD)

The links and documents provided under Applicable Documents (above) are subjected to be modified/ revised during the course of the Project as per the Project requirements. ITCC shall be communicating about the modifications/ revisions as and when they are updated. Contractor shall be studying all the modifications/ revisions as the Scope of Work under this document shall be applicable to the Latest Revision Data Set.
SECTION A

1. Background Information

The Thirty Meter Telescope (TMT) International Observatory (TIO) is a joint venture of scientific institutions in Canada, China, India, Japan and the US to build a 30m diameter optical infra-red telescope. As part of India’s contribution to TIO, the India-TMT Coordination Centre (ITCC) intends to develop various sub-systems needed for the telescope within the country which can then be delivered to the observatory.

The primary mirror (“M1”) of the Thirty Meter Telescope (TMT) is comprised of 492 segments. Each segment is actively controlled by THREE actuators and passively controlled by a Segment Support Assemblies (SSA). The total number of:

- SSAs required are 580 (including spares), and
- Actuators required are 1546 (including spares)

The India-TMT group is led by the Indian Institute of Astrophysics (IIA), Bangalore, the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune and the Aryabhatta Research Institute for Observational Sciences (ARIES), Nainital. The activities of India-TMT are coordinated by The India-TMT Coordination Centre (ITCC) that is hosted at IIA, Bengaluru.

ITCC will be engaging with multiple manufacturing vendors in the execution of the work of the SSA and Actuator Prototyping and subsequent production.

In pursuance of the above, ITCC invites proposals for the On-site Third-Party Inspection of SSA and Actuator components.

It is of extreme importance that Third-Party Inspector understands GD&T as per ASME Y14.5-2009, inspects the components as per the drawings and project schedule provided by ITCC.

1.1 TMT Actuators and SSA Description

In order to achieve very high spatial resolution as well as sensitivity, all the 492 hexagonal mirror segments of TMT must be precisely positioned with respect of each other to form a 30-meter hyperboloid primary mirror. The M1 control system (M1CS) performs this task, with the help of actuators that corrects for the segments tip-tilt and piston errors measured by edge sensors. Each segment will be supported by an SSA in the axial (piston, tip, and tilt) and lateral (two in-plane directions and clocking) degrees of freedom in such a way that the segments position is maintained within the required accuracy. Also, each mirror segment will be driven by three actuators and altogether 1476 actuators are required to keep all the segments aligned.
1.1.1 Actuators

Actuators are designed in two variants: right-handed Actuators and left-handed Actuators, to accommodate the interface between the Actuator and the Segment Support Assembly-Fixed Frame when installed in the telescope mirror cell.

1.1.2 SSA

The 492 mirror segments of the TMT primary mirror are required to function as a single mirror with the required specifications at any given time. Therefore, each mirror segment will interface with the mirror cell (primary truss) through the Segment Support Assembly (SSA). This SSA will support each mirror segment in the axial (piston, tip, and tilt) and lateral (two in-plane directions and clocking) degrees of freedom in such a way that the segments position is maintained within the required accuracy. They also help to maintain vibration mode frequencies above specified levels, thereby minimizing gravity-induced distortions and distortions from other external sources such as wind as well as elevation angle changes.

Fig. 1 Segment Support Assembly

Fig. 2 Actuator Assembly
The SSA consists of the PMA Kit and Subcell, as shown in Fig. 3.
2. Statement of Work

Contractor shall conduct On-site inspection of the SSA and Actuator components as per the Part List provided in Applicable Documents Serial No. 5, at the respective manufacturers’ facility, and any other components/ assemblies identified by ITCC. The Contractor shall use Manufacturer’s instruments for the Inspection. Portable instruments may be carried by the Contractor to the Site (if necessity felt by the Contractor) subject to manufacturer and ITCC’s approval.

ITCC may engage multiple contractors for Third Party Inspection depending on the:

1. Scope of Inspection at Manufacturing Site(s)
2. Type/ Number of Components or Inspection Load
3. Contractors capability to provide qualified inspectors at identified manufacturing site(s)
4. Project schedule requirements

ITCC reserves the right to:

1. decide the number and type of components to be given to each Contractor for conducting inspection.
2. decide the stage at which the contract will be terminated in case of unsatisfactory performance, and/ or reassigning of inspection work to one or more other Contractors to meet the TMT project schedule.
3. specify the inspection procedure at any stage of the work.

Contractor shall provide the details of personnel to be engaged for the inspection. As a part of technical assessment, ITCC will make preliminary assessment of the person(s), whom the Contractor plans to employ for the inspection (refer Section B.3.1). Third Party Inspection shall ONLY be carried by ITCC assessed and qualified personnel.

Contractor activities shall comply with all Applicable Documents.

Following shall be the various stages of Third-Party Inspection:

1. 100% Dimensional Inspection during:
   a. Prototyping – Identified number of components for the purpose of Manufacturer Qualification
   b. Production Qualification Program (PQP) –Minimum TWO sets per manufacturer
2. Dimensional Inspection Based on Sampling Plan (TBD after PQP) during Production

The Third-Party Inspector(s) shall have Good Knowledge of:

2. Drawing requirements as per Applicable Documents Serial No. 3 and 4.
3. Inspection using Coordinate-measuring machine (CMM) of various brands like Zeiss, Hexagon Metrology, Accurate, Mitutoyo, etc.
4. Inspection using Video Measuring Machine (VMM)/ Vision Inspection System (VIS) of various brands.
5. Inspection using Non-Programmable and Hand-held Inspection Tools like Standard Gauges (Pin Gauges, Ring Gauges, Thread Gauges, etc.) Vernier Calliper, Micrometer, Height Gauge, Profile Projector, etc.

The inspectors appointed for the work shall be well trained in ASME Y14.5-2009 to execute the Third-Party Inspection. The human factor is considered as the central point of any inspection activity provided any kind of measuring equipment/ instrument/ gauge being used. The inspector(s) needs to be fully knowledgeable in the implementation of the inspection methodology that is to be used.

The Third-Party Inspector(s) appointed by the Contractor shall be evaluated by ITCC as per Section B.3.1. ITCC reserves the right to reject/ remove/ change the Inspector from the qualified panel at any stage of work.

2.1 Scope of Work

2.1.1 The Third-Party Inspection is to be carried as per:
   b. Balloon Drawings as per Applicable Documents Serial No. 3 and 4.
   c. Inspection Report Formats as per Applicable Documents Serial No. 3 and 4.
   d. Controlled Measurement Uncertainty (maximum of 10% of the working tolerance) of the measuring system. The Measuring System includes:
      i. Part to be inspected
      ii. Measuring Instrument
      iii. Measuring Method
      iv. Measuring Environment, and
      v. Inspector

Exceptions (requested by the Contractor, if any) to the allowable Measurement Uncertainty (max 10% of working tolerance) shall be made after clearance from ITCC.

2.1.2 The Third-Party Inspector(s) shall

2.1.2.1 Place/send Manpower (Third Party Inspectors) to all possible manufacturing sites. The Contractor may require placing/ sending multiple Third-Party Inspectors with a Supervisor (if necessitated) at any manufacturing site depending on the amount of work. Multiple Manufacturing Sites are possible at the below listed cities. There may be additions or removals to the manufacturing sites as per the Project Requirement. The probable manufacturing sites (cities) for SSA and/ or Actuator manufacturing are, but not limited to:

   i. Bengaluru    ii. Coimbatore
   iii. Hyderabad  iv. Pune
   v. Jamshedpur   vi. Belagavi
   vii. Nasik


2.1.2.2 Place the required Manpower (Third Party Inspectors) at the manufacturing site within TWO days of intimation from ITCC. For the Outstation sites (sites outside the municipality limits of the Third-Party Inspectors’ office), this timeline may be relaxed upto FOUR days upon request to ITCC by the Contractor. The contractor needs to abide with the schedule and shall be flexible to adapt unexpected schedule changes, esp. for the critical path items. Refer Section A.2.3 for more details on Schedule.

2.1.2.3 Prepare an Inspection Plan considering Section A.2.1.1. The Inspection Plan shall consist of (minimum):
   i. General Measuring Strategies
   ii. Special Measuring Strategies (if any)
   iii. Probability of Pass Errors for each type of measurement (if required by ITCC)

The intention of Inspection Plan is to control and have **Repeatable, Reproducible and Reliable** Inspection Process.

2.1.2.4 Check for the validity of Calibration Certificates of each Inspection equipment. The calibration shall be done by either:
   i. ISO 17025 NABL accredited lab, OR
   ii. Manufacturer of the equipment

2.1.2.5 Evaluate and qualify manufacturers’ algorithms/ programs for programmable inspection (if any) based on the Inspection Plan (Section A.2.1.2.3) and witness the Qualified Programmed Inspection performed by the Manufacturer.

2.1.2.6 Evaluate and qualify custom gauges (if any) based on Inspection Plan (Section A.2.1.2.3).

2.1.2.7 Inspect the components using Custom gauges (if any), Non-Programmable and Hand-held Inspection Tools as per the Inspection Plan (Section A.2.1.2.3). Care shall be taken while using the Manufacturer’s items. The costs of damage (if any) to any manufacturer’s items during their use by the Contractor shall be borne by the Contractor.

2.1.2.8 Inspect in an ISO 14644-1 Class 8 environmental condition, R.H. 50±5% and 20±2°C. Contractor shall ensure that there is adequate soaking of the components at the required temperature prior to measurement. The Temperature of the component while inspection shall be 20°C. If not, appropriate corrections/ compensation shall be considered in the measurements.

2.1.2.9 Support ITCC to solve the differences (if any) between Contractors Inspection results and Manufacturer’s Inspection results. If the inspection done by the Contractor is found to be incorrect by ITCC/ Manufacturer, and to which the Contractor agrees, ITCC may suggest an alternative method of inspection and a re-inspection to be done by Contractor at no extra cost to ITCC.
2.1.2.10 Sort out any discussions (like disagreements, clarifications, etc., if any) with the manufacturer(s) in presence of ITCC personnel. *Exceptions to certain situations can be made and shall be communicated by e-mail to ITCC on the same day of the discussion.*

2.1.2.11 *(optional)* Shall provide information on any innovative approach to make the inspection method efficient, time effective and/or cost effective.

2.1.2.12 Shall conduct additional activities like:

   i. Reinspection of re-worked component(s), if any
   ii. Inspection which is out-of-scope of the Sampling Plan, if any

ITCC shall facilitate for payment by the Manufacturer (as per the applicable inspection charges limited to the rate quoted to IIA/ITCC) for the above additional activities.

2.1.2.13 Prepare Inspection Report as per the ITCC format (Applicable Documents Serial No. 3 and 4). The inspection report shall be duly signed and stamped by the Third-Party Inspector.

2.1.2.14 Prepare and send progress reports daily as per ITCC format (Applicable Documents Serial No. 6)

2.1.2.15 *(Optional)* Review of COCs or supporting certificates for Raw Material, Heat Treatment, Surface Treatment, Assembly Processes, etc. as per the Applicable Documents Serial No. 3 and 4.

### 2.2 Deliverables and Acceptance Criteria

1. Inspection Plan(s) as per Section A.2.1.2.3 with revision history (if any).
2. Signed Inspection reports in soft copies (.pdf and .xls/.xlsx formats) as per Section A.2.1.2.13.
3. Signed and certified (with Contractor’s stamp) hard copy inspection reports as per the prescribed format by ITCC (Applicable Documents Serial No. 3 and 4).
   The Signed Inspection reports will be considered as declaration by the Third-Party Inspector that:
   
   A. No preferential bias with respect to how the measurements have been taken or the results are interpreted.
   B. The inspection has been done as per Section A.2.1.
4. Traceability Data like Automated reports from the instrument controllers, manual record of readings for hand tool measurements, etc. Manual entry in the inspection report is to be avoided wherever applicable.
5. Facilitate for Photographic/ Video graphic documentation of inspection setups (if required by ITCC) and cosmetic defects. The photographs shall have the date and time recorded on them and highlight the area of concern (if any). The photographs shall be taken from all
possible views for better clarity. The photographs shall also have a clear tracking of serial numbers.

6. Daily Reports as per Section A.2.1.2.14

## 2.3 Schedule

<table>
<thead>
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<th>Tender Schedule</th>
<th>Schedule</th>
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<tbody>
<tr>
<td>Date of this Announcement</td>
<td>T0</td>
</tr>
<tr>
<td>Last date to conduct Pre-Bid Meeting(s)</td>
<td>T0 + 2 weeks</td>
</tr>
<tr>
<td>Last date for receipt of bids and Opening of Technical Bids</td>
<td>T0 + 3 weeks</td>
</tr>
<tr>
<td>Opening of Price Bids</td>
<td>T0 + 7 weeks</td>
</tr>
<tr>
<td>Price Negotiation and final compliance evaluation</td>
<td>T0 + 9 weeks*</td>
</tr>
<tr>
<td>Award of Contract</td>
<td>T0 + 11 weeks*</td>
</tr>
</tbody>
</table>

*Tentative schedule

<table>
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<th>Overall Project Schedule</th>
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<tr>
<td><strong>Events</strong></td>
<td><strong>Tentative Start Date</strong></td>
<td><strong>Tentative End Date</strong></td>
</tr>
<tr>
<td>SSA Manufacturing</td>
<td>Feb, 2019</td>
<td>Jan, 2026</td>
</tr>
<tr>
<td>Actuator Manufacturing</td>
<td>Jun, 2019</td>
<td>June, 2024</td>
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Detailed schedule will be provided to the Contractor at various stages after signing of the contract. The contractor needs to abide with the schedule and shall be flexible to adapt unexpected schedule changes, esp. for the critical path items.

Contractor shall prepare a list of Estimated Time of Inspection and Inspection Plan (as per Section A.2.1.2.3) for each part after the above-mentioned detailed schedule is provided by ITCC. The estimation can be modified and mutually agreed after the first round of inspection. The Inspection Plan shall be finalised and provided to ITCC atleast TWO weeks before commencing the inspection.

### SECTION B

#### 1. Submission of Bids

Submission of offer is to be in TWO parts:

1. Technical Bid: including commercial terms and conditions,
2. Price Bid
1.1 Methodology of Submission of Bids

Sealed Bids in two-part bid system are invited, enclosing documents listed below and any other documents/ information as appropriate:-

A. Technical Bid
   a) Profile of the company
   b) Previous Experience of the company for having carried out similar inspection activities
   c) Resumes/ CVs with detailed Qualification of Proposed Staff (to be involved in Inspection and Communication)
   d) A compliance sheet clearly indicating any deviation with reference to the terms and specifications shall be included. Limitations and assumptions, if any, should be clearly mentioned. Scope description may explicitly state anything which is NOT covered.
   e) Project execution and management details, including details of the project team, escalation paths, etc.
   f) Details of the resources, infrastructure or data expected to be provided by IIA/ITCC to the successful bidder for undertaking the project
   g) Risk identification and mitigation plans
   h) Quality audit, control and assurance plans
   i) Change control process
   j) Commercial Terms and Conditions
   k) A copy of Price bid without indicating the quoted price
   l) Annual Turn-Over of the company for last THREE years

B. Price Bid

Contractor shall quote the man-hour rate for each city as mentioned under Section A.2.1.2.1. In addition to the given cities, contractor shall quote for “Any Other City in India” which is most likely to be a city with established manufacturing industries.

The offer should be complete to indicate that all services asked for are quoted. Quotation shall be applicable for the period mentioned under Section A.2.3. IIA/ITCC may ask for the bidder’s consent to extend the period of validity. Such request and the response shall be made in writing only. A bidder agreeing to the request of IIA/ITCC for extension of the bid will not be permitted to modify the bid.

The envelopes must bear the following: “Third Party Inspection of SSA & Actuators - Thirty Meter Telescope Project”; name and address of the vendor and it shall be addressed to:

The Director

Indian Institute of Astrophysics

Koramangala, Bengaluru-560 034
1.2 Submission of Technical and Price Bids: General Terms

The bid shall be signed by the Bidder or a person or persons duly authorized by the Bidder. The latter's authorization shall be indicated by written Power of Attorney accompanying the Bid.

The bid must be submitted in an organized and structured manner. No brochures/leaflets etc. should be submitted in loose form. Please indicate page nos. on your quotations. For e.g., if the quotation is containing 25 pages, please indicate as 1/25, 2/25, 3/25, ..., 25/25.

The contents must be clearly typed without any cancellation/corrections or overwriting. Each page of the bid and cutting/corrections (if any) shall be duly signed and stamped by the bidder. Failure to comply with this requirement may result in the bid being rejected.

All pages of the Bid (except for un-amended printed literature) shall be initialled by the person or persons signing the Bid. The Bidder's name stated on the proposal shall be the exact legal name of the firm.

The technical bid and the financial bid should be sealed by the bidder in separate covers duly super-scribed as "Technical-Bid" or "Price-Bid" as the case be along with Tender Number and both these sealed covers are to be put in a bigger cover which should also be sealed and duly super-scribed with the Tender Number, name of Item / work addressed in favour of "Director, Indian Institute of Astrophysics, Bangalore-560034". Both the envelopes shall bear the name and address of the vendor.

If the envelopes are not sealed and marked as required, IIA/ITCC will not take any responsibility for the bid's misplacement or premature opening, whatsoever the reason may be.

The bidder has the option of sending the bid by registered post or submitting the bid in person so as to reach IIA/ITCC by the date and time indicated in Section A.2.3. IIA/ITCC will not be responsible for late, delayed bids and loss of bids in transit, whatsoever the reason may be.

IIA/ITCC may organize a pre-bid meeting(s) as per the schedule mentioned under Section A.2.3 where the Bidders can obtain clarifications regarding the technical/commercial and price bid terms and conditions. All the parties who have submitted or planned to submit the bids shall request IIA/ITCC to organise the pre-bid meeting with a proposed date(s) for the meeting. The request shall be made at least ONE week before the proposed date. IIA/ITCC reserves the right finalise the date for the pre-bid meeting(s).

IIA/ITCC reserves the right to accept/reject any or all bids without assigning any reasons.

Technical Bid shall be opened on the date specified by IIA/ITCC in Section A.2.3. Bidders or their authorized agents may be present at their own interest when the Bids are being opened.

To assist in the evaluation of bids, IIA/ITCC may at its discretion ask the bidder for a clarification of its bid. IIA/ITCC may call for meetings with bidders to seek clarification at appropriate times in its premises in Bengaluru. The bidders shall attend the meeting at their own cost. The request for clarification and the response shall be in writing.
Following the evaluation of technical bids, the price bids of qualified bidders shall be opened to choose the bidder to execute the work.

The evaluation committee may hold techno-commercial discussion with short listed and select the vendor or vendors engaged for conducting third party inspection as per drawings, technical specifications and delivery schedule given in the tender document. The order(s) may be placed with one vendor or more than one vendor.

Any other condition or guideline for submission of the bids shall be notified by IIA/ITCC, if it finds necessary.

IIA/ITCC may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents, in which case all rights and obligations of IIA/ITCC and Bidder previously subject to the deadline will thereafter be subject to the deadline as extended.

At any time prior to the deadline for submission of Bids, IIA/ITCC may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, notify changes in the bidding documents through an amendment.

In order to allow reasonable time for the prospective bidders for taking the amendment into account in preparation of their bids, IIA/ITCC may, at its discretion, extend the deadline for the submission of the bids.

The amendments, if any, shall be notified in writing by IIA/ITCC and the amendments shall be binding on all the bidders.

The company responding to announcement shall be deemed to have read and understood the documents in complete. Where counter terms and conditions have been offered by the company, the same shall not be deemed to have been accepted by IIA/ITCC, unless a specific written acceptance thereof is obtained.

Any effort by a bidder to influence IIA/ITCC in the bid Evaluation, bid Comparison or contract award decisions may result in the rejection of their bid.
2. Contacts

Any clarifications pertaining to this document may be obtained from IIA/ITCC by the bidders by writing at the following address at least fifteen days prior to the due date for submission of bids.

2.1 Technical clarifications

Shri P. K. Mahesh, Shri Varun Saraswat,
Engineer E & Acting Head, Project Engineer – II (Mechanical),
System Engineering Group, India-TMT Coordination Centre (ITCC),
Indian Institute of Astrophysics, Indian Institute of Astrophysics,
Bengaluru, India-560034 Bengaluru, India-560034
(pkmahesh@iiap.res.in) (varun.saraswat@iiap.res.in)

2.2 Administrative Clarifications

Shri K. P. Vishnu Vardhan, Shri C. H. Basavaraju,
Stores and Purchase Officer Consultant, Administration,
Indian Institute of Astrophysics Indian Institute of Astrophysics/ITCC,
Koramangala, Bengaluru-560 034 Koramangala, Bengaluru, India-560 034
(vishnu.vardhan@iiap.res.in) (basavaraju@iiap.res.in)
3. Eligibility Criteria and Qualification Process

The technical bids will be evaluated by an ITCC Evaluation Committee. The criteria for qualifying for the tender evaluation stage shall include the following:

3.1 Technical Criteria

- a) Experience of the organisation in handling similar nature of work based on Technical Bid Documents,
- b) Suitability of proposed staff (with the resumes/ experience details) to be deployed on this work. ITCC will assess all personnel, appointed by the Contractor for the job.

Following are the essential requirements:
- i. Trained in ASME Y14.5-2009
- ii. Understanding of Section A.2
- iii. Minimum TWO years of Experience in relevant Dimensional Inspection.

ITCC will assess the identified personnel to be involved in the work as a part of technical evaluation and at any stage of the work but, this doesn’t obligate ITCC about the inspection results. Minimum THREE persons shall be technically qualified at technical evaluation and at any stage of the contract.

Based on the brand of the Inspection Machines (CMM, etc.) available at a Manufacturers’ site(s), the Third-Party Inspectors who are skilled/ experienced in the same brand of Inspection Machines will be considered to conduct Third Party Inspection at that Manufacturer’s site(s).

ITCC may visit the inspection premises at any stage of the work to assess the suitability, competence and compliance.

3.2 Price Criteria

Following the evaluation of technical bids, the price bids of technically qualified bidders shall be opened to choose the bidder to execute the work. Price bids will be opened only in respect of technically qualified bids. The lowest price bid (L1) and the bidder(s) with highest ranking in the technical evaluation for each location (Section A.2.1.2.1) shall be chosen to execute the work. As ITCC may require more than one supplier to ensure quality and schedule, we may award the contract to more than one technically qualified Contractor based on technical competence, schedule, scope of work at site, and price. ITCC reserves the right to decide the number and type of components to be given to each Contractor for conducting inspection, the stage at which the work will be terminated in case of unsatisfactory performance, and/ or reassigning of inspection work to one or more other Contractors to meet the TMT project schedule.
SECTION C

1. Terms and Conditions (Part – I)

The successful Vendor who is awarded the contract shall be subjected to the following terms and conditions:

1.1 Schedule

The Contractor shall adhere to the schedule for the work which shall comply with overall project schedule as per Section A.2.3.

1.2 Subcontracts

a) The contractor is an independent contractor
b) The contractor shall provide as an independent contractor and provide all necessary personnel, materials, equipment and facilities to perform the Work
c) The Vendor shall not assign its rights or obligations to a third party without the prior written approval of IIA/ITCC
d) Notwithstanding any subcontract under this Agreement, whether approved by IIA/ITCC or not, the Contractor shall remain fully liable and responsible for the satisfactory and timely completion of the Work.

1.3 Payment

a) IIA/ITCC shall pay the Contractor the price in accordance with the actual man-hours spent on Inspection.
b) The Payment milestones shall be as per monthly/ quarterly schedule.
c) Upon completion of each milestone, the contractor shall submit to IIA/ITCC an Invoice for the amount corresponding to that milestone in Schedule.
d) The documents submitted to ITCC as per Section A.2.2 shall verify the completion of each Milestone. IIA/ITCC may at its own discretion verify and substantiate that the milestone has indeed been performed or completed as invoiced by the contractor. Such verification may require contractor to submit to IIA/ITCC, additional documentation with regard to quality control normally expected during process of inspection, by IIA/ITCC representatives. Any request for substantiation under this clause shall be made by IIA/ITCC within fourteen (14) days of its receipt of the corresponding Invoice.
1.4 Access to work

a) Work in progress and data and documentation related to inspection it may be necessary to present to understand the ability of the work to meet the specifications are subject to examination, evaluation, and inspection by IIA/ITCC, on behalf of TMT-India, at reasonable times deemed necessary by IIA/ITCC.

b) The Contractor shall provide IIA/ITCC, access to such documentation and to those of its premises where work on or in connection with the subject of this contract is being performed during normal business hours and subject to prior arrangement.

c) IIA/ITCC may depute Engineers/Scientists of its choice from time to time who will be allowed by the Contractor to participate in the process in respect of the disciplines in which they are specialized.

1.5 Vesting of Title and Assumption of risk

a) On each item to be delivered by the Contractor, including an item of work in progress, in respect of which payments have been made, ITCC shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable Item is finally accepted by ITCC/ and delivered at Indian Institute of Astrophysics/India TMT Co-Ordination Centre, Koramangala, Bengaluru.

b) Risk for loss or damage to Manufacturers’ items shall rest with the Contractor during the course of Contractor’s inspection.

c) Title to all deliverable inspected Items provided by the Contractor shall pass from the Contractor to ITCC upon final acceptance or the final payment, whichever last occurs.

d) IIA/ITCC shall not accept any liability for the Contractor and its subcontractors, their subsidiaries and/or their officers, employees or agents, servants, and assignees, or any of them or for their property. The Contractor shall indemnify and keep harmless IIA/ITCC, its officers, employees consultants, servants, agents and assignees, or any of them, against any loss or liability, costs or claims, action or proceedings which they or any of them may incur by reasons of damage to property or injury, including death, caused to the employees of the Contractor, its subsidiaries and/or their officers, employees or agents, servants and assignees, or any of them in connection with the performance of Work under this Agreement, and caused by an act of commission or omission by the Contractor, its subsidiaries and/or their officers, employees or agents, servants and assignees, or all or any of them.
1.6 Deliverable documentation and Standards

The Deliverable Documentation shall be as per Section A.2.2. All documentation shall be written in clear and concise English language. The author should also adhere to consistent terminology and use acronyms that are well defined in the document.

1.7 Progress reports

The Contractor shall provide IIA/ITCC with detailed day-wise reports on progress of the Work as per the format given under Applicable Documents Serial No. 6. Any deviation from the schedule shall be notified (by e-mail) by the contractor by the same day of delay.

2. Other Terms and Conditions (Part – II)

The successful Vendor who is awarded the contract shall be subjected to the Terms and Conditions that include, but not limited to the following. A detailed Contract Agreement will be drawn and signed by both the parties before the award of the contract.

2.1 Intellectual Property rights

a) All Intellectual Property Rights existing in a party prior to the Contract (“Existing Intellectual Property Rights”) shall remain with that party. Except to the extent necessary to complete the Work or expressly stated otherwise, neither party grants any rights in its Existing Intellectual Property Rights to the other party.

b) All Intellectual Property Rights arising directly from the Work (“Work Intellectual Property Rights”) shall, upon completion of the Work, vest in IIA/ITCC and TMT project.

2.2 Confidential Information

a) The Receiving Party shall protect the confidential information and keep it secure, and shall not at any time (except with the prior written consent of the disclosing Party):
   i. Directly or indirectly disclose or distribute the confidential information to a representative, employee, agent or advisor of the receiving party except where such disclosure is necessary for the purpose of the Work.
   ii. Use or copy the confidential information except for the purpose of the work.
b) Where the receiving party discloses confidential information to a representative, employee, agent or advisor, the receiving party shall ensure that such person is aware of the confidential nature of that confidential information and is bound by suitable obligations of confidentiality to ensure that that person protects and keeps secure that confidential information and does not use the confidential information for any reason other than the purpose of the Work.

c) The receiving party shall, on demand by the disclosing party, or where the purpose of this agreement has been served, promptly return to the disclosing party all confidential information (including copies or reproductions of the same) which is reasonably capable of being returned which is in the possession or control of the receiving party.

d) This agreement is not intended to restrict the use or disclosure of confidential information by the receiving party to the extent that it is required to be disclosed by law provided that the receiving party has taken such steps as are available under law (but not the institution of legal action) to protect such confidential information and notifies the disclosing party hereunder of its obligation to make such disclosure prior to the time such disclosure is made.

e) The provisions of this Section C 2.2 are subject to the provisions of Section C2.2 (d).

2.3 Settlement of disputes

a) All disputes arising in connection with the interpretation or implementation of the contract shall be amicably settled by IIA/ITCC and the Vendor, by direct discussion.

b) If IIA/ITCC and the Vendor are unable to resolve a dispute within 30 working days of the dispute being referred to them in accordance with Section C.2.3 (a), the parties may agree to refer the dispute to mediation.

c) ITCC and the Vendor appoint a mediation committee comprising of two nominees by IIA/ITCC and two nominees by the Vendor. IIA/ITCC and the Vendor will seek the opinion of this mediation committee to amicably settle the disputes.

d) In the event of a dispute or difference which cannot be resolved by mediation, the same shall be referred to an Arbitration Tribunal consisting of three members. Either party shall give notice to the other regarding its decision to refer the matter to arbitration. Within 15 days of such notice, one Arbitrator shall be nominated by each party and the third Arbitrator shall be nominated by agreement between the parties to this agreement. The venue of the arbitration will be Bengaluru, India. Subject to the aforesaid, the Indian Arbitration and Conciliation Act, 1996 and the rules there under and any statutory modification thereof for the time being in force shall be deemed to apply to the Arbitration proceedings.

2.4 Force Majeure

a) Neither party shall be held responsible for any losses, if the fulfilment of any terms and conditions of this contract are delayed or prevented by acts of lawful Government, revolutions and other disorders, wars (declared or undeclared), acts of enemies, strikes,
fires, floods, acts of God and, without limiting the foregoing, any other cause not within the control of the party whose performance is interfered with and which, by the exercise of reasonable diligence, they are unable to prevent.

b) Each party will promptly notify the other in writing when a condition of Force Majeure described in Section C 2.4 (a) arises. Neither party will be liable for any failure to perform its obligations hereunder if prevented from doing so by reason of Force Majeure, provided that it will have used all reasonable endeavours to perform its obligations notwithstanding such situation or event.

c) As soon as practicable after the lodging of such notice the Vendor and IIA/ITCC shall jointly determine whether the situation constitutes Force Majeure and if so the appropriate measures to meet the situation. Either party shall not be liable for any penalty or damage resulting in delays to perform its obligations as a consequence of Force Majeure.

2.5 Termination

a) IIA/ITCC may terminate the Work with Thirty (30) days prior written notice any time without assigning any reason or cause by notifying the Vendor in writing. In the event that the Work is so terminated by IIA/ITCC then ITCC shall pay the Vendor total amount of the costs and liabilities incurred by the Vendor up to the date of termination.

b) IIA/ITCC may at any time terminate the contract by giving written notice with immediate effect in any of the following cases:
   a. If the Contractor is adjudged insolvent or if its financial position is such that within the framework of its national law, legal action leading towards bankruptcy is taken against it by its creditors or its Government, or
   b. If it is determined through appropriate proceedings that the Contractor has resorted to fraudulent or corrupt practices in connection with its securing or implementation of this Agreement.
   c. If the Contractor/ appointed manpower is
      i. inconsistent or to provide incorrect results even after ITCC flagged a similar issue in the past. Issues can be technical, schedule related, improper communication and breach of any of the other contractual obligations.
      ii. unable to provide adequate number and skilled manpower as per ITCC’s requirement
      iii. not adhering to Manufacturer Company Policies (Safety, Security, etc.)

2.6 Patents, Copyrights and other Proprietary rights

The Contractor warrants that any deliverable item provided to IIA/ITCC shall to the best of its knowledge and belief be free of any rightful claim of any third party for infringement of patent, copyright, or other proprietary right.
2.7 Performance Guarantee/ Security Deposit

The vendor shall furnish upfront Performance Bank Guarantee of 5% of the contract value, the validity of which will be during the performance of the contract. The Bank Guarantee shall remain valid for a period of 60 days beyond the date of completion of contract period.

2.8 Income Tax

Income tax will be deducted at source in respect of invoices raised and the same will be deposited with income tax authorities and form 61A for having accepted the tax will be issued in the next quarter of the tax paid.

2.9 Liquidated damages

If the party fails to deliver, as per Delivery schedule, within the stipulated time specified or any extension thereof, there will be no liability for the first 15 (fifteen) days of delay. Thereafter, for each completed calendar month of such failure, the IIA/ITCC will be entitled to claim from the party as liquidated damages, a sum of one-half of one per cent (0.5%) per week of the contract price relating to that portion of the delay up to a maximum value of ten per cent (10%) of the contract price of the portion of delay. The work or part thereof will be deemed to have been delivered/completed only when all its component parts are accepted by IIA/ITCC.

The detailed statement of liquidated damages will be notified to the party who will be entitled to submit the reasons against levy of liquidated damages to IIA/ITCC within 10 (ten) days from the date of notification of the statement. Beyond this ten (10) days period, the party is deemed to have accepted the liquidated damages claimed to have to be paid. This clause is not applicable when the delay is due to a failure on the part of the IIA/ITCC.

2.10 Governing law

This Agreement shall be governed by, and construed in accordance with, the law for the time being in force in India.

***** End of Document *****