



**Centre for Atmospheric & Oceanic Sciences
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**Dr. S.K. Satheesh
Professor**

17 May 2017

Subject: Invitation for quotation for Nephelometer and Aerosol Sampling system

Bid Notification Number: CAOS/Tender/IITM03/2017/05

QUOTATIONS SHOULD BE SUBMITTED IN TWO SEPARATE SEALED COVERS (TECHNICAL & COMMERCIAL BID) AND THE PACKAGE SUPERSCRIBED WITH THE ENQUIRY NUMBER AND SHOULD BE SUBMITTED WITHIN DUE DATE. QUOTATIONS VIA FAX AND EMAIL ARE NOT ACCEPTABLE.

INTRODUCTION:

Indian Institute of Science (IISc) is located in the city limits of Bengaluru City Corporation. There are about 45 departments and centres in IISc that work on a wide range of scientific and technological areas of research. Centre for Atmospheric and Oceanic Sciences (CAOS) is one of the centres in IISc and our research addresses a wide variety of topics within the broad realm of atmosphere-ocean-climate science. One of the research theme of CAOS is impact of atmospheric aerosols on climate. Aerosols are suspended particulates in the atmosphere and have implications for climate through different mechanisms. Several studies have suggested that aerosols may be mitigating global warming by increasing the planetary albedo, although the sign and magnitude of aerosol effects on climate are still uncertain as outlined in the International Panel of Climate Change (IPCC) reports. Given this background, it is imperative that detailed aerosol measurements of aerosols are performed carefully to answer crucial questions related to climate change.

The instruments intended in this tender is meant for making measurements of aerosol mass concentration and scattering coefficient near real-time. A nephelometer is an instrument for measuring concentration of suspended particulates in a liquid or gas colloid. A nephelometer measures aerosol scattering coefficient by employing a light beam (source beam) and a light detector. Aerosol sampler is an instrument to measure aerosol mass concentration.

REQUIRED SPECIFICATIONS:

(1) Aerosol Sampler:

Inlet: 2.5 micrometers

Automation: Programmable and should be suitable for field experiments.

Sampling: Should have facility to use filter paper to collect aerosol sample.

(2) Nephelometer:

Wavelength: Visible range; at least three wavelengths between 400 and 700 nm are required.

Accuracy: 5% or better preferred.

Sensitivity: $< 10^{-7} \text{ m}^{-1}$

Angular range: 8 to 170°

BRIEF SCOPE OF THE PROJECT:

1. Supply of the instrument and accessories.
2. Installation on site.
3. Extended warranty for three years (optional).

ELEGIBILITY CRITERIA:

The bidder shall be an established agency having adequate experience in supply, installation and maintenance of similar instruments in the last three years.

SELECTION PROCESS:

Step-1: Short listing based on documents submitted by the firm along with the expression of interest, in proof of satisfying the two eligibility criteria given above.

Step-2: Subsequent evaluation of the competency and other technical merits of the product and also the financial capabilities during the purchase committee meeting. Only those firms who satisfy step-1 will be selected for the evaluation process under step-2.

Terms and Conditions:

1. Please arrange to enclose valid Exclusive Dealer/Distributor Certificate in case of dealers/distributors.
2. 3 years onsite warranty should be mentioned, if offering.
3. For software items, updates during the warranty period are to be provided without any additional cost to IISc.
4. Supply, Configuration, installation, commissioning, demonstration and training are also the responsibility of the supplier.
5. Please arrange to send Brochure, literature and Pamphlets of the products quoted.
6. Please arrange to send your Bank details for making E-payment.
7. Delivery period is to be specified. Delivery in 4 months or less will be given preference.
8. The quotation should be in two separate sealed covers (Technical and Commercial bid). The cover should be submitted to Prof. S.K. Satheesh, Centre and Atmospheric Oceanic Sciences (CAOS), Indian Institute of Science, Bengaluru-560012. The last date for submitting the bid is 17 June 2017.
9. The offer should be valid for a period of at least 90 days from the last date for submission of quotes.
10. Price quoted should be inclusive of all taxes / duties and shown separately. The price quoted should be for delivery of the items to the site and installation at site.

Important Dates:

Date of release of the enquiry: 17 May 2017

Last date for submission of quotes: 17 June 2017

For any clarifications, contact: Prof. S.K. Satheesh, Centre for Atmospheric and Oceanic Sciences, IISc, Bengaluru. Tel: 080-22933070; Email: satheesh@caos.iisc.ernet.in