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Ref: RFT/IND/NLST/093/14-15

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13th October, 2014

CORIGENDUM - I

Sub: Extension of date for Submission of Tender for "System for measuring

Wind Speed, Temperature & Humidity (Wind Profiler) – reg.

Ref: Public Tender Notice No. RFT/IND/NLST/093/14-15 Dated: 12/09/2014.

- a) Extension of Last date for the submission of "Tender" both Technical and Commercial bids separately, extended up to 27th October 2014 at 15.00 hrs."
- b) Technical bids will be opened on 27th October 2014 at 15.30 hrs. at IIA, Bangalore. Bidders or their authorized agents can be present at their own interest which the bids are being opened.
- c) All other terms and conditions are remaining unchanged.
- d) Herewith attached again Specification / RFP for reference.

Stores & Purchase Officer

For Director

IIA, Bangalore. - 34.

ANNEXURE - I

Requirement of a system for measuring wind speed, temperature and humidity

A system for measuring ambient atmospheric parameters as mentioned below, is required at the Indian Astronomical Observatory at Hanle, Ladakh, Jammu and Kashmir.

The system should consist of the following:

One anemometers each at heights of 2m, 12m, 22m and 32m above the ground level and one thermometer and one hygrometer at a height of 2m above the ground level.

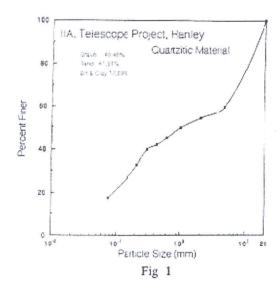
Vendor should have a proven capability of having designed and installed towers of this height at various terrain from coastal areas to high altitudes. The tower design should be such that it will have very less effect on the air flow around the tower for proper measurement by the anemometers at various heights. It is preferable that the design is vetted by the structural engineering team of a National/international research institution.

The work involved is as follows:

Design of the Mechanical structure of the tower including selection of suitable material for the tower.

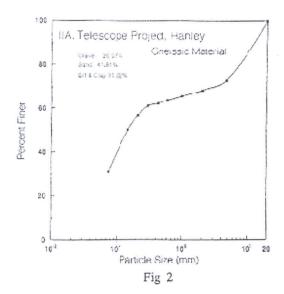
The design of the tower has to be done in tandem with the design of the Civil Engineering foundation of the structure. The characteristics of the soil at the location where the tower is to be installed is provided below.

The density measurements on pieces of rock (obtained from pits) showed values like 2.30gm/cc for quartzitic materials and 2.60gm/cc for gneisssic materials. The grain size distribution of the matrix materials are given in figures 1 and 2. Both of them have shown nearly 80% of coarse grained material.



भंडार व क्रय अधिकारी STORES & PURCHASE OFFICER भारतीय ताराभौतिकी संस्थान INDIAN INSTITUTE OF ASTROPHYSICS

बंगलूर BANGALORE - 560034.



The tower design report should be made available before the commencement of the work to IIA.

The geographical location and the ambient conditions at Hanle are as follows:

Location: On top of Mount Saraswati (Dikpa Ratsa Ree) at the Nilamkhul Plain, Hanle, about 275Km South-East of Leh, Ladakh, Jammu and Kashmir. The altitude of the location is about 4500m above mean sea level.

Motorabale road available up to the top of Mount Saraswati.

The ambient temperature varies from -30deg C to +30deg C and the ambient humidity varies from 5% to 95% (non-condensing). Maximum wind speed expected: 55m/sec^* . Ambient pressure: \sim 56% of that at mean sea level.

*Referring to Indian Standard IS: 875, Code of Practice for Design Loads (Other than Earthquake) for Buildings and Structures, Part 3, Wind Loads (Second Revision), a 50 year return wind speed of 55m/sec is specified for Hanle region. This specification is based on a peak gust velocity, averaged over a short time interval of 3 seconds, at a height of 10m above mean ground level.

All equipment and mounting have to be guaranteed to work at the above environment.

Preparation of a solid model and a finite element analysis of the structure followed by optimization and reanalysis for reconfirmation of the suitability of the design.

Preparation of detailed Engineering drawings of the tower structure and manufacture.

The tower has to be transported, installed at the above site and commissioned along with the instruments.

All steel material used in the tower should be SAIL/TATA and if aluminium is used should be Jindal/Indal/Hindalco. All fasteners used must be Unbrako.

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