

**ARYABHATTA RESEARCH INSTITUTE OF OBSERVATIONAL SCIENCES (ARIES),
MANORA PEAK, NAINITAL-263 129 (INDIA)**

Phone (91-05942)233727, 233734,233735,232655, Fax No. (91-05942)233439, Gram: ASTRONOMY

No. : AO/2010 /3-5(2)/09-10

Dated: 07 Jan, 2010

To,

As Per Attached List

Sir,

This office is in need of the following items/services, You are requested to send technical and Commercial bid in separate envelope and both should be put up in a another sealed envelope and clearly marked on the cover of envelope Technical bid, commercial bid , enquiry No. , date of opening. Sealed envelop should reach to ARIES latest by dated 23rd Feb 2010 up to 2:00 P.M. Technical bid will be opened on same day at 3:30 P.M. and commercial bid will be opened on 02 Mar 09.

Sl. No.	Description of items	Specification	Qty
01	Optical Bench/table	As Per Attached Sheets with installation	04
	Breadboard		03
02	Lens Holder		10
03	Prism Mount		03
04	Cage System		01
05	Filter Holder		04
06	Optical Rail		01
07	Lab jack		02
08	XYZ Translation Stage		03
09	Optical Fibres		01
10	Laser Light Sources		01
11	Photodiode		01

Other terms and conditions of the tender:

- Specifications and make for each item should necessarily be mentioned as per specification.
- Place of Delivery : ARIES, Manora Peak, Nainital-263129
- Delivery Period : 06 Months from the date of PO
- Validity period : 90 days from the date of opening of financial bid
- All bidders can be present at the time of opening the tender. No. separate intimation shall be given in this regard.
- The opening of the tenders shall only be attended by an authorized representative of the firm whose name, designation and address should be indicated in the offer of the firm. Tendering firm shall issue a letter of authority to such representative indicating the tender no. date due on for the item. In no case un-authorized person shall be allowed to enter tender opening room.

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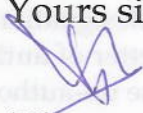
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7. **Payment** : 100% payment will be released after successful installation and acceptance of item and submission of Performance Bank guarantee of 10% of the total amount (including taxes) valid for two months beyond warranty period or else 10% of the amount will be released after two months beyond warranty period.
8. **Warranty period** : The supplier will guarantee (3/3/3 guarantee) all the components for a period of one year from the date of installation & Commissioning.
9. **Insurance** : Transit insurance covering all risk for all the items is to be arranged By the renderer/supplier.
10. **Special Cause** : Any tender can be rejected by the order of the Director, ARIES, Nainital without assigning any reason whatsoever.
11. Prices should be quoted on F.O.R. ARIES, Manora Peak, Nainital basis only.
12. Packing & Forwarding charges, Bank Charges, Insurance and Freight Charges should be mentioned clearly and separately in the quoted price. Terms like "At actual" "at the time of delivery" will not be accepted and tender will be summarily rejected.
13. If the item is found to have any defect during the warranty Period, Transportation and other charges from Nainital to the Service Station will be borne by the Vendor supplying the item.
14. Tenders Received by only **Post/Speed post/Courier** will only be accepted.
15. Sealed tender should reach "Director, ARIES, Manora Peak, Nainital - 263 129" by stipulated date. Tender received late by whatsoever reason will not be accepted at all.
16. EMD has to be deposited by lowest bidder @ 2% of total value of the items before placing the purchase order with in 15 days from the date of intimation by telephone/Fax/E-Mail in favor of Director ARIES, Manora Peak , Nainital in form of DD.
17. If the supplier does not deliver the item with in 07 months from the date of PO, the Institute reserves the right to extend the delivery period on suppliers' request or cancel the order without any notice to the supplier and the EMD will be forfeited.
18. The Institute can Change the number of items being procured at the time of issue of PO.

19. For any enquiry you may contact Dr Amitesh Kumar - 232
Note: Please quote the tender no. and opening date on the top of the cover containing tenders.

Dr Kumar@aries.res.in.

Yours sincerely,


(Dheerendra Kumar)
Junior Purchase Officer
For Director

1. Optical Bench/Table/Breadboard: *Specifications:*

- The size of the table/breadboard should be ($\sim l \times b$) = 8' x 5' (table, 2 Nos.)
[dimensions in feet] = 5' x 3' (table, 2 Nos.)
= 4' x 3' (breadboard, 3 Nos.)
- The Table/breadboard must be athermal and of a grade suitable for optical interferometric and fibre optics experiments.
- The maximum deflection under 100 kg. of load should be less than 2 micron.
- The table/breadboard should be able to withstand a mass of 300 kg.
- A provision for vibration damping at frequencies below 100 Hz should be inbuilt suitable for sensitive optical experiments (for table).
- The table/breadboard top surface flatness should be better than 100 micron.
- The construction of table/breadboard should be rigid and made from a suitable material for optical table specifications.

Vendor Specifications (should be filled in by vendor for each item mentioned above with attached manuals and test reports wherever applicable):

S. No.	Properties	Specifications
1	l x b x w	
2	Load Capacity	
3	Top Surface Accuracy	
4	Material & weight	
5	Damping Provision Details	
6	Athermal Provision Details	
7	Construction Type	
8	Maximum Deflection at 100 kg.	
9	Natural Frequency	
10	Hole size	
11	Total weight of the table	
12	TPI in holes	

13	Height form ground	
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2. Lens Holder (incl. post holder assembly) (10 Nos. each):

Specifications:

- The holder should be capable of holding glass optics in the diameter range 10 -150 mm.
- It should also be able to hold thin lenses or long-barrel lens assemblies.
- It should be such that it can be fitted on standard breadboard table.
- Material should be appropriate for optical testing.

Vendor Specifications (also attach picture):

S. No.	Properties	Specifications
1	Optics Diameter	
2	Material	

3. Prism Mount (incl. post holder assembly) (3 Nos.):

ARIES Specifications:

- It should be capable of holding prisms of dimension up to 90 mm x 90 mm.
- It should have fine adjustment of 50TPI lead screws.
- It should be such that it can be fitted on a standard breadboard table.
- Material should be appropriate for optical testing.
- It should have two-axis movement.

Vendor Specifications (also attach picture):

S. No.	Properties	Specifications
1	Prism dimension	

2	Material	
3	TPI	
4	Movement	

4. Cage System (for Optical instrumentation):

Specifications:

- The rectangular size should be 6 cm (+/- 1 cm).
- The system should have the following accessories:
 1. 2-inch filter wheel (1 No.)
 2. Mounted Beam Splitter having 8:92 ratio (1 No.)
 3. Fibre port (mounted) to SMA adopter capable of focusing optical beam into fibre (1 No.)
 4. Cage System Cube- 4 way (2 Nos.)
 5. Rods of size 1", 1.5", 2" (8 Nos. each)
 6. Rods of size 3", 6" (4 Nos. each)
 7. Cage plate of diameter 0.35" (3 Nos.)
 8. SM1 Lens tubes 0.5", 1" 2" (2 Nos. each)
 9. 1" Rotating focusing element tube (1 No.)
 10. Iris Diaphragms (2 Nos.)
 11. SM1 coupler (5 Nos.)
 12. SM1 spanner wrench (1 No.)
 13. X-Y stage (1 No.)
 14. Square filter holder (1 No.)

Vendor Specifications:

S. No.	Properties	Specifications
1	2-inch filter wheel	
2	Mounted Beam Splitter	
3	Fibre port	
4	Cage System Cube	
5	Rods of size 1", 1.5", 2"	
6	Rods of size 3", 6"	
7	Cage plate	
8	SM1 Lens tubes	
9	1" Rotating focusing element tube	
10	Iris Diaphragms	
11	SM1 coupler	
12	SM1 spanner wrench	
13	X-Y stage	
14	Square filter holder	

5. Filter Holder (incl. holder assembly, excl. filters) (4 Nos. each for circular type filters and square type filters):

ARIES Specifications:

- The holder should be capable of holding filters in the diameter range 20 mm to 100 mm and also the square filters in the range 20 mm to 100 mm.
- It should be such that it can be fitted on standard breadboard table.
- Material should be appropriate for optical testing.

Vendor Specifications:

S. No.	Properties	Specifications
1	Filter Diameter and Dimension of square filter holders	
2	Material	

6. Optical Rail (1 No.):**Specifications:**

- The Optical Rail should have scale engraved.
- It should have easier sliding, fixing and high stability suitable for optical fibre and lens optics experiments.
- The length of the rail should be 2 meter containing 10 careers.
- It should be such that it can be fitted on standard breadboard table.
- Material should be appropriate for optical testing experiments.

Vendor Specifications (also attach picture):

S. No.	Properties	Specifications
1	Length	
2	Careers details	
3	Material and Weight	

7. High-load small lab jack (2 Nos.):**ARIES Specifications:**

- The jack should be able to take height up to 250 mm or more.
- The platform should be such that it can withstand load up to 200 kg mass.
- It should be such that it can be fitted on standard breadboard table.

- Material should be appropriate for optical testing.

Vendor Specifications (also attach picture):

S. No.	Properties	Specifications
1	Height	
2	Platform Details	
3	Material and weight	

8. Vertical XYZ translation stage (3 Nos.):

Specifications:

- The stage should have X, Y, Z-axis travel up to 50 mm on each axis.
- The drive should have micrometer head and accuracy should be 0.01 mm or better.
- It should have load capacity up to 30 kg.
- It should be such that it can be fitted on standard breadboard table.
- Material should be appropriate for optical testing experiments.

Vendor Specifications:

S. No.	Properties	Specifications
1	Travel In X, Y and Z directions	
2	Drive/micrometer Details	
3	Load	
4	Material and weight	

9. Optical Fibre and tools :

Specifications :

1. The numerical aperture = 0.3 (+/-5 %), with multimode propagation possible.
2. The % transmission/meter more than 98 in the wavelength range 400 nm - 1000 nm.
3. The core diameter = 100 micron, coating/buffer diameter < 300 micron.
4. The fibre stripping and cleaning tools should be included.
5. The required length of the fibre is 200 meters.
6. The maximum tolerance is 5% in diameters.
7. The fibre must be of a grade suitable for scientific optical experiments.

Vendor specifications : Provide full spec sheet closely meeting above requirements.

10. Laser light sources :

1. Focusable Laser diode modules (incl. mounting stand/housing and power supply @ 230 V input) for scientific applications operating at 670 nm and 532 nm with maximum power output 4 to 5 mW in visible. An IR blocking filter must be included. The ambient operating temperature will be 10 to 30 C. The long term stability of the output power should be better than 0.1 dB. The output beam divergence should be less than 2 mrad. The focus range should be 100 mm to infinity.

Vendor specifications : Provide full spec sheet closely meeting above requirements.

11. Photodiode :

1. Silicon photodiode (3 Nos., un-calibrated) suitable for scientific applications for 400 nm - 1000 nm light detection (incl. power supply @ 230 V input). Typical dark current < 20 nA and NEP ~ 10^{-14} w/Hz. Active sensor area ~10 mm². Mounted in TO5 case.

Vendor specifications : Provide full spec sheet (incl. circuit diagram) closely meeting above requirements.