इलेक्ट्रॉनिकी एवं
सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF
ELECTRONICS AND
INFORMATION TECHNOLOGY
सत्यमेव जयते

SAMEER

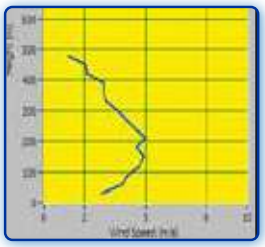
PHASED ARRAY DOPPLER SODAR

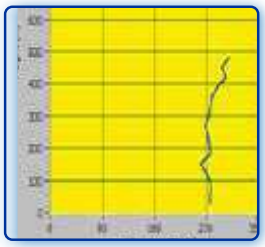
Phased Array DOPPLER SODAR is a ground based remote sensing instrument to measure the wind speed, wind direction and turbulence of the lower part of the atmosphere, especially the boundary layer. The SODAR developed by SAMEER makes use of phased array antenna for generating the multiple beams. Phased array technology provides the capability to electronically steer the sound beam in any direction and makes the system compact and easily deployable,

SODAR system @
GHAVP Haryana

System installed @
NARL Tirupati

SODAR GUI

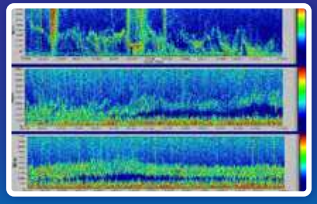




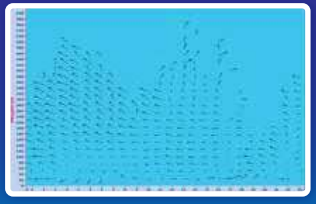
Wind Speed &
Direction

Operating Frequency	1.7 to 2.5 kHz
Beam Tilt Angle	15-25 deg
Wind speed Range	0-30 m/s
Wind Direction	0-360 deg
Wind speed Accuracy	1.5 m/s
Max range	600m @40 dBA ambient noise level, 1000 meters in favorable weather conditions
Minimum Height	20 m
Range resolution	20 to 100m Programmable
Data Display and products	Doppler Spectra, Echogram, Radial wind components,, Wind speed, Wind direction,, Time height plot, Daily wind averages etc.
Power	230 ± 10% V AC, 50±5 Hz

Time Height Plot



Time Height Plot



Wind Rose

SOCIETY FOR APPLIED MICROWAVE ELECTRONICS ENGINEERING AND RESEARCH
R&D laboratory of Ministry of Electronics and Information Technology,
Govt. of India, IIT Campus, Powai, Mumbai : 400076, India
Tel. +91-22-2572-4699 | E-mail : dg@sameer.gov.in | Website : www.sameer.gov.in

इलेक्ट्रॉनिकी एवं
सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF
ELECTRONICS AND
INFORMATION TECHNOLOGY
सत्यमेव जयते

SAMEER

SODAR INSTALLATIONS & APPLICATIONS

SODAR Installations @:

- NARL Tirupati
- NPCIL Kaiga, Karnataka
- SPL,VSSC Trivandrum
- IITM Pune
- NESAC, ISRO Shillong
- ISTRAC, ISRO Port Blair
- BARC, Trombay , Mumbai
- IGCAR, Kalpakkam, March
- NPCIL, Kakrapar, November
- Andhra University, Vizag
- BITS Ranchi
- S. K. University, Anantapur
- IMD Kolkata (Mobile Sodar)
- Assam University, Silchar
- NPCIL, Hissar (Gorakhpur) Haryana
- BARC Mumbai
- IPRC, Mahendragiri
- SDSC, SHAR, Sriharikota

System@ NESAC, Shillong

Andhra University

ISTRAC, Port Blair

IITM, Pune

IPRC, Mahendragiri

ISRO, SHAR, Sriharikota

SODAR Applications:

- Environmental Impact Studies
- Prediction of Toxic Chemical Spills
- Inversion Detection
- Sea Land Breeze Studies
- Meteorology
- Research in Atmospheric dynamics
- Environmental Monitoring
- Wind Energy site evaluation

SODAR System @ IMD Kolkata

SOCIETY FOR APPLIED MICROWAVE ELECTRONICS ENGINEERING AND RESEARCH
R&D laboratory of Ministry of Electronics and Information Technology,
Govt. of India, IIT Campus, Powai, Mumbai : 400076, India
Tel. +91-22-2572-4699 | E-mail : dg@sameer.gov.in | Website : www.sameer.gov.in