



Ka Band Scanning Millimeter Wave Cloud Radar

The ka Band scanning Millimeter wave cloud radar is a high accuracy, high sensitivity, and high spatial resolution dual polarization scanning cloud radar for ka-band, with TWT, magnetron or solid-stat transmitter. The radar is mainly used for detection & measurement of metrological objects, such as non-precipitation cloud, and weak precipitation which can service cloud physics research, climate change, Earth's radiation balance research, modification, airport metrological support, etc.

Technical Data

• SYSTEM			
<i>Operating frequency</i>		<i>Ka band</i>	
<i>Polarization Rang</i>		<i>Dual, Horizontal/Vertical</i>	
<i>Detection Range</i>		<i>159m~15km/30km</i>	
<i>Range Resolution</i>		<i>30m/60m</i>	
<i>Time Resolution</i>		<i>0.1s~1s</i>	
<i>Sensitivity</i>		<i>≤-35dBZ@5km</i>	
<i>Detection Accuracy</i>	<i>Reflectivity</i>	<i>≤1dB(RMS)</i>	
	<i>Radial Velocity</i>	<i>≤1m/s(RMS)</i>	
	<i>Spectrum width</i>	<i>≤1m/s(RMS)</i>	
	<i>LDR</i>	<i>≤0.dB(RMS)</i>	
<i>Output data</i>		<i>I/Q Signals, Doppler Power Spectra, Z,Vr W,LDR & SNR.</i>	
• ANTENNA			
<i>Diameter</i>		<i>1.5m</i>	
<i>Gain</i>		<i>≥50dB</i>	
<i>Beam width</i>		<i>≤0.45°</i>	
<i>Scanning Mode</i>		<i>PPI/RHI/VOL/sPPL/ sRHL/Vertically Pointing</i>	
<i>Azimuth span</i>		<i>0°~+360° continuous</i>	
<i>Elevation span</i>		<i>-1°~+92°</i>	
<i>Scanning speed</i>		<i>0~ 4rpm</i>	
• TRANSMETTER			
<i>Amplifier</i>	<i>TWT</i>	<i>Magnetron</i>	<i>Solid state</i>
<i>Peak power</i>	<i>600w</i>	<i>20kw</i>	<i>200w</i>
<i>Pulse width</i>	<i>0.2/0.4/12/24 us</i>	<i>0.2/0.4us</i>	<i>0.24/12/24us</i>
• RECEIVER			
<i>Channel</i>		<i>2</i>	
<i>Noise figure</i>		<i>≤dB</i>	
• SIGNAL PROCESSOR			
<i>Dynamic Range</i>		<i>≥90dB</i>	
<i>Ground clutter suppression</i>		<i>≥50dB</i>	