

**Detailed Specifications of Global Tender Notice No: 02/2016**

<b>S. NO.</b>	<b>TENDER NO.</b>	<b>BRIEF DETAILS OF ITEM(S)</b>	<b>PAGE NOS.</b>
<b>1.</b>	<b>14-VI/AU(770)15-PB/T-06</b>	Doppler SODAR	<b>2-4</b>

**Tender No: 14-VI/AU(770)15-PB/T-06**

**Technical specifications for procurement of Doppler Sonic Detection and ranging (SODAR) Instrument for continuous monitoring of relative intensity of temperature eddies, horizontal and vertical wind speed and direction in the lower atmosphere.**

This Instrument (SODAR) will be installed at Multi parametric geophysical Observatory Ghuttu (30.53°N, 78.74°E), Uttarakhand .

S.No.	Item	Specifications	
1.	Name of Instrument	SODAR for continuous monitoring of relative intensity of temperature eddies in the lower atmosphere as a function of height and time, horizontal and vertical wind speed and direction. The system should provide information of the mixing height, inversion height and stability condition. The SODAR should have phased array antenna system.	
2.	Transmitter Characteristics	Operating range	From 20 meter to 1000 meter from ground in fair weather condition and average range should not be less than 700 meters.
		Transmit Frequency	Between 1 to 7 kHz (user selectable)
		Pulse length	Between 10 millisecond to 900 milliseconds. (user selectable)
		Pulse repetition frequency	Selective as per the range
		Sampling height Increment	User selectable
		Minimum Sampling height	20 meters
		Averaging and Reporting Interval	User selectable

3.	Deliverables	Back scattered vertical echo profile and 3D wind speed profile	
4.	Receiver Characteristics	➤ Gain (max) : 100±20 dB	
5.	Range & Accuracy	Vertical speed range	Greater than or equal to ± 10 m/sec
		Vertical speed accuracy	± 0.5 m/sec or better.
		Horizontal wind speed range	0 to 30 m/sec or better.
		Horizontal speed accuracy	Less than or equal to ± 0.5 m/sec or better.
		Horizontal direction accuracy:	Less than or equal to three degrees.
6.	Ambient Operating conditions	Temperature	-10°C to 60° C
		Relative Humidity	10 -100%
7.	Power requirement	230±10 % VAC/50±5 Hz	
8.	Additional accessories.	GPS for positioning, Pressure, temperature and humidity sensors. GPRS modem for remote control and data transfer	
9.	Warranty	Two year's on-site warranty after installation and commissioning.	

10.	Installation and training	Onsite demonstration and training for three persons for time period as required. Operating manuals should also be provided.
11.	Software/hardware support (optional)	Automatic estimation of mixing height, inversion height, stability classification and lapse rate. Provision for Solar panel based power supply to the instrument. Price should be quoted for each item individually.
12.	AMC( optional)	AMC should be quoted for One year after warranty period.

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