INDIAN INSTITUTE OF TROPICAL METEOROLOGY
PASHAN, PUNE-411008 (INDIA)
(An Autonomous Body under the Ministry of Earth Sciences, Govt. of India)

TENDER NO.: IITM/NFAR/1

PUBLIC NOTIFICATION

GLOBAL REQUEST FOR INFORMATION FOR RESEARCH AIRCRAFT

Director, Indian Institute of Tropical Meteorology, Dr.Homi Bhabha Road, Pashan, Pune- 411 008 (India) invites sealed **Request for Information (RFI) for research aircraft for National Facility For Airborne Research (NFAR)** from reputed aircraft manufacturing companies for MANUFACTURE, MODIFICATION, COMMISSIONING AND DELIVERY OF RESEACRH AIRCFAFT in the prescribed format.

Last date of receipt of RFI at IITM, Pune : **25 January 2012 at 11:00 hrs.**
Opening of RFI : **25 January 2012 at 12:00 hrs.**

The eligibility criteria and other details of the RFI can be downloaded from IITM's website **www.tropmet.res.in.**

The vendors may seek clarifications, if any, through faxes / electronic mail / letters addressed to The Director (IITM), at the above address or Fax: +91-20-2586-5142 or email: vipin@tropmet.res.in latest by **10th January 2012**.

The Institute reserves the right to reject any or all RFI without assigning any reason therefore

Senior Technical Officer-II, for Director
Email: **vipin@tropmet.res.in**

INDIAN INSTITUTE OF TROPICAL METEOROLOGY (IITM)

(An Autonomous Research Institute under the Ministry of Earth Sciences (MoES), Govt. of India)
Dr. HOMI BHABHA ROAD, PASHAN, PUNE-411 008, INDIA

PUBLIC NOTIFICATION

No. IITM/NFAR/1

GLOBAL REQUEST FOR INFORMATION FOR RESEARCH AIRCRAFT - NATIONAL FACILITY FOR AIRBORNE RESEARCH (NFAR)

Indian Institute of Tropical Meteorology, Dr.Homi Bhabha Road Pashan, Pune- 411 008 (India), an autonomous R&D institution under Ministry of Earth Sciences (Govt. of India) invites Request for Information (RFI) from reputed aircraft manufacturing companies for MANUFACTURE, MODIFICATION, COMMISSIONING AND DELIVERY OF RESEACRH AIRCFAFT in the prescribed format. The eligibility criteria and other details of the RFI can be downloaded from IITM website < www.tropmet.res.in>

1. The experience and capability of the companies should be provided in the prescribed format along with all the necessary supporting documents.

2. The offers for RFI sealed in a cover and super scribed "RFI FOR RESEARCH AIRCRAFT; DUE DATE: 25th December, 2011 TIME 1100 hrs IST should reach DIRECTOR, IITM, Dr. HOMI BHABHA ROAD, PASHAN, PUNE-411 008, INDIA by the **Due Date i.e. 25th January, 2012; Time 1100 hrs (IST). T**he sealed covers containing RFI not super scribed as above are liable to be ignored.

4. The vendors may seek clarifications, if any, through faxes / electronic mail / letters addressed to The Director (IITM), at the above address or Fax: +91-20-2586-5142 or email: vipin@tropmet.res.in latest by 10th January, 2012. All reasonable queries will be replied to and put on the website for information of all prospective companies**.**

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Request for Information (RFI)

NFAR Aircraft Specification

An aircraft with following specifications will be required:

- Aircraft type — Twin Engine
- Service ceiling — 30000 ft minimum with full load and full fuel
- Max scientific payload up to — 1000- 1500 kg
- Scientists Capacity — 6-8 scientists
- Range — 2000 km minimum
- Endurance — 5 hrs. minimum
- Cabin volume required for equipments and personnel — 10-12 m^3
- Special arrangements- Air inlets, 2-3 instrument racks , 1 Toilet
- With airframe and engine warranty of 5 years
- Certified to fly into known icing condition
- Capability of operating over land and ocean

REQUIRED IMPORTANT TECHNICAL PARAMETERS FOR AN AIRCRAFT FOR NATIONAL FACILITY FOR ARIBORNE RESEARCH (NFAR)

1. Commercial Information

Sl No	Information Required	Vendor to specify
(a)	Aircraft Type (Turbo Prop, Dual-engine, Pressurized) - Yes or No	Provide tech info
(b)	Number of aircraft registered in India & since when	Provide tech info
(c)	Delivery Schedule after Supply Order	Provide tech info
(d)	Airworthiness Certification for atmospheric research and weather modification	Provide info
(e)	Location of aircrafts in India (in which cities?)	Provide info
(f)	Availability of Authorized Service Centre(s) in India	Provide info
(g)	Availability of Pilots, examiners, instructors in India	Provide info

2. Technical Information of Aircraft-

Sl No	Information Required	Vendor to specify
(a)	Useful Load - Maximum Take Off Weight (MTOW) in kilograms - at various altitudes (sea level to max take off)	Provide tech info
(b)	Endurance excluding reserve fuel for 45 min + fuel for 100 Nm diversion	Provide tech info
(c)	Range with maximum take-off weight	Provide tech info
(d)	Certification under FAR 23/25-Yes or No/Please specify	Provide tech info
(e)	Take off and landing distance with MTOW	Provide tech info
(f)	Design Cruising Speed	Provide tech info
(g)	Stall speed	Provide tech info
(h)	Service ceiling or absolute ceiling	Provide tech info
(i)	Payload capacity	Provide tech info
(j)	Warranty for airframe and engines	Provide tech info
(k)	Engine make and model - TBO	Provide tech info
(l)	Instrument Meteorological Conditions capability as per DGCA requirements. Please indicate Yes/No	Provide tech info
(m)	Type and make of Avionics – In detail including avionics ground testing facility	Provide tech info
(n)	Type of de-icing/anti-icing system	Provide tech info
(o)	Available power for Special Mission Equipment(s) including electrical power/load analysis and heat load analysis for air conditioning system	Provide tech info
(q)	Capable of interfacing the instrument(s) data with the avionics suite – please describe the avionics systems to be interfaced.	Provide tech info
(r)	Integrating all three systems/sensors for simultaneous operation – describe if there is a solution to integrate all sensor information and how this will be operated.	Provide tech info

3. Additional Communication Equipment.

Sl No	Information Required	Vendor to specify
(a)	Type and Model of SATCOM equipment that can be fitted /already fitted	Provide tech info
(b)	Service Provider for SATCOM	Provide tech info
c)	Data Link capability with bandwidth available	Provide tech info
(d)	Power output available/details of alternator and its capacity	Provide tech info
(e)	HF equipment fitted/can be fitted.	Provide tech info
(f)	Data link capability for HF and bandwidth thereof.	Provide tech info
(g)	Describe the mission audio system solution, type, functions for cockpit and crew members	Provide tech info

4. Aircraft Special mission modification and integration

Sl No	Information Required	Vendor to specify
(a)	Company profile, expertise, experience of handling modifications/upgrades, etc. and whether the company has supplied any such similar system in the past.	Provide tech info
(b)	Possibility of having necessary cut-outs in the aircraft for installing various instruments/sensor systems for non-interfering simultaneous use (EMI/EMC compatibility) Provide floor plan for instrumentation placing and mounting	Provide tech info
(c)	Proposed certification process for mission modification of the aircraft. Please provide reference to similar modifications.	Provide tech info
(d)	Please describe where (country and facility) the modification will be done and according to what rules (FAA, EASA, CAA) to be further approved by CEMILAC	Provide tech info
(e)	Capability of integrating the instruments and getting the instrumented aircraft for atmospheric research	Provide tech info
(f)	Please describe how the modifications will be documented	Provide tech info
(g)	Describe in detail how and where the modification will be tested for systems verification & validation (V&V) performance	Provide tech info

5. Logistical Support

Sl No	Information Required	Vendor to specify
(a)	Details for how the Logistic Support will be given (including in-country support) for the mission systems and integration.	Provide tech info
(b)	Details of Aircraft and Maintenance of Aircraft capability and details of programme for labor and parts	Provide tech info

Any other relevant info on capability of roles & additional facilities may also be specified. The budgetary quote if provided will be used as additional information.

Annexure

REQUIREMENT OF IMPORTANT SCIENTIFIC INSTRUMENTS FOR AIRBORNE RESEARCH

NFAR instrumentation for airborne measurements as listed below should be procured, installed and commissioned with certification by OEM to carry out atmospheric research.

- Weather parameters
- Cloud Microphysics, cloud water collection system
- Aerosols
- Isokinetic inlet, CVI inlet and multiple use inlet
- Trace Gases
- Radiation
- W band radar
- Lidar
- Atmospheric electricity
- Dropsonde
- Research Aircraft Data Acquisition System

The combination of instrumentation suite will be fixed in the aircraft according to scientific objective of each airborne program.

S No	Information Required		Vendor to specify
1.	Configuration	Manufacturer, Make and Model, Size range of instrument, specification	Provide tech info
2.	Platform	Capable of being fitted on AIRCRAFT	Provide tech info
3.	Role	Type of measurements	Provide tech info
4.	Operations	(i) Should be capable of undertaking long aerial study missions (including recording type & capacity)	Provide tech info
6.	Specifications	(i) Fitments details in a pressurized aircraft.	Provide tech info
7.	Additional features	(i) In-flight Sensor Control and Flight Guidance Software (ii) Post processing software (iii) Training details (iv) Sensor system servicing & spare parts for min 3-year (iv) Service & Maintenance for all software elements for minimum 3-year (v) Annual cost of one Tech support person at customer site	Provide tech info
8.	Operational Life	TTL >10 years or more	Provide tech info
9.	Warranty	>10 years or more	Provide tech info
10.	Certification	Certification details	Provide tech info

Note: - The Vendors to attach detailed technical specifications of the equipment/sensor systems are being offered as response to the RFI. Any other relevant information on additional instrumentation facilities may also be specified. The budgetary quote if provided will be used as additional information.