

# Radiometrics Mobile SkyCast®

## Fire Weather Decision Support System



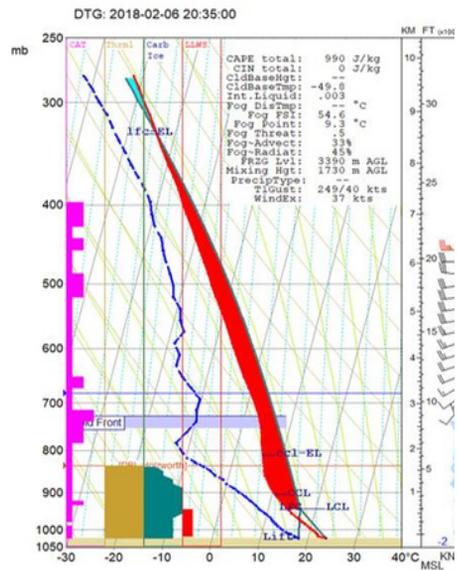
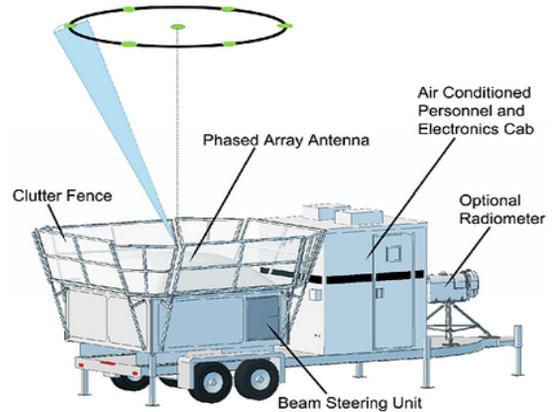
SkyCast® trailer-mount unit is quickly deployed to optimize data collection and support real-time decisions.

### SkyCast® delivers continuous, real-time:

- Temperature, humidity, and liquid water profiles up to 10,000 m AGL
- Wind profiles and wind shear characteristics to 8000+ m AGL1
- Atmospheric stability and convective forecast indices
- Development, depth and dissipation of fog events, and temperature inversions
- Evolution of low-level jets
- Presence of icing conditions

SkyCast® incorporates a Radiometrics' Radiometrics Radar Wind Profiler, MP-3000A Microwave Thermodynamic Profiling Radiometer, system control and display software, and optional Acoustic Wind Profiler (sodar).

SkyCast is available in fixed or mobile configurations, with either boundary layer or tropospheric radar wind profilers. Radiometrics offers installation and site acceptance testing, tailored training for operators, forecasters, and administrators and long-term support options.



Skew-T and forecast indices from SkyCast

**Monitoring rapidly changing conditions in real-time is critical for forecasters to provide timely and effective support for fire operations. Our Toolkit provides users with the ability to generate hundreds of forecast indices to assure the most mission critical information is delivered.**

Radiometrics *SkyCast* can play a crucial role in predicting fire movement by providing accurate and real-time data on wind behavior, atmospheric stability, and water vapor content. Here's how it can help you:

**Wind Monitoring:** *SkyCast* uses proven technology to continuously monitor wind speed, direction, and turbulence. This detailed information about wind behavior within and around a fire-affected area is essential for understanding how wind patterns might influence the spread of the fire.

**Fire Behavior Modeling:** Wind is a primary driver of fire behavior. By integrating the critical and unique wind data from Radiometrics wind radar into fire behavior models, fire analysts, and meteorologists can simulate and predict the movement of the fire. These models take into account factors such as fuel availability, topography, and weather conditions, along with wind patterns, to forecast the fire's potential path and intensity.

**Early Warning Systems:** By combining wind radar data with other fire detection technologies like thermal imaging and satellite observations, early warning systems can be implemented to detect fires in their early stages and provide timely alerts to emergency responders, enabling more effective evacuation planning and resource allocation.



**Tactical Decision Support:** Firefighters and incident commanders rely on accurate and up-to-date information to make critical decisions during firefighting operations. Radiometrics mobile and easily deployed *SkyCast* system can provide real-time wind data that assist in tactical decision-making, such as determining safe zones for firefighters, anticipating fire spot-overs, and adjusting fire line strategies based on up-to-date forecasts and nowcasts. These fire management strategies utilizing *SkyCast* data is critical for determining suitable locations for deploying firebreaks, planning controlled burns, and assessing the potential impact of the fire on nearby communities, infrastructure, and natural resources.

Overall, Radiometrics wind radar, radiometer and *SkyCast* system can significantly enhance fire movement prediction by providing precise and timely information about wind behavior and atmospheric stability. This improves situational awareness, enhances firefighter safety, and facilitates more effective response and management of wildfires.

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*Radiometrics is a world leader in ground-based remote sensing offering several models of microwave profiling radiometers, acoustic wind profilers and radar wind profilers. Radiometrics was founded in 1987 and has delivered over 500 systems worldwide.*

