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## INDIAN INSTITUTE OF ASTROPHYSICS

IIND BLOCK, SARJAPUR ROAD, KORAMANGALA,  
BANGALORE-560 034

### PUBLIC TENDER NOTICE NO: PR/IIA/CONS-DOME/CAP/280 DT: 26<sup>TH</sup> NOVEMBER 2007

The Director, Indian Institute of Astrophysics invites Quotations/Bids from reputed firms for following. Hence the interested consultants in the line to submit bids should have executed similar works.

Sl.No.	Description In Brief	Quantity	E.M.D (refundable) <b>Rs.</b>	Tender Fee (non-refundable) <b>Rs.</b>
01.	Design consultancy for 1.3 Meter Telescope Project (as per details in Annexure II)		---	250/-

**Note:** (1) The Tender documents with Specification details are available on IIA website [www.iiap.res.in/tenders.htm](http://www.iiap.res.in/tenders.htm). Hence the interested tenderers may at their option download the same from our website (as no hard copies of Tender documents is/are provided from this office) and submit their offers along with Tender fee (non-refundable) prescribed therein, only in the form of Demand Draft drawn in favour of Director, IIA). However, your offers (both Technical & Commercial/price bids) should be superscribed in envelopes mentioning the tender notice no., Date of opening, and submit both the Bids in a sealed envelopes addressed in favour of Director, Indian Institute of Astrophysics, Bangalore – 560 034.

2. The firms who fulfill the requirements as in the Annexure II are only eligible to submit their Bids. Joint ventures are not acceptable.

(a) Tendering Company shall be professionally managed and equipped with facility for providing required consultancy services.

(b) The tenderers should have Experience in structural design consultancy of work of a similar nature.

(c)The tenderer shall submit Audited Balance Sheet of the previous year duly certified by the Chartered Accountant.

(d) The Contractor shall be required to produce the TDS Certificate indicating the Income Tax deducted by the client for the execution of similar projects.

3. Both Technical/Commercial/price Bids supported by the above information should be submitted in Sealed envelope duly superscribed with the name of proposed work. The completed Bids will be received by this office **upto 1500 Hrs. on 26<sup>th</sup> December 2007.**

4. If any information furnished by the tenderers is found incorrect at a later stage, the firm shall be liable to be debarred from tendering and taking up of work in IIA. The Institute reserves the right to verify the particulars furnished by the tenderers.

5. The interested tenderers may contact **Dr.A.K.Pati** ([pati@iiap.res.in](mailto:pati@iiap.res.in)) with prior permission on or before 14<sup>th</sup> December 2007, for Technical clarifications, if any, before submitting both Technical / Price bids.

6.The firms should submit both Technical and Commercial/Price bids separately superscribed along with Tender fee of prescribed amount **upto 1500 Hrs. Latest by 26<sup>th</sup> December 2007.** The Technical Bids will be opened in presence of the bidders or their authorized representatives **at 1530 Hrs. on 26<sup>th</sup> December 2007.**

7.Incomplete Technical Bids are liable for rejection. Commercial/price bids will be considered only for the Qualified Technical Bidders.

8.Late / delayed offer will not be considered.

9.IIA is not responsible for any delay / loss of documents in transit.

10. No bids will be considered if prescribed Tender Fee is not found with Technical bids Part I.

10.The Commercial/Price Bids will be opened on **11<sup>th</sup> January 2008 at 1530 Hrs.** of those firms technically qualified in the presence of such bidders or their nominated representatives. However, the decisions for finalization shall be done by a technical evaluation committee being nominated for this purpose approved by the Head of the institution.

11.IIA reserves the right to reject any or all tenders without assigning any reasons.

**Administrative Officer  
IIA, Bangalore-34**

**Annexure-I**  
**IMPORTANT: TWO PART TENDER INSTRUCTIONS**

1. It is proposed to have a two cover system for this tender.  
Part I: (a) Technical part (without price) is one cover.  
Part II: (b) Commercial /Price part alone is another cover.

**2. TECHNICAL PART:**

Technical part should clearly indicate the technical details. A compliance Statement indicating whether the specifications are met is to be submitted with reasons for deviations if any. Complete with Drawings, in relevant to the offer are also to be enclosed to the technical part.

**2. COMMERCIAL PART (without price)**

Commercial part should indicate commercial terms like, delivery period, place of delivery, payment terms, validity, warranty/guarantee etc. and should be sent along with the price part. The Technical part should be kept in one cover along with EMD & Tender Fees superscribing tender number and due date and should be sealed.

3. **COMMERCIAL AND PRICE PART** alone should be kept in a separate cover superscribing tender number and due date.

5. The technical part in one cover and **Commercial and Price part** in another cover should be put in one large cover, and should be superscribed with the tender number, due date and time of opening.

4. The cover should be sent to the following address:- **THE DIRECTOR, INDIAN INSTITUTE OF ASTROPHYSICS., IIND BLOCK, KORAMANGALA, BANGALORE – 560 034.**

6. The offer should be valid for a minimum period of 120 days from the due Date.

7. Offer shall be submitted in sealed cover only as said above.

8. No conditional discounts will be allowed.

9. EMD & Tender fee of prescribed value shall be sent along with the Technical Bids) tenders in the form of demand draft only in favour of “The Director, Indian Institute of Astrophysics., Bangalore” drawn from any Indian Nationalised / reputed Banks in India.

10. Tender shall be submitted as above without fail.

Phone: 25530672-676  
Fax : 25534043  
Grams: ASTRON

**INDIAN INSTITUTE OF ASTROPHYSICS**  
IInd Block, Koramangala, Bangalore-560 034

No.PR/IIA/CONS-DOME/CAP/280

Dated: November 2007

M/s.

Dear Sirs,

The Director, Indian Institute of Astrophysics, Bangalore invites Sealed Tenders for the supply of Stores detailed in the Tender Form hereto annexed. The Tender Terms enclosed are also may be noted carefully. If you are in a position to quote for the supply in accordance with the requirement, please submit your quotation in the attached Tender Form also.

Your Tender ( Technical, Commercial & price Bids) must reach this office on or before the date and time indicated in the Tender Schedule.

Thanking you,

Yours faithfully,

Encl: as above.

**(AJ Raghupathy)**  
Admn. Officer  
For Director

**INDIAN INSTITUTE OF ASTROPHYSICS**  
**BANGALORE-560 034**

**PUBLIC TENDER DOCUMENT NO:PR/IIA/CONS-DOME/CAP/280**

**DT: \_\_\_\_\_, 2007**

**TENDER FORM**

**FROM:**

TO

THE DIRECTOR,  
Indian Institute of Astrophysics.,  
Bangalore-560 034.

Sir,

I/We hereby offer to supply the stores indicated below at the price hereunder quoted and agree to hold this offer open till \_\_\_\_\_. I/We shall be bound to supply the store hereby offered upon the issue of the Purchase Order communicating to the acceptance thereof on or before the expiry of the last mentioned date. You are at liberty to accept any one or more of the items of such stores. I/We notwithstanding that the offer in this tender has not been accepted in whole, shall be bound to supply such items and such portion or portions of one or more of the items as may be specified in the said Purchase Order communicating the acceptance.

Sl.No.	Description of the item(s)	Quantity	Unit	Rate	Dely. Period
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01.	Design consultancy for 1.3 Meter Telescope Project (as per details in Annexure II)				
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Place at which the Delivery is required : IIA, Bangalore

Date by which the supplies are required : As per section 3 in attached RFP.

2. I/We have understood the items of the tender annexed to the invitation to this Public Tender and have thoroughly examined the specifications/drawing and /or pattern quoted or referred to herein and/are fully aware of the nature of the stores required and my/our offer is to supply the stores strictly in accordance with the requirements subject to the terms and conditions contained in the Order, if communicated on the acceptance of this tender either in whole or in part.

Date:

Signature and seal of Tenderer

Annexure II

*1.3metre Telescope Project, Indian Institute of Astrophysics, Bangalore*

## Request for Proposal

Design of 1.3m Telescope Enclosure and  
Dome

*at VBO, Kavalur*

Indian Institute of Astrophysics,  
Block -II, Koramangala,  
Bangalore -560034.  
Ph: 080-25530672 -76  
Fax: 25534043



## 1.0 Background Information

The Indian Institute of Astrophysics (IIA) is setting up a 1.3m optical telescope at Vainu Bappu Observatory (VBO), Kavalur, which is located 30 kms from Vaniyambadi, Tamilnadu.

The design of the telescope has already been finalized and the telescope is in the process of fabrication. There is a requirement for an enclosure (building structure and dome) to house the telescope and auxiliary facilities.

The dome and enclosure is required to be completed by December 2008.

This RFP is for Design, manufacturing and project management consultancy services for realisation of a suitable enclosure with dome and other auxiliary facilities.

### ***1.1 Project Site Information:***

This project site is at Vainu Bappu Observatory, Kavalur, Tamilnadu.

Postal address	: Vainu Bappu Observatory, Kavalur, Alangayam -635704. Tamilnadu Phone : 04174 203014 -15,16
Nearest railway station	: Vaniyambadi ( Bangalore- Chennai route)
Road Distance	: From Bangalore to Kavalur about 180kms Vaniyambadi to Kavalur 30kms
Altitude	: Around 800m MSL
Ambient Temperature	: maximum 40deg C /minimum 10 deg C
Relative Humidity	: 100% Max ( monsoon) 20% Min 50% Average
Climate condition	: Mild tropical but generally dry
Latitude 12deg 35'N	Longitude 78deg 37'E

Soil test report pertaining to the location at site will be provided to the design consultant.

## 2.0 Scope of work :

The design consultant shall be responsible to execute the following scope of works of 1.3m telescope enclosure and dome, conforming to the specifications and concepts detailed in Annexure I “*1.3m telescope Enclosure and Dome specifications*”.

The work shall include complete design, detail engineering and analysis as necessary, preparation of tender documents/Request For Proposals (RFP), vendor selection, preparation of manufacturing/fabrication drawings as necessary, supervision and inspection at various stages of dome and outer enclosure including civil, mechanical and electrical works.

### 2.1 Dome:

This includes main, secondary arches and purlins, ring beams, circular rails, drive and idler wheel assemblies, dome drive automation, dome cladding, dome shutter with suitable mechanism, dome guide wheel and wind lock arrangements, cable laying and routing arrangements, seven remote controlled windows/ventilators on dome, power supply method for automated windows, encoder mounting arrangements, limit switches, methodology of installation for dome drive and shutter drive assembly, material handling facility including dome hoist, painting/ surface treatment etc.

### 2.2 Enclosure:

This includes design with structural analysis, of the outer structure, design of observation floor with suitable stairs, design and /or selection and specification of the industrial elevator, catwalk with stairs to reach observation floor, proper ventilation system in the outer structure to maintain thermal stability, related electrical power distribution system, cable routing for telescope etc.

### 2.3 Civil works :

This includes design/analysis of pier, pier foundation, foundation for enclosure structure, design of ramp access for basement level, retaining walls, basement rooms, water supply and sanitation, conduits for electrical power cables, air ventilation system for underground room, rainwater drainage and evacuation system.

### 3.0 Deliverable items for the Work:

The work will be implemented in phases outlined below. The consultant proposing to take up the work shall give a work plan with time schedule for implementation of the phases.

During first phase, the design consultant shall study the requirement (RFP) and address the technical issues given in the concept design as well as from existing dome and enclosures of the institute and present a plan for realization of the work. The plan/scheme will be reviewed by IIA and suggestions/corrections (expected time to complete is 3 weeks to 1 month).

During the second phase, the consultant shall present design report and drawings (for both enclosure and dome), supported by results of design analysis, for review by IIA. The design shall cover all aspects including mechanical, structural, electrical and manufacturing feasibility (expected time to complete is 1 month to 1.5 months).

In the third phase, design consultant shall provide complete set of final drawings, including drawings and bill of materials for fabrication, machining, assembly and installation of dome and enclosure. Cost estimates for realisation of the design, for all subsystems should be provided.

Design consultant shall also provide necessary tender documents/RFP (in both electronic and paper formats) required for tendering of Dome and enclosure works. Design consultant shall also provide support in selecting the vendor to subcontract the relevant jobs (expected time to complete is 1.5 to 2 months).

Design Consultant shall provide drawings/Documentation in 3 hard copies plus one complete version in electronic format preferably in dwg and pdf format.

Design consultant shall provide manuals, where necessary, consisting of assembly and disassembly procedures, preventive/periodic maintenance requirements and procedures for all systems/components to IIA.

Consultant shall also provide a schedule of safety measures for the workers as a part of project implementation plan.

#### 4.0 Eligibility Criteria

The consultant shall have reputed background in the field of designing of large structures, preferably design of technical buildings for astronomical telescopes, steel structures, planetarium etc. Design consultant shall have or have access to necessary infrastructure, professional manpower to carryout design, analysis and detailed engineering using modern design tools.

#### 5.0 Clarifications:

For any clarifications pertaining to this work, the Dean (E), IIA may be contacted.

## Annexure I

### 1.3m telescope Enclosure and Dome specifications

#### 1.0 Features of Enclosure :

The telescope building (or enclosure) is required to fulfill the following functions:

1. Enclose the concrete pier on which the telescope is mounted and protect it from direct sun and the elements. The design must also ensure that the enclosure does not trap large volumes of air which can get heated during the day. The pier and enclosure will rise to a height of about 13 metres above local ground to clear the surrounding trees.
2. Support a structure called the 'dome' at the top. The dome protects the telescope from the elements in the closed position and can be opened such that the telescope can point to any position on the sky during observations.
3. Provide appropriate enclosed space with environment control for the equipment for control and operation of the telescope, for the auxiliary equipment and instruments to be used with the telescope, as well as space for daily operations.
4. Provide facilities such as elevator and/or other lifting systems for both initial erection of the telescope as well as maintenance thereafter.

The principal and most important aspect of the design of the building and dome is that the temperature inside should closely track the temperature outside. In particular, the building and dome must not release heat to the atmosphere during the evening and night hours. Whereas the consultant may evolve a design meeting these requirements, a concept design based on experience at IIA and other similar institutions is described below and shown in the attached drawings.

## ***2.0 Outer Structure of the enclosure***

The outer structure of octagonal shape with steel built up columns and purlins supported on RCC foundation. The structure surrounds the concrete pier and supports the rotating dome.

The structure shall have basement floor, ground floor and observatory floor.

The basement area shall accommodate control room and other utilities as described in section 2.3 of Annexure -I.

The ground floor area shall have an entry and access for staircase leading to the observing floor, industrial lift leading to observation floor, as well as stairway access to the basement.

The outer structure shall be covered by subpanels, each of which will have part stainless steel mesh and part sheet covering. The panel mesh/sheet area should be worked out to minimise heating by the sun from the east and west sides while allowing ventilation of the enclosure volume

The observational floor shall be supported entirely by the columns of the stationary building and shall be isolated from the concrete pier described in 2.2 below.

### **2.1 Industrial Lift**

An open, industrial lift shall be provided (preferably within the enclosure) with only one landing, 10ft below the level of the observation floor and connected to the internal stairs. The machine room of industrial lift may be located either underground or at ground level. The industrial lift shall have minimum of 1 m wide door opening and 2.1 metre head room, and must have a load capacity of at least 0.5 ton. The location for the industrial lift may be decided considering the requirements and site conditions.

### **2.2 Telescope Pier**

The telescope is to be mounted at a height of about 13.6 metres above ground level, on the top of a reinforced concrete pier, rectangular in shape and hollow, isolated from the rest of the enclosure structure.

As shown in the drawing, the top of the pier shall have a minimum circular opening of diameter 2 m to facilitate lowering of the telescope mirror cell assembly, using a hoist attached to the dome, during maintenance and aluminisation.

The telescope pier structural design shall be optimized to suit the natural frequency of the telescope structure taking account of the dynamic forces imposed on to the pier.

### 2.3 Control Room

Air conditioned areas at basement floor shall be provided for an telescope controls, Mirror handling fixture, electrical panels, computer etc . The control room shall be located at the basement floor with doorway and ramp, wide enough to allow equipments to be rolled from the ground level. Space shall also be provided for a storage room, and mechanical handling room etc. The space requirements and suggested layout are shown on the conceptual drawing No.130-002 (1.3 m Basement Plan).

The basement floor shall be made water tight surrounded by RCC retaining wall with ventilators located at ground level.

### 3.0 Dome

Dome houses the optical telescope and rotates on its axis with the help of wheel and rail mechanism. Dome will have an opening with a shutter door to facilitate viewing the sky. The concept for the octagonal shape dome (Refer Drg No. 130-001) has been appropriately chosen. The goal is to provide a rigid, lightweight, thermally optimized structure using space frame techniques. The shape approximates the traditional hemispherical dome using flat panels for ease of fabrication and low cost. A pair of laterally bi-parting shutters open up to provide a 2.2 meter wide opening for viewing the sky. The lowermost, vertical portion of the octagonal dome shall have seven windows to provide openings for cross ventilation.

The dome is nominally 9 meters in diameter and mounted on a ring beam. The dome will have drive and idler assemblies to ensure smooth, vibration free rotation. Dome arches and shutters shall be fabricated from readily available sections. The shutter panels shall be fabricated using space frame techniques and roll on tracks at their top and bottom ends. The dome and shutters shall be designed to withstand the wind conditions at the site. The

speed of dome rotation and shutter opening should match the telescope movement.

The general specifications of the dome and subsystems are :

Shape of rotating dome	: Octagonal shape (Conceptual design enclosed).
Dome outside diameter(A/F)	: 9 m
Dome inside dia	: 8.4m(Refer drg)
Clear radius for telescope movement	: 2.9m ( <u>Refer drg</u> )
Height from observation floor to top of the dome interior	: Minimum 5.5m (Refer drg)
Total height of the building/enclosure above G.L	: < 20 m
Dome cladding	: Aluminium sheet.
Windows/ventilator	: Manual, Remote operated.
Dome drive computer controlled.	: Motorized, suitable for
No of drive units	: As required.
No of idler units	: As required.
Shutter opening	: 2.2m( * to be finalized)
Shutter drive	: Suitable mechanism for open/close

**Note:**

Dome center should match with the telescope center (Declination axis).

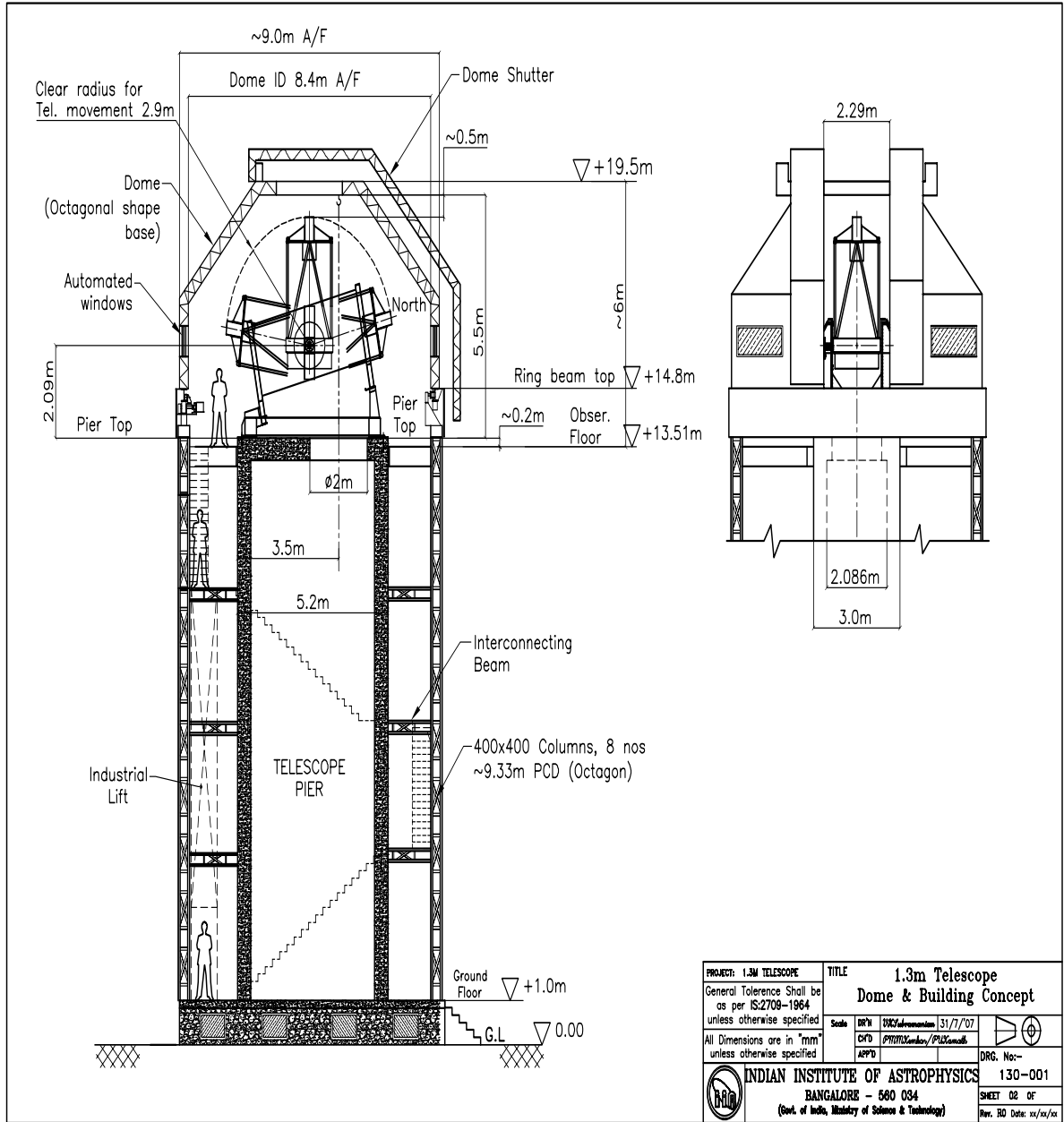


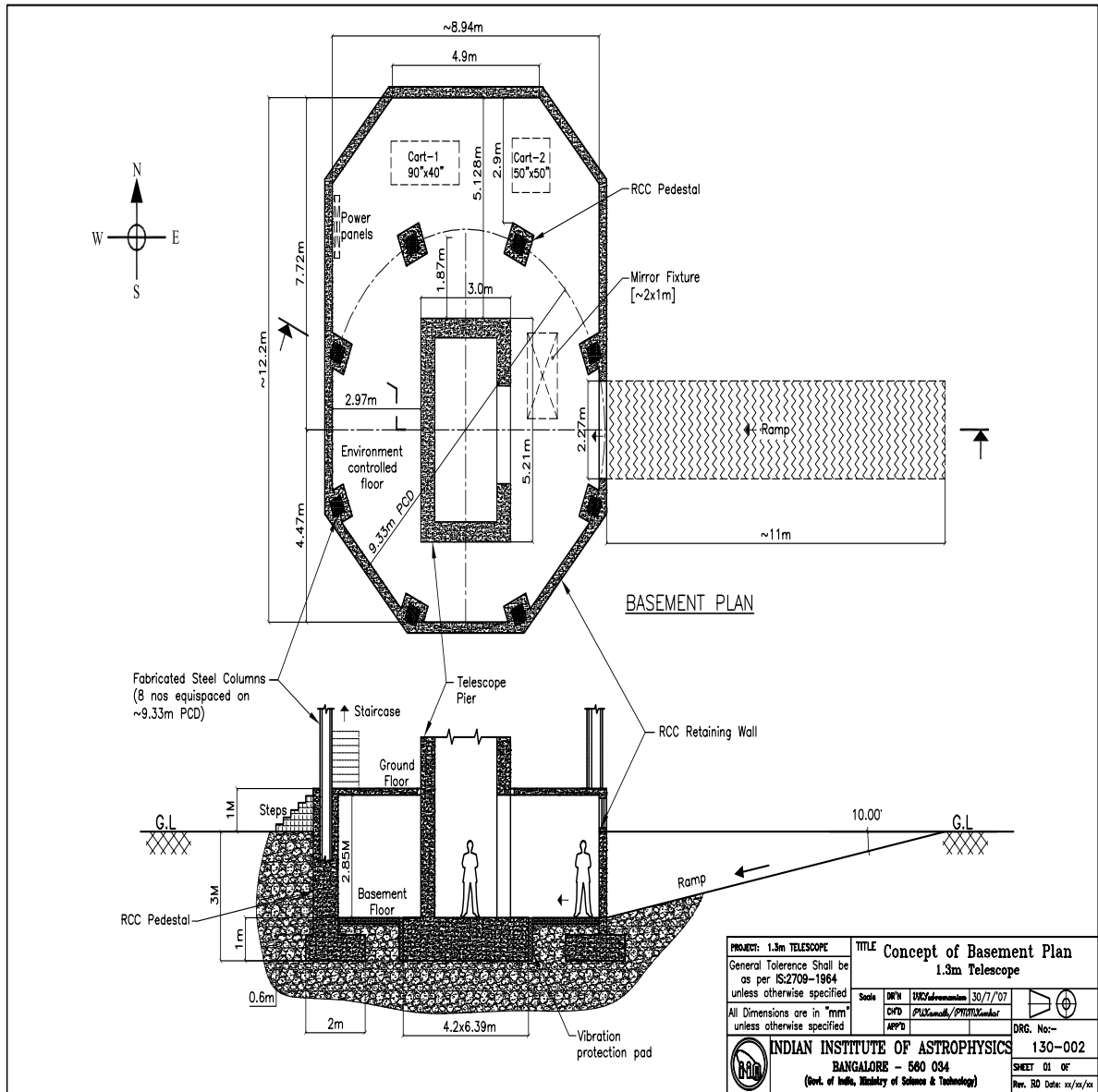
### 3.1 Dome drive specifications

- a) The maximum speed of the dome shall be in the order of 5-8min/rev (bi-directional).
- b) The dome shutter will allow the telescope to observe without obstruction for elevation angles between 12.5 deg and 116 deg.
- c) Dome drive shall be compatible for dome automation.
- d) The dome shall be able to make 360deg rotation and the position of the same need to be encoded.
- e) The dome positioning accuracy shall be within  $\pm 0.5$  deg
- f) Dome shutter open/close operation shall take less than 30 secs.
- g) Operating wind speed - 72 km/hr (20m/sec)  
Survival wind speed - 200km/hr (55m/sec).

### 3.2 Dome hoist

The dome should have provision for supporting a hoist centered over the 2m diameter hole in the pier. The hoist will be used to lift and lower the mirror cell assembly of weight upto 2.5 tons, from/to the ground floor to/from the observing floor.





PROJECT: 1.3m TELESCOPE	TITLE: Concept of Basement Plan 1.3m Telescope
General Tolerance Shall be as per IS:2709-1964 unless otherwise specified	Scale: DWG: 1/4"=1'-0" / 30/7/07 C/D: PLS/Member/PTM/Member APP: DRG: No-
All Dimensions are in "mm" unless otherwise specified	INDIAN INSTITUTE OF ASTROPHYSICS BANGALORE - 560 084 (Govt. of India, Ministry of Science & Technology)
	SHEET 01 OF 130-002 Rev. RD Date: xx/xx/xx

## Annexure – III

### INSTRUCTIONS TO TENDERERS

1. Tenders should be sent in sealed and superscribed envelopes with mention of Tender No. date and date of opening.
2. Late and Delayed Tender will not be considered at all.
3. Duties, Taxes where legally leviable and intended to be claimed should be distinctly shown separately in the Tender.
4. As a Govt. of India Department, this office is exempted from the payment of Octroi Duty and similar local levies (but not providing any C or D forms). Tenderers shall ensure that necessary exemption certificates are obtained from the officer concerned to avoid any payment of such levies.
5. a) Your quotation should be valid for 120 days from the date of opening of tender.  
b) Prices are required to be quoted accordingly to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
6. Preference will be given to those tenders offering supplies from ready stocks at the earliest and on the basis of F.O.R Destination/Free door delivery at Site.
7. a) All available Technical Literature(s), Catalogue(s) and other data in support of the specifications and details of the item(s) should be furnished along with the offer.  
b) Samples, if any, called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer shall have to remove the samples at his own expense.

### **C). SPECIFICATIONS:**

The offered details should strictly conform to our specifications tendered. Deviation, if any should be clearly indicated by the tenderer in their quotation. The tenderer should also indicate the Make/type No. and provide catalogue(s), Technical literature(s) and sample(s), wherever necessary along with the quotations. Test certificates wherever necessary should be forwarded along with the supplies. Whenever options are called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us the tenderer could suggest changes to specifications with appropriate response for the same.

1. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted.
2. Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.
3. The Tenderer should supply along with the tender, the name of his bankers as well as the latest Income Tax Clearance Certificate duly countersigned by the Income Tax Officer of the circle concerned under the seal of his office.
4. The Purchaser reserves the right to place order on the successful tenderers for additional quantity upto 25% of the quantity offered by them at the rates quoted.
5. The authority of the person signing the tender, if called should be produced.
6. Complete system configuration and sub-system design details should have approval of the purchaser.
7. A complete set of relevant instruction and operation manuals if any, should be supplied.

## **TERMS AND CONDITIONS OF CONTRACT**

### **1. DEFINITIONS:**

- a). The terms 'Purchaser' shall mean the Director, Indian Institute of Astrophysics, Bangalore-560 034.
- b). The term 'Contractor' shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the contract.
- c). The 'Stores' shall mean that contractor agrees to supply under the contract as specified in the Purchase Order including erection of Plants and machinery and subsequent testing, should such a condition be included in the Purchase Order.
- d). The terms 'Purchase Work Order' shall mean the communication signed on behalf of the Purchaser by an officer duly authorized intimating the acceptance on behalf the Purchaser on the terms and conditions mentioned or referred to in the said communications accepting the tender or offer of the contractor for the tendered consultancy work.

### **2. PRICES:**

Tenders, offering firm prices will be preferred, where a price variation clause is insisted upon by a tenderer, quotations with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variations.

### **3. SECURITY DEPOSIT:**

On acceptance of Tender, the Contractor shall, at the option of the Purchaser and within the period specified by him deposit with him in cash or any other form as the Purchaser may determine, Security deposit not exceeding ten percent of the value of the contract as the Purchaser shall specify. If the contractor is called upon by the purchaser to deposit 'Security' and the contractor fails to provide the security within the period specified, such failure shall constitute a breach of the contract and purchase shall be entitled to make other arrangements for the re-purchase of the stores contracted for at the risk of contractor in terms of sub-clause (ii) and (iii) of clause 10 (b) hereof and/or to recover from the contractor damages arising from such cancellation.

**5. GUARANTEE AND REPLACEMENT:**

- a) The contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material workmanship and performance.
- b) For a period of (12) twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use arising from faulty stores, design or workmanship, contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the store or any part thereof are faulty.
- c) If in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser provided the notice informing the contractor of the defect is given by the purchaser in this regard within the said 14 months from the date of acceptance thereof.
- d) Should the contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the contractor the whole or any portion of the defective stores.
- e) The decision of the purchaser, notwithstanding any prior approval of acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the contractor are defective or any defects has developed within the said period of 12 months or as to whether the nature of the defectives required renewal or replacement shall be final, conclusive and binding on the contractor
- f) To fulfill guarantee conditions outlined in Clause 5(a) to (d) above, the contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the contract along with first shipment documents. On the performance and completion of the contract in all respects, the Bank Guarantee will be returned to the contractor without any interest.
- g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of stores at Purchaser's site.
- h) Even while the 12 months guarantee applied to all stores in case where a greater period is called forth by our specifications then such a specification shall apply; in such cases the period of 14 months referred to in Para 5(b) and (c) shall be 'asked for' guarantee period plus two months.

## **6. DELIVERY PERIOD:**

- a) The delivery period of the stores stipulated in the Purchase order shall be deemed to be the essence of the Contract, and delivery must be completed on or before the specified dates/period.
- b) Should the Contractor fails to deliver the stores or any consignment thereof within the period prescribed for such delivery, the Purchaser shall be entitled at his option either.
  - i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 2% of the price of any stores which the contractor has failed to deliver as aforesaid for each month or part of a month, during which the delivery of such stores may in arrears, or
  - ii) to purchase elsewhere, without notice to the Contractor on the account and at the risk of the contractor, the stores not delivered or others of similar description (where other exactly complying with the particulars are not, in the opinion of the purchaser readily procurable, such opinion being final) without canceling the Contract in respect of the consignment(s) not yet due for delivery or,
  - iii) to cancel the contract or a portion thereof, and, if so desired to purchase or authorize the purchase of stores not so delivered or others of similar description (where others exactly complying with the particulars are not, in the opinion of the purchaser readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub-clause (ii) and (iii) of clause 10 above, the Contractor shall be liable for any loss which the Purchaser may sustain on that account, provided that the re-purchase, or, if there is an agreement to re-provide shall made within (6) six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall without prejudice to the right of the purchase to recover damages for breach of contract by the Contractor.



**11. EXTENTION OF DELIVERY TIME:**

As soon as it is apparent that Contractor delivery period / dates cannot be adhered to, an application shall be sent by the Contractor to the Purchaser. If failure, on the part of the Contractor to deliver the stores in proper time shall have arisen from any cause which the Purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final he may allow such additional time as he considers it to be justified by the circumstances of the case without prejudice to the Purchaser's rights to recover liquidated damages under clause 10(i)(ii) and (iii).

**12. PAYMENT:**

Contractor's Bill will be passed only after the stores have been received, inspected and accepted by the Purchaser for payment.

**13. RECOVERY OF SUMS DUE:**

Whenever there is a breach of contract whether liquidated or not, money arising out of or under this contract against the contract, the Purchaser shall be entitled to recover such sum by appropriating, in part or whole, the security deposited by the Contractor, if a Security is taken against the contract. In the event of the Security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be shall be deducted from any sum then due or which at any time thereafter may become due to the contractor under this or any other contract with the Purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the Purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claims, whether liquidated or not, against the Contractor under any other contract with the purchaser, the payment of all moneys payable under the contract to the Contractor including the Security Deposit shall be withheld till such claims of the Purchaser are finally adjudicated upon and paid by the Contractor.

**14. INDEMNITY:**

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this contract are free and clean of infringement of any patent, copy right or trade mark, and shall at all time indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by patent, registration of design or trade mark and shall take all risk of accidents of damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all the means used by him for the fulfillment of contract

**15. ARBITRATION:**

In the event of any question, dispute or difference arising under these conditions contained in the purchase order in connection with this contract, (except as to any matters the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of the Head of the Institution or of some other person appointed by him. It will be no objection that the arbitrator is a Government Servant, that he has to deal with matter to which the Contract relates or that in the course of his duties as Government Servant he has expressed views on all or any of the matters in dispute binding on the parties of this Contract.

**(a) IT IS TERMS OF THIS CONTRACT:**

If the Arbitrator be the Head of the Institution.,

i) in the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor-in-office either to proceed with the reference himself, or to appoint another person as arbitrator, or,

ii) in the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Institution, to appoint another person as arbitrator or,

**(b) If the Arbitrator be a Person appointed by the Head of the Institution :-**

In the event of his death, neglecting or refusing to act, or resigning or being unable to act for any reason, it shall be lawful for the Head of the Institution either to proceed with reference himself or to appoint another person as arbitrator in place of the outgoing arbitrator. Subject as aforesaid, the Arbitration Act, 1940 and the rules there under and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings under this clause. The Arbitrator shall have the power to extend with the consent of the Purchaser and the Contractor the time for making a publishing the award. The venue of Arbitration shall be the place as the Purchaser. In his absolute discretion may determine. Work under the contract shall if reasonably possible, continue during Arbitration proceedings.

**16. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:**

Where Counter Terms and Conditions/printed or cyclostyled conditions have been offered by the Supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

**17. SECURITY FOR PURCHASER'S MATERIAL(S):**

Successful Tenderer will have to furnish in the form of a Bank Guarantee or any other form as called for by the Purchaser towards adequate security for the materials/property provided by the Purchaser for the due execution of the Contract.

