

Leaders in Ground-Based Atmospheric Remote Sensing

RADAR SYSTEMS FOR ATMOSPHERIC & SPACE RESEARCH

ALL-SKY METEOR RADAR



- ◆ 20,000+ unambiguous detections per day
- ◆ Wind Profiling of the MLT Region
- ◆ Meteor Astronomy
- ◆ Space Research
- ◆ All-Sky Meteor observations
- ◆ 70–110km sampling height
- ◆ 8/20/40 kW Power Configurations
- ◆ Remote monitoring and control
- ◆ Online data analysis
- ◆ Optional Spaced-Antenna

ST/MST DBS+SA RADARS



- ◆ Modular, Scalable Architecture (8kW-160kW Peak Power Output @15%)
- ◆ Spaced Antenna (SA) &/or Doppler Beam Swinging (DBS) Modes
- ◆ All-sky Meteor observations (Optional)
- ◆ Typical Array sizes from 36-1024 Antennas
- ◆ Half-Power-Half-Beam width from 1.5° upwards
- ◆ 1km–20km sampling range
- ◆ 1–6 complex radar receivers

MF SCALEABLE RADAR SYSTEM



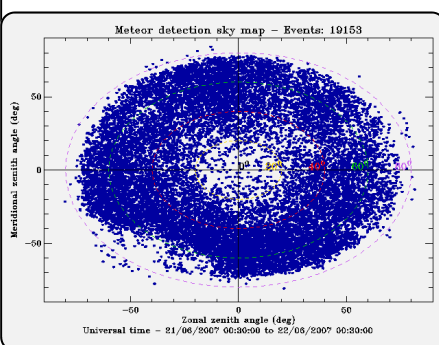
- ◆ Modular, scalable architecture (8kW-256kW peak power output)
- ◆ Doppler, Spaced Antenna & Mixed Mode capability
- ◆ Electronic Beamsteering/Phase Control
- ◆ 50-110km height range
- ◆ Wind Velocity Estimation
- ◆ Electron Density Estimation (DAE)
- ◆ Turbulence estimation
- ◆ Momentum Flux (DBS)
- ◆ Meteor Winds & Diffusion Coefficient

IONOSPHERIC RADAR SYSTEMS

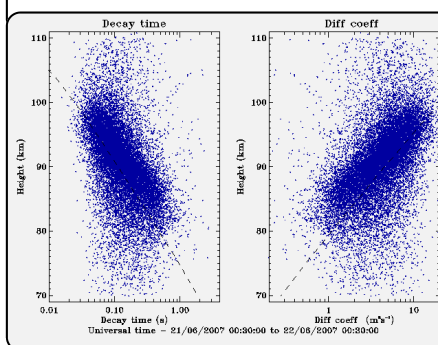


- ◆ Coherent Doppler Backscatter Radar
- ◆ MLT region Ionospheric and Meteor Observation modes
- ◆ Fixed or Steered Beams
- ◆ Monostatic & Bistatic Configurations
- ◆ Peak Power from 8-80kW @15% Duty Cycle
- ◆ Option Rx Interferometer for All-sky Meteor observations
- ◆ 70–850km sampling range

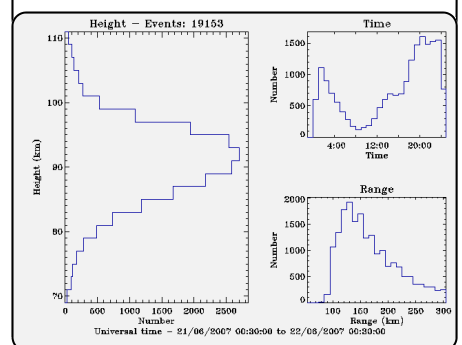
METEOR AOA SKYMAP



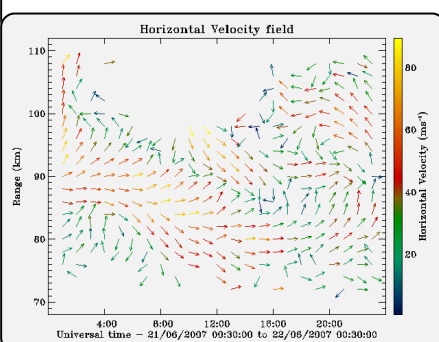
METEOR DECAY TIMES



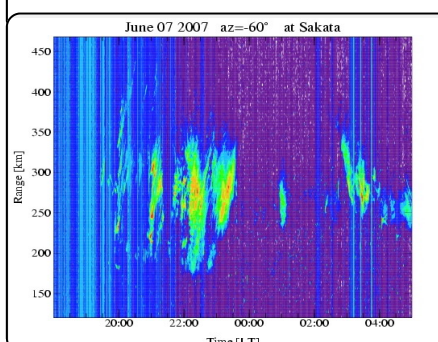
METEOR HISTOGRAM



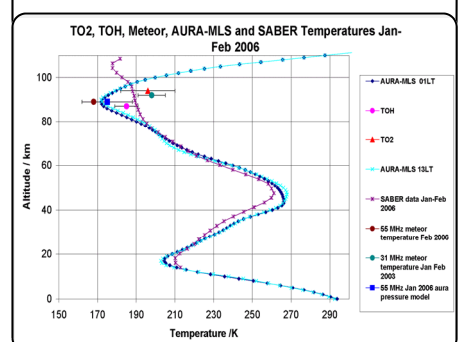
MLT WINDS



IONOSPHERIC IRREGULARITIES



METEOR TEMPERATURES

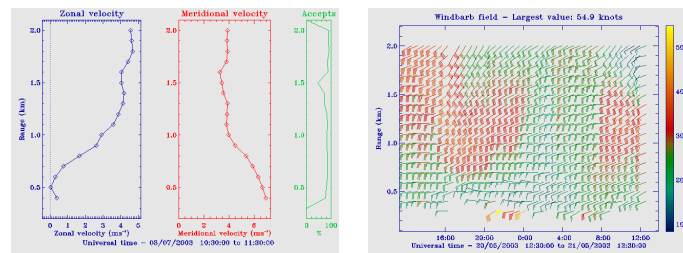
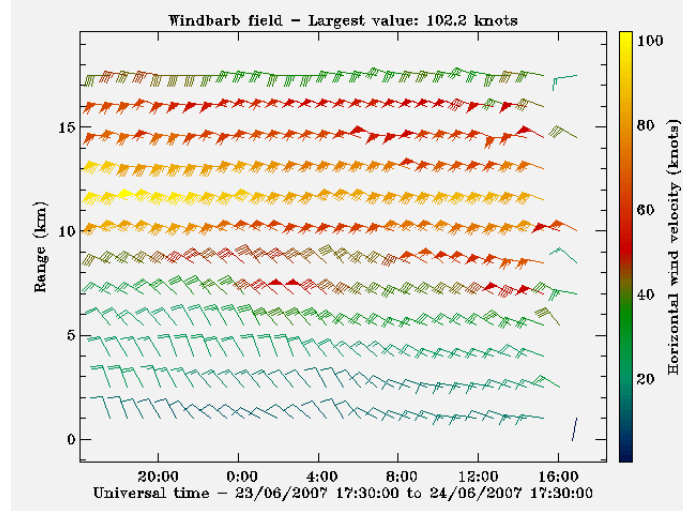


METEOROLOGICAL RADAR WINDPROFILER SOLUTIONS

BOUNDARY LAYER & TROPOSPHERE



- ◆ Small, medium & large array configurations
- ◆ 300m—8km AGL range
- ◆ Real-time Wind Profiles
- ◆ Low Operating Cost
- ◆ Fully Automated
- ◆ Unattended Operation
- ◆ Remote Monitoring & Control
- ◆ BUFR Output
- ◆ Unaffected by Precipitation, Bird or Insect Migration
- ◆ Small footprint & Portable (BLR-3)



UPPER-AIR



- ◆ 1km—20km AGL range
- ◆ 300m Low range with Boundary Layer Option
- ◆ Real-time Wind Profiles
- ◆ Turbulence & other Parameters available
- ◆ Low Operating Costs
- ◆ Fully Automated, Unattended Operation
- ◆ Doppler Beam Swinging (DBS) Operation
- ◆ BUFR Output for easy Data Assimilation
- ◆ Unaffected by Precipitation, Bird or Insect Migration

RADAR SUB-SYSTEMS

RADAR DATA SYSTEMS



- ◆ Radar Transceiver, Data Acquisition, Analysis & Display Sub-systems
- ◆ 1..4 Channel MF Systems
- ◆ 1..6 Channel VHF Systems
- ◆ 16-bit Digitisation
- ◆ Flexible Data Analysis Software
- ◆ Fully Documented Software API
- ◆ Comprehensive Range of Analysis Modules Available
- ◆ Online & Offline Analysis

RADAR TRANSMITTERS



- VHF Transmitters
- ◆ 4-160kW @15% Duty Cycle
 - ◆ Redundancy & Standby Battery Options
- MF Transmitters
- ◆ 8-256kW @0.5% Duty Cycle
- Common Features
- ◆ Graceful Degradation
 - ◆ High MTBF / Low MTTR
 - ◆ Field Upgradeable
 - ◆ Remote Monitoring & Control

BEAMSTEERING & ANTENNA SYSTEMS



- Beamsteering & Antenna Array Design & Manufacture
- ◆ MF, HF, VHF
 - ◆ Doppler Beam Steering
 - ◆ Spaced Antenna
 - ◆ Mixed-Mode DBS/Spaced Antenna/Meteor
 - ◆ All-Sky Meteor Interferometers
 - ◆ Ionospheric; fixed and steered
 - ◆ Phase-matched Feeder Networks
- Applications & Types
- ◆ Desert, Tropical, Arctic/Antarctic & Temperate zones
 - ◆ Fixed, Portable and Transportable Antennas
 - ◆ Long-wire Dipole, Yagi, Co-Co



ATRAD Pty Ltd

ABN 72 112 121 801

ATRAD

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Export Brochure

Specifications subject to change without notice or obligation

FURTHER INFORMATION

Email:
sales@atrad.com.au

Web:
<http://www.atrad.com.au>

HEAD OFFICE

1/26 Stirling Street
Thebarton SA 5031
Australia

Telephone + 618 8303 3493
Facsimile + 618 8303 3489