

INDIAN INSTITUTE OF TROPICAL METEOROLOGY, PASHAN, PUNE-411 008
GLOBAL TENDER NOTICE

Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, Pashan, Pune-411008 (India) invites sealed separate tenders for following work (Part-I – Technical Bid, Part-II – Commercial Bid) in separate sealed covers from Manufacturers / Suppliers and their accredited selling agents for the Supply, Commissioning and Installation and Satisfactory Demonstration of the following items:

SR. NO.	Tender Notice No.	NAME OF WORK	Last Date of Receipt of Tenders at IITM, Pune (INDIA)	Date & Time of Opening the Tenders (Technical Bids only)
1	PS/TENDER/10/2012	Transportable C-Band Dual Polarimetric Doppler Radar - Qty 01 Set	01/05/13 at 1200 hrs	01/05/13 at 1500 hrs
2	PS/TENDER/11/2012	Photoacoustic Extinctionmeter (PAX) – Qty 01 Set	01/05/13 at 1200 hrs	01/05/13 at 1500 hrs
3	PS/TENDER/12/2012	i) Tethersonde – Qty 01 No. ii) Tethersonde Sounding System (Complete Set) – Qty 01 Set	01/05/13 at 1200 hrs	01/05/13 at 1500 hrs
4	PS/TENDER/13/2012	Hydrometer Measuring Probe for the Size Range 100-6200 Micro Meter with Korolev Tips & Accessories – Qty 01 Set	01/05/13 at 1200 hrs	01/05/13 at 1500 hrs
5	PS/TENDER/14/2012	AIMMS-20: Air Motion Probe Pylon Mount – Qty 01 Set	01/05/13 at 1200 hrs	01/05/13 at 1500 hrs
6	PS/TENDER/15/2012	Cloud Imaging Probe to measure Hydrometeor Images, number in Clouds. Size Range: 25-1550 µm with Korolev Tips & Accessories – Qty 01 Set	01/05/13 at 1200 hrs	01/05/13 at 1500 hrs
7	PS/TENDER/16/2012	Cloud Probe (Size 2-50 µm) to measure droplets with Korolev tip or Anti-shattering tip with Accessories – Qty 01 Set	01/05/13 at 1200 hrs	01/05/13 at 1500 hrs

Tender documents with specifications can be obtained from Purchase and Stores Section of the Institute. The Institute reserves the right to reject any or all tenders without assigning any reason therefore. For further details please visit our website: www.tropmet.res.in or CPP Portal: www.eprocure.gov.in.

Scientific Officer, Gr-I, for Director
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**INDIAN INSTITUTE OF TROPICAL METEOROLOGY,
PASHAN, PUNE – 411 008, INDIA**

File No.PS/125/32/2012

TENDER No.: PS/TENDER/10/2012

Transportable C-Band Dual Polarimetric Doppler Radar - Qty 01 Set

Specifications:

Sr. No	Description	Value
I	System configuration	
1.	Range of observation	250 km or more
2.	Range Resolution	Better than 50 m
3.	Max. unambiguous range	Consistent with PRF; 2 nd trip echo recovery necessary
4.	Max. unambiguous velocity	Ambiguity Resolution upto 4 times the Nyquist velocity. Velocity Dealiasing using dual PRF and staggered pulse repetition time techniques.
5.	Detection Capability	-6 dBZ or better at 100 km range using 1 μ s pulsewidth
6.	Receiver sensitivity	-110 dBm or better
7.	Polarization	Simultaneous H&V and H alone. Please specify switching time between single pol to dual-pol transmission
II	Transmitter	
8.	Operating Frequency	Tunable from 5.6-5.8 GHz, Please specify.
9.	Peak power	250 kW
10.	Type	Klystron based
11.	Pulse widths	0.2 – 4 μ s, selectable(please specify)
12.	PRF	250 to 2500 Hz, please specify.
13.	Phase stability	0.1 degree, please specify
III	Antenna	
14.	Type	Prime focus parabolic antenna, please specify configuration
15.	Gain (typical)	45 dB
16.	Beam width	1 degree or less
17.	Peak side lobe	-28 dB for FSL and further sidelobe levels better than -30dB. Detailed analysis should be provided.
18.	Integrated cross-pol isolation	Better than -30 dB
19.	Radome	Frontend or Random panel; please

		specify configuration and losses due to radome. The losses should be as minimum as possible.
III	Pedestal	
20.	Movement	Elevation over azimuth mount
21.	Elevation range	-2 to 182 degrees or -2 to 92 degrees; please specify
22.	Maximum scan rate	36 deg/sec
23.	Acceleration	20 deg / sec ² or better
24.	Pointing accuracy	0.1 deg or better
25.	Geographical alignment/ north fixing	Automatic sun-tracking utility
26.	Waveguides	Pressurized with dehydrator / compressor
IV	Receiver	
27.	Type	dual channel digital IF down converter
28.	Front End Noise figure	2 dB or better
29.	Dynamic range	90 dB or better
30.	Doppler processing	Pulse pair and FFT. FFT bins selectable from 32 to 1024.
31.	Phase stability	0.1 deg rms or better
32.	Velocity & Range dealiasing	Using standard techniques, please specify
33.	Clutter filters	50 dB or better clutter cancellation capability. Specify filter technique(IIR, FIR)
34.	Conventional and Polarimetric output	Z _{DR} , K _{DP} , ϕ_{DP} , ρ_{HV} , Z, V, σ , LDR Derived products for QPE(based on polarimetric variables like Kdp, Zdr as well as Z-R for H alone), Velocity volume processing, Velocity Azimuth Display, Hydrometeor Classification etc.
35.	Calibration	(1)BITE and Self calibration(Test Signal Generator). Necessary equipments for external calibration like corner reflector/sphere shall be provided. BITE should also monitor and store the health of the overall system. Also it should monitor and store the radar constant for each experiment. (2) System level Calibration for H alone with variable Doppler, as well as Dual Pol mode is essential. Procedure and necessary hardware to be incorporated in the system.
36.	Computer/Workstation/Software/ data storage	(1) Radar control system (RCS), Master Control Computer (MCC) should be the

latest computer configuration at the time of delivery in terms of motherboard chipset, Processor, processor speed, RAM size and speed, Ethernet speed/usb speed, VGA/DVI card memory and harddisk storage. RCS & MCC shall have dual storage of the data so as to avoid any loss of data.

(2)A separate workstation (WS) for data analysis shall also be supplied. The workstation may have linux/unix operating system and all the software needed for radar data quality control, data correction, analysis, data conversion etc. installed in it. It shall also have very high data storage system for storing all the radar measurement data. Please specify the storage capacity supplied. The users shall login to this system and work on radar data analysis using the software provided. The software shall have multiuser environment. The data directory shall be read only and any user shall access the data file and make his own products in his home directory. The data storage and maintenance shall be done by the root user (a typical linux/unix environment). This configuration setup should be made by the vendor to ease the scientists work directly on the data products.

(3).Industry standard GUI software for radar control/operation. Menu driven provisions to set scan strategies, repeated Volume/Sector scan, Data acquisition, Various Radar display options, Data storage in native binary and conversion to other formats etc.. It shall include all weather radar operational products.

(4) Software shall include all algorithms for cloud physics, precipitation and wind measurements (QPE using Z and polarimetric, Hydrometeor classification, VAD etc.). Provide a detailed documentation on

		<p>these weather products and algorithms used. This will help the scientists to improve or modify the algorithm in future.</p> <p>(5) Provision for TITAN interface, Satellite Imagery overlay, Lightning Location Network Overlay and any other external data overlay.</p> <p>(6)Provision to record raw I/Q data for short duration (typically 1 hour)</p> <p>(7) Provision to store spectral data for each range gate.</p> <p>(8) Enough disk space to store typically 2 weeks of moments and 1 week of spectral data. The data backup from RCS and MCC would be done periodically to free the disk space.</p> <p>(9). If data storage is in native binary format, its structure should be provided. Tools should be provided to convert binary data to MDV, netCDF, CFRadial, NexRAD, UF, etc. Source code in c language or matlab may be provided to read one full volume of binary data and write it to an ascii file.</p> <p>(10) System health and monitoring data also should be stored for later analysis. The file should atleast contain Tx Power, Tx Temperature, Antenna temperature, System noise temperature, Key voltages and disk Usage.</p> <p>(11) The data may be stored at 2 locations (dual storage).</p> <p>(12) Provision for remote radar control and operation.</p> <p>(13) All software licence shall be multiuser and open within radar group without any restriction/hardware lock/softlock.</p> <p>(15) Two monitors (32"), one for radar control and other for realtime display shall be supplied.</p> <p>(16) Provision to connect one more workstation for making specialized products useful for Cloud seeding</p>
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		experiment (Titan display etc.)
V	Container, Platform	<p>(1) Air conditioned shelter for entire radar system.</p> <p>(2) Suitable diesel generator to meet entire radar operation with any other subsystem as may be required for uninterrupted operation.</p> <p>(3) Suitable UPS for 1 hour.</p>
VI	SPARES, TOOLS, AND TEST EQUIPMENTS:	<p>(a) All spares and consumables required for installation and testing shall be provided by the supplier at his own cost.</p> <p>(b) All spares used during the warranty maintenance period shall be replaced by the supplier at his own cost. These spares may be kept with IITM so as to avoid any delay.</p> <p>(c) The manufacturer shall also include any other recommended spares / test equipments identified as critical item. A list showing all critical spares / test equipments required for operation and maintenance of radar shall also be provided along with bid document.</p> <p>(d) The supplier shall give an assurance for continued availability of spares and consumables for a period of 15 years from the date of commissioning of the system.</p> <p>(e) A set of standard and specialized tools required for repair, disassembly and assembly of the system (like flat head and Philips head screw drivers, ratchet-action multipurpose tool kit, LAN cable crimper, Terminal log crimper, Nipper, Cutter, Adjustable wrenches, Pliers, Allen keys, Tool box, short range walkie-talkie and hand gloves etc.) should be supplied. Detailed tool kit list shall be provided by the supplier in the bid document.</p> <p>(f) Digital storage oscilloscope-Tektronics 4 channel + High voltage oscilloscope probe or Capacitive High voltage divider probe (like Pearsons) + Current probe (AC/DC, 100A) to monitor Tx modulator pulse current like Pearsons or equivalent.</p> <p>(g) Signal generator with pulse modulation facility upto X band – Rohde & Schwarz for C band operation and measurements (Bench model) or</p>

		<p>similar</p> <p>(h) Power meter (Peak & Average) & Power sensor-Agilent or similar</p> <p>(i) Digital multimeter(5 & ½ digit)-Fluke or similar</p> <p>(j) Set of test cables & adapters/connectors</p> <p>(k) Hard & soft copies of detailed manuals of all the test equipments shall be provided.</p> <p>(l) The cost of spares, tools & test equipments will be included for price comparison.</p>
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2. The radar shall be designed in such a way that it shall be easily disassembled into the major sub-systems and transported in a shelter or container for easy re-installation at any other site. The disassembly before transportation and reassembly at new site must be doable within 3 days or less each. Since this radar is expected to be more readily transportable, the vendor may have two shelters(if required), one for antenna alone and other for Tx/Rx, operation, UPS, Diesel generator etc.
3. The system shall have dual polarimetric capability transmitting in both horizontal and vertical polarizations simultaneously besides conventional H alone mode. It should be user-selectable Single polarization and Dual polarization mode of operation. The switching between these modes shall be designed with electronic switches for fast operation. It shall be possible to switch between these modes using GUI setup or command line script.
4. The working operating system of radar operation/control, master computer control shall be preferably Linux/Unix.
5. The entire operation of the System shall be fully computer-controlled and automatic. Radar operations, scan strategies, data acquisition/storage, display data products, store the displayed data in image file (JPG, TIFF, or any other image format) at a regular time interval shall be doable with GUI. GUI should be user friendly to create/modify/repeat(looping) specific scan strategies in very less time. Scripts/Commands may also be provided to automate specific operations/controls/data storage etc.
6. GUI shall also have capability to analyse offline data. It shall have provisions to open and process single or multiple files, process single file, store and/or display certain product (e.g PPI) and repeat the same for entire directory.
7. Scripts/Commands should be provided to handle offline data. To process huge volume of data collected in a year or even more, it is preferable to have command line/scripting provisions. These commands may be used in unix/linux shell scripting to automate certain data analysis task to produce a particular data product on all the days. All the data and display products used in GUI shall also be doable by these set of commands/scripts. The scripting language user manual shall be very

detailed. In case the vendor do not have such scripting language, the commands/tools provided shall be compatible and usable with unix/linux shell scripting.

8. The computer used for data acquisition should be of latest (at the time of delivery) configuration in terms of processor speed, RAM memory and harddisk (more than a terra byte) space so as to meet large data storage and simultaneous data processing during continuous round the clock, 24x7 operation of the radar. Separate state of art computer system shall be used for the generation of data products and its processing. Separate data storage shall also be provided to meet this requirement.
9. All equipment and sub systems shall be industry standard and commercial-off-the-shelf (COTS) items so as to enable easy up gradation and maintenance. All parts/components should be brand new and these parts/components should not be purchased from non-authorized merchants or auction sites. Manufacturer shall submit the full details of the hardware, including model numbers and the software proposed to be employed for meeting the requirements given therein.
10. The system shall be a Truck Mounted consisting of transportable radar, shelter etc. which will be delivered to the consignee ready for operation at virtually any selected site that is accessible by a truck and/or trailer.
11. These shelter(s) shall be a brand new 20'x8.5' (or any other size as per the design of the radar/antenna) ISO shipping container fully air-conditioned with suitable doors and a window (for the observer to watch outside for any weather phenomena like rain, lightning etc.). The doors should be fireproof. It shall not have any wood surfaces. The sidewalls shall have tie-downs for securing loads during transport. It should have wall mounted air-conditioners (as far as possible, a make available in India, so as to have quick servicing/replacement when required)
12. The shelter(s) walls, floor, ceiling and rear external doors shall be insulated. Shelter(s) floor should be non-skid, non-corrosive, antistatic flooring.
13. The shelter(s) shall sustain 130 kmph wind loads. It shall be maintenance free as far as possible. The cabling feeds through shall be weather proof.
14. Two adjustable office chairs and a working table may be provided with operator shelter.
15. A smoke alarm with battery backup shall be provided.
16. The shelters shall have interior lighting, lighting at the entrance and lighting at outside walls. If sea containers are used, as the international sea container guidelines don't allow any fixture on the outside walls, wiring for external lamps may be made and provision for fixing the lamps at the operational site may be provided. As far as possible, lamps/holders may be used Indian compatible.
17. The system should include:
 - a. Suitable flat bed trailer with hydraulic/mechanical leveling adjustments (registration in the name of Director, IITM)
 - b. Air conditioned equipment shelter(s).

- c. Diesel Generator & UPS system
 - d. GPS Position devices to report current location with accuracy less than 20 meters
 - e. Surveillance Camera(s)
 - f. Communication hardware for data transfer to central location.
 - g. The radar is expected to be operated continuously during highly raining period (Indian summer monsoon season) and hence the radome/antenna and any other parts of radar system to be carefully designed to meet these operating conditions. Chillers/Compressed Dry Air systems (if any) have to be included to avoid condensation in the radome or any other parts exposed outside /inside the shelter.
18. The system to be integrated in India to ensure proper compliance with local vehicle configurations, driving rules and road regulations.
19. The original equipment manufacturer will be responsible for the entire setup starting with, the supply, installation and commissioning of the equipment. The system should be integrated and demonstrated for proper functionality at our location.

20. ACCEPTANCE TESTING:

- a. The supplier shall submit detailed test plans for system acceptance testing prior to shipment and after installation at site. The test plan shall require concurrence by the indenter.
- b. The object of the tests shall be the verifications of performance of the system as per the specifications and functional requirements.
- c. As per the mutually agreed test procedures, acceptance tests shall be carried out at the supplier's premises prior to shipment. The equipment shall be shipped only after satisfactory conclusion of the pre-shipment acceptance testing.
- d. As per the mutually agreed test procedures, acceptance test should be carried out at site after installation. The supplier shall arrange for necessary test equipments.
- e. Any defects / deviations noticed during the site acceptance tests shall be rectified within a maximum period of one month from the completion of the tests. After such rectification, the tests shall be repeated to verify the rectification.

21. SYSTEM COMMISSIONING:

After the satisfactory completion of the site acceptance tests, the supplier shall demonstrate the capability of the system to be operated continuously for three days, after which it shall be said to be commissioned.

22. COMPREHENSIVE WARRANTY:

- (a) This warranty shall remain valid for **three years** after the goods, have been delivered to the final destination and installed and commissioned at the final destination and accepted by the purchaser in terms of the contract. The warranty shall also be included for third party bought out items / subsystems including radome.

- (b) A site engineer should be available at the site to operate and maintain the system.
- (c) In case of any defect during this warranty, the supplier shall repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination.
- (d) During warranty period, any complaint on system performance/defect/male function should be attended and rectified within 24 hours. The required spare/sub system should be readily available for the site engineer to achieve this.
- (e) The supplier shall take over the replaced parts/ goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/ goods thereafter.
- (f) The firm shall supply the software updates, if any, during the warranty period free of cost.
- (g) If there is complete failure of the system for more than 2 working days due to failure of any of the hardware / software /networking equipment supplied by the vendor then a penalty of 2% of order value will be levied for delay in every 5 days or part thereof subject to the maximum of 10%.

23. TRAINING:

- (a) The supplier shall provide training in theory, operation, maintenance and servicing of the radar system to two persons from IITM for a period of 4 weeks at factory premises. The training shall include theoretical lectures on the system design, computer hardware/software and such other aspects which are considered essential for optimum utilization of the radar system.
- (b) Intensive Training to one person at their premises for a period of 4 weeks in use, modification and up gradation in application software shall be provided.
- (c) The supplier shall also provide training to IITM personnel at site after completion of installation/commission for duration of one week in routine operation and maintenance.

In case periods indicated above are considered insufficient, the desired duration may be indicated.

24. Annual Maintenance Contract (AMC):

The firm shall quote for comprehensive AMC for three years subsequent to completion of warranty period. The firm shall submit the year wise breakup of AMC charges. The AMC charges shall be included for price comparison.

25. DOCUMENTATION:

The supplier shall furnish three copies of the following documentation in well-bound sets/volumes of good print quality. Soft copy of all the manuals should be provided along with hard copy.

- a. Detailed system installation instruction shall be supplied. These instructions shall include all information (in step by step form) required to install the system. The written instructions shall be supported by pictures and drawings and shall include instruction for all work to be performed including the assembly connectors.
- b. All standard manuals, technical data sheets and other pertinent information offered by the manufacturer of functional, electrical, and mechanical modules used in the System shall be included in the manuals.
- c. Vendor-supplied system software, software developed for the system including structure diagram, data flow diagrams, data dictionary etc. shall be supplied.
- d. The system function block diagram shall be laid out so that a user can readily understand and identify the major functions, which the equipment performs. The overall system functional description shall give a complete description of each function depicted, shall identify the purpose and reason for each interface signal between functions and shall describe in general terms what the functions do in relation to the total system.
- e. The operating instructions shall include routine and emergency procedures as applicable. These instructions shall include turn-on, standby, normal operating procedures and turn off procedures. The sequence of turn-on procedures shall be optimized and shall account for controls at different physical locations. The instructions shall provide help to an operator to use the System for optimum performance. Sufficient illustrations shall be included to identify and locate all operating controls and indicating devices.
- f. **Layout and Schematic Assembly Drawings:** Schematic Diagrams of all assemblies, modules shall be provided. All the schematic diagrams shall be of same size.
- g. **Parts List:** Detailed parts list shall be provided. It shall contain each and every item, mechanical, electrical, nuts, bolts, washers etc. used in the System. Suitable coding of the parts may be done (e.g. MP-Mechanical Part) for easy identification. Each part shall be identified with
 - (i) Module / PAC / Unit Number.
 - (ii) Part Number in the PCA/module.1
 - (iii) Full description (resistance, IC....)
 - (iv) Its value, tolerance, size, wattage, etc.
 - (v) Commercial nomenclature.
 - (vi) Manufacturer's name (if commercial)
 - (vii) Company's part number (if made in house)

It shall be the responsibility of the supplier to provide detailed parts list of modules etc. procures from outside. Only such items may be used in the system whose full technical details (schematic diagrams, theory, and parts lists) are made available by the manufacturer.

26. DELIVERY SCHEDULE:

System shall be delivered within 9 (nine) months from the date of placement of supply order.

27. COMPLIANCE STATEMENT:

The supplier shall submit detail Para-wise compliance statement in tabular form giving full details of each parameter alongwith reasons for non-compliance, if any. The supplier shall also submit the details of references, reports etc. for each compliance giving name of technical manual, chapter number, page number and Para and shall provide a copy of each documents along with the technical bid. Silence on any Para will be considered as non-compliance. Also all the claims with respect to any specification shall be supported by print document along with bid document otherwise same may be treated as non- compliance.

28. SUPPLIER'S PAST EXPERIENCE:

The supplier shall submit a statement on his past experience in this field, with details of the type and locations of radars supplied.

29. Others

Installation and commissioning should be followed within 1 month after delivery at our location.

INDIAN INSTITUTE OF TROPICAL METEOROLOGY PUNE 411 008 (INDIA)

GENERAL TERMS & CONDITIONS

- 1) The Tenderers are requested to give detailed sealed tender in their own forms in two Bids i.e.
Part-I Technical Bid.
Part-II Commercial Bid

Both the bids addressed to
The Director,
Indian Institute of Tropical Meteorology,
Dr. Homi Bhabha Road, NCL Post,
Pashan, Pune – 411 008, INDIA.

- 2) You have to submit two separate bids in two separate envelopes and you may keep both the bid envelopes in an envelope for sending to us.

One envelope will contain only the **TECHNICAL SPECIFICATIONS** of the indented equipment.

Another envelope will contain only the financial bid in which price, maintenance, AMC, CMC, OMC etc. and any other information, which has financial implications, will only be given.

- 3) Please indicate page nos. on your quotation ex. If the quotation is containing 25 Pages, please indicate as 1/25, 2/25, 3/25 -----25/25.
- 4) The main envelope, which will contain both the bids, should be super scribed with our tender enquiry No.**PS/125/32/2012** due on **01 May 2013**.
- 5) The technical bids will be opened on the specified due date in the presence of tenderers who wish to be present & the financial bids of only those bidders will be opened whose technical bid is found suitable by us.
- 6) The Date and Time of opening for Part-II (Commercial Bid) will be intimated only to pre-qualified and technically acceptable Tenderers for the item at a later date.

Last Date and Time for receipt of Tenders: **Upto 12.00 hrs. on 01 May 2013.**

Date and Time of opening of Tenders: **At 15:00 hrs. on 01 May 2013.**
(Part-I Technical Bids only)

Tenders addressed to the Director, Indian Institute of Tropical Meteorology, Pune 411008 are to be submitted for each item in duplicate in double cover, under two bids system. Superscribed with Tender No. **PS/125/32/2012** for purchase of “**Transportable C-Band Dual Polarimetric Doppler Radar**” – Qty **01 Set** due on **01 May 2013**.

- 7) This tender is **not transferable**.
- 8) **Fax / E-mail / Telegraphic / Telex tenders will not be considered**
- 9) If a request is made to IITM, Pune for Tender Documents, a sum of **Rs.1,000.00 (Rs. One Thousand only)** for indigenous suppliers / Indian agents (Non-refundable) and **USD 50.00 (USD Fifty only)** for foreign suppliers (Non- refundable) has to be paid in the form of Demand Draft only drawn in favour of **The Director, Indian Institute of Tropical Meteorology, Pune** enclosed in Technical Bid only.
- 10) a) The Equipments are required for **IITM, Pune** and to be installed at Pune and subsequently Training is to be provided to the concerned scientists / personnel of IITM, Pune.

- b) Packing, Forwarding, Freight & Insurance and Commissioning Charges, if any extra may be quoted separately in Commercial Bid.
 - c) In case if your quote is FOR/FOB basis, estimated Insurance coverage charges may please be indicated.
 - d) CIF, Mumbai / DDP value by Airfreight may be indicated.
 - e) Octroi Payment if any, the same may please be shown separately.
- 11) Cost of the items should be mentioned clearly in the Commercial Bid (Part-II) only. The optional and any other essential items / accessories required for the maintenance of the equipment for the next five years should also be specified in the offer separately.
- 12) In case of foreign quote, the Principal supplier should clearly indicate the address of the Indian Agent and percentage (%) of Agency Commission payable if any, to be paid to the Indian Agent in Indian Currency. If Agency Commission is not applicable, the same may kindly be mentioned clearly in the offer.
- 13) Percentage & amount of Indian Agency commission payable in Indian currency after the receipt of consignment in good condition at our Stores & satisfactory installation and commissioning of the ordered equipment on submission of copy of DGS&D registration wherever it is applicable.
- 14) Indicate the names of the Indian reputed Organizations where you have supplied the similar equipment and may attach the satisfactory performance report of the equipment from user Organization.
- 15) a) If you have supplied identical or similar equipment to other Institutes under Ministry of Earth Sciences and Ministry of Science & Technology, the details of such supplies for the preceding three years should be given together with the prices eventually or finally paid.
b) Based on the above information IITM will have its option to obtain details of the equipment, their performance, after sales services etc. for evaluation of the tender, directly from the concerned Labs. /Scientists etc.
- 16) All the Bank Charges inside and outside India, including opening of LC, communication, confirmation, amendments etc., if any may be indicated separately in the commercial bid.**
- 17) Details of services rendered by you as well as after-sales services offered by you are to be made clear in the tender.
- 18) The Tenderer's conditions printed on the tender or otherwise sent along with the tender shall not be binding on IITM.
- 19) The vendor should have appropriate facilities and trained personnel for supply, installation, commissioning and warranty-maintenance of the equipment to be supplied. Detailed information in this regard may be furnished.
- 20) **Delivery Period:** As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to.
- 21) Details regarding terms of payment including period of warranty. However we prefer to release the payment on BILL Basis (excluding Indian Agency Commission) after receipt of consignment in good condition and satisfactory installation, and commissioning thereof. Alternatively, depending upon the value and foreign exchange regulations the payment can also be considered through Sight Draft / Letter of Credit through the State Bank of India for the order value excluding the Indian Agency Commission. However, the detailed payment for Sight Draft / Letter of Credit is mentioned at clause No. **30 (b), (c) & (d)** of this tender terms and conditions.

- 22) Supply means "Supply, Installation, Commissioning and satisfactory demonstration of the whole system and training". If any charges extra for Installation, Commissioning and training, the same should be specified in the commercial offer.
- 23) Kindly attach a copy of your latest DGS&D, New Delhi registration Certificate under the compulsory Scheme of Ministry of Finance regarding the registration of Indian Agent of foreign supplier wherever it is applicable.
- 24) a) The Tenderer is required to furnish the Permanent Account Number (PAN) Allotted by the Income Tax Department. If registered with the National Small Industries Corporation, the registration number, purpose of registration and the validity period of registration' etc. should also be provided in Technical Bid for Indian Agents.
- b) A copy of latest Income Tax Clearance Certificate from Income Tax Department (INDIA) for Indian Agents.
- 25) In case of foreign quote, the address of Principal's / Manufacturer's and their Banker's details should be furnished.
- 26) The item should be supplied with manuals and the manuals including technical / Electronic drawings / circuit diagrams should be complete in all respects to operate the system without any problem.
- 27) The import license is covered under OGL policy of 2009-2014.
- 28) a) In case of Indigenous Items the offer should contain the Basic Price and percentage of Excise Duty should be shown separately, since IITM, Pune is exempted from payment of Excise duty vide Govt. Notification No.10/97-Central Excise dated 15t March, 1997.
- b) IITM is exempted from payment of Customs Duty vide Govt. Notification No.51/96-Customs dated 23rd July, 1996. However as per the Govt. of India further notification No.24/2002-Customs dated 15t March, 2002 and notification No.19/2006-Customs' dt. 01.03.2006 Customs Duty is levied on all imports meant for IITM. Since the suppliers are requested to quote only on FOB basis, applicable freight, insurance and customs duty to R&D Institutions will be borne by IITM.
- 29) Tender must clearly indicate the features offered unit price, VAT tax, transport, transit insurance, installation charges. Institute cannot furnish any concessional certificate for exemption or reduction in VAT tax or any other duty / tax except mentioned above at 28 a) and b). The vendor should mention the price of the equipment and the duties / taxes to be paid such as customs duty / excise duty / VAT taxes etc. separately.
- 30) a) No advance can be paid.
- b) **PAYMENT: 80%** payment shall be made by Sight Draft / an Irrevocable Letter of Credit established in favour of the supplier through the State Bank of India, Main Branch, Camp, Pune 411 001 (India) for the order value, excluding the Agency Commission due to the Indian Agents, against the presentation of original Shipping documents, **10%** payment shall be released after completion of satisfactory installation, commissioning, demonstration of the whole system, after imparting training and Balance **10%** will be released upon receipt of Bank Guarantee from Indian nationalized / commercial bank for 10% of total Order value towards performance bank guarantee to be valid for the period of warranty including extension if any, from the date of installation. However Letter of Credit/Sight Draft arrangement will be made for 100% order value. If no Bank Guarantee is given, the balance 10% will be paid after assessing, after sales service during warranty period i.e. payment after warranty period.
- The Agency Commission to the Indian Agent will be paid only after successful installation, commissioning and satisfactory demonstration and acceptance of the items ordered for by the end user.

- c) For Indigenous items, **80%** payment shall be made against delivery of indigenous goods, **10%** payment shall be released after completion of installation, commissioning and on acceptance test as per Purchase Order at site and balance **10%** shall be made after receipt of performance Bank Guarantee from Indian nationalized / commercial bank for 10% of the total order value, to be valid for entire period of warranty including extension if any. If no Bank Guarantee is given, the balance 10% will be paid after assessing, after sales service during warranty period i.e. payment after warranty period.
- d) To ensure due performance of the contract, the successful bidder has to furnish the Performance Security in the form of bank guarantee for **10%** of the Order value from the Indian nationalized / commercial bank before execution of ordered work but not later than 21 days from the date of receipt of the Purchase Order. The same will be returned to the successful bidder only after completion of satisfactory installation, commissioning, demonstration of the whole system.
- 31) The prices quoted should be firm and irrevocable and not subject to any change whatsoever, even due to increase in cost of raw material components and fluctuation in the foreign exchange rates and excise duty.
- 32) The Tenderer has to state in detail the Electrical Power/UPS requirements, floor Space, head room, foundation needed and also to state whether Air-conditioned environment is needed to house the system and to run the tests. i.e. pre-installation facilities required for installation may please be intimated in the technical bid.
- 33) **INSTALLATION:** Bidder shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty and thereafter.
- 34) Acceptance tests to be prescribed later will be carried out after installation and the items will be taken over only after successful completion of the acceptance tests.
- 35) The tenders must be clearly written or typed without any cancellations / corrections or overwriting.
- 36) The tenders will be received in the Institute till **01 May 2013** up to **12:00 hrs.** and shall be opened on **01 May 2013** at **15:00 hrs.** in presence of the tenderers or their authorized agents who wish to be present.
- 37) IITM will not be responsible:
- a) For delayed / late quotations submitted / sent by Post / Courier etc.
 - b) For submission / delivery of quotations at wrong places other than the Office of Director, IITM, Pune ,
- 38) In case of Foreign Quote, the mode of dispatch should be by Air Post Parcel/Ocean Freight/Air Freight (By Air India Freight) and on Freight to-pay basis only. The approximate dimensions of the packages and weight of consignment are to be indicated.
- 39) The makes / brand and name and address of the manufacturer, Country of Origin, Country of Shipment and currency in which rates are quoted are to be mentioned.
- 40) The Technical Bid should accompany with complete specification, Manufacturer's name, address and relevant Technical Literature/Brochures with Warranty Terms.
- 41) The payment of local currency portion shall be payable in equivalent Indian Rupees, within 30 days after the receipt of the equipment in good condition and after satisfactory installation and commissioning and demonstration.

- 42) The tender / quotation / offer submitted by you should be valid for a minimum period of **One Hundred Eighty (180) days** from the date of opening the tender.
- 43) The quotation should be only in Indian Rupees for indigenous items. In case of foreign quote, the vendors may quote their rates in, Indian Rupees as well as in Foreign Currency.
- 44) The bidder who submits the tender on behalf of their principals should produce documentary evidence in support of their authority to quote or submit proforma invoice of their principals.
- 45) Installation demonstration to be arranged by the supplier free of cost and the same is to be done within 15 days or as specified in the Purchase Order of the arrival of the equipment at site after site readiness.
- 46) IITM will not provide any accommodation/transportation for the Engineers/ Representatives for attending Installation, Commissioning and Demonstration Work. It is the absolute responsibility of the Principal Supplier/Indian Agent to make their own arrangements.
- 47) **WARRANTY/GUARANTEE:**
- (a) Please see the complete detail in the specifications of tender document.
- (b) The equipment should be guaranteed for trouble free performance during warranty period after installation. Supplier shall finally warrant that all the stores, equipment and components supplied under the ORDER shall be new and of the first quality according to the specifications and shall be free from the defects (even concealed fault, deficiency in the design material and workmanship). The defects, if any, during the guarantee period are to be rectified free of charge by arranging free replacement wherever necessary. Further, the technical specifications and requirements may also be verified.
- (c) The system should remain operational at least 90% of the time in a year and should not remain non-functional continuously for more than **Two weeks**. In case of non-compliance a penalty of 2-5% of the order value amount or the Warranty period will be extended proportionately. The instrument should be commissioned, regularized and operational after the order is executed without any additional facility and cost to IITM excepting the infrastructure which includes well furnished laboratory space with 230V standard Indian power supply. **Warranty period will stand extended for a period of total downtime of the equipment.**
- (d) Kindly mention the charges for Annual Maintenance Contract (AMC) / Comprehensive Maintenance Contract (CMC) separately in **commercial bid** (for Post Warranty / Extended Warranty period).
- 48) Details of onsite warranty, agency that shall maintain during warranty. In case of foreign quote, the Indian Agent who shall maintain during warranty an. After warranty period (post warranty) who will maintain equipment / instrument. Indicate the name of Firm, address, contact person, phone no. And fax no. etc in your technical bid.
- 49) The supply of spare parts is to be guaranteed at least for a period of 10 years after the supply of the equipment.
- 50) Please mention that during warranty period who will maintain system/ equipment / instrument. Indicate the name of firm, address, contact person, phone no. and fax no. etc in your technical bid.
- 51) After successful installation what will be the minimum down time of equipment/instrument in case of breakdown. If the identified firm or person fails to put the system into working condition what is the further alternative course of action suggested by you to adhere to minimum down time.

- 52) No sub-contracting will be allowed for installation or maintaining system/ equipment / instrument during or after warranty period.
- 53) Any upgrade in Operating System (OS) and associated other software during the warranty period should be supplied free of charge.
- 54) Discount offered should be mentioned clearly in the commercial bid only.
- 55) The Tenderers are requested to quote for Educational Institutional Prices for Equipment and Software, since we are eligible for the same.**
- 56) This Institute is an autonomous scientific research organization under the Ministry of Earth Sciences and is a recognized centre for studies leading to M.Sc. and Ph.D. of the University of Pune and various other Universities. As such, all possible concessions / discounts / rebates applicable for educational Institutions may be given.
- 58)a) The Earnest Money Deposit of **Rs.14,00,000.00 (Rs. Fourteen Lakhs only)** must be paid / sent along with your technical bid in the form of a Demand Draft, Banker's cheque or Bank Guarantee (from a Indian Nationalized Bank only) drawn in favour of The Director, Indian Institute of Tropical Meteorology, Pune payable at Pune, otherwise your technical & financial bids will not be considered at all. The Earnest Money of successful bidder will be returned only after installation, commissioning, satisfactory demonstration and on acceptance of the equipment by the user Scientist / HOD as per the terms of our purchase order. If the successful bidder fails to fulfill the contractual obligations before the due date, he will forfeit the EMD.
- The Earnest Money of the unsuccessful bidder whose technical bid has not been found suitable will be returned within **FORTY FIVE DAYS** after receipt of Technical Committee recommendations.
- b) Those who are registered with Central Purchase Organization (e.g. DGS&D), National Small Industries Corporation or the concerned Ministry / Department need not to furnish EMD along with their bids.
- c) Though EMD has to be submitted by Demand Draft, Banker's Cheque or Bank Guarantee, we prefer to have Bank Guarantee for easy return to the bidders once a decision is taken by IITM. (Specimen of Bank Guarantee is enclosed at Annexure 'A').
- d) Tenders not accompanied with Demand Draft / Bank Guarantee towards "Earnest Money Deposit" will summarily be rejected.
- 59)a) Tenders, which are submitted without following the Two-Bid Offer System, will summarily be rejected.
- b) Unsigned Tenders will also be rejected.
- c) Part and incomplete tenders are liable to be rejected.
- 60) If the supplier fails to Supply, Install and Commission the system as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of one percent value of the Purchase Order awarded, per every week delay subject to a maximum of 10% for every week beyond the due date and such money will be deducted from any money due or which may become due to the supplier.
- 61) **Penalty:** During the warranty and post warranty period, purchaser reserves the right to deduct twice the amount equivalent to the downtime period of the system OR as decided by the competent authority of this Institute.

- 62) **Delay in Acceptance:** In the event of the failure by the supplier to secure satisfactory acceptance of the system by the purchaser after the completion of this contract, the purchaser reserves the option to recover from the supplier as liquidated damages and not by way of penalty for the period after the said 30 days, until satisfactory acceptance is achieved, an additional sum equivalent to 2% (two percent) of the contract value for each month of the failure of vendor also subject to a maximum of 10% of the total contract value, to secure acceptance in full or part at its sole discretion without prejudice to the purchaser's other remedies under the contract, provided however, that no such deduction shall be made if the delay is on account of the purchaser.
- 63) **Suspension:** The Purchaser may by a written notice of suspension, suspend all payments to the supplier under the contract, if the supplier has failed to perform any of its obligations under this contract, (including but not restricted to the carrying out of the services) provided that the such notice of suspension:
- (i) Shall specify the nature of the failure and
 - (ii) Shall require the supplier to remedy such failure within a specified period from the date of issue of such notice of suspension.
- 64) Goods should not be dispatched until the Vendor receives a firm order.
- 65) The purpose of certain specific conditions is to get or procure best Equipment / service etc. for IITM. The opinion of Technical Committee shall be guiding factor for Technical short listing.
- 66) **Firms which have already supplied similar equipment to IITM and have not completed required installation / commissioning / after sales service / warranty replacements etc. such firms' offers will not be considered for further evaluation and no enquiries thereafter will be entertained.**
- 67) **In the event the Manufacturer / Supplier proposes for amalgamation, acquisition or sale of its business to any firm during the contract period, the Buyer/Successor of the Principal Company are liable for execution of the contract and also fulfillment of contractual obligations i.e. supply, installation, commissioning, warranty, maintenance/replacement of spares accessories etc. with the same cost / ordered value while submitting your bid, you may confirm this condition.**
- 68) Conditional Offers will not be considered.
- 69) All disputes are subject to exclusive jurisdiction of Competent Court and Forum in Pune, India only.
- 70) **The Director, Indian Institute of Tropical Meteorology, Pune 411 008, India reserves the right to accept any tender in full or in part or to reject the lowest or any or all tenders without assigning any reason.**
- 71) In case of any dispute regarding part-shipment, non-compliance of any feature etc., The Director, Indian Institute of Tropical Meteorology, Pune will be the final authority to decide the appropriate action and it will be binding on the Vendor.
- 72) **Last Date and Time for receipt of Tenders: Up to 12.00 hrs. on 01 May 2013.**
- 73) **Date and Time of opening of Tenders: At 15:00 hrs. on 01 May 2013.**
(Part - I Technical Bid only)

(V. R. MALI)
Scientific Officer, Gr-I
For Director
Email: vipin@tropmet.res.in
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BID SECURITY FORM

Whereas 1 (hereinafter called "the Bidder") has submitted its bid dated (*date of submission of bid*) for the supply of _____ (*name and/or description of the goods*)(hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE _____ (*name of bank*) of (*name of the country*), having our registered office at (*address of bank*)(hereinafter called "the Bank"), are bound unto (*name of Purchaser*) (hereinafter called "the Purchaser") in the sum of _____ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ___ day of 20___ THE CONDITIONS of this obligation are:

1. If the Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity:
 - a) fails or refuses to execute the Contract Form if required; or
 - b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, Without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee shall remain in force up to forty five days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the Bank)
Name of Bidder.