

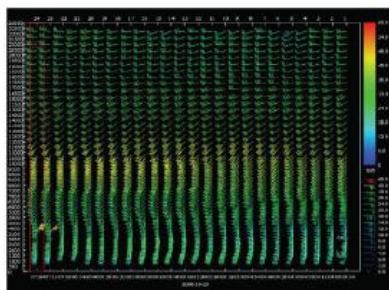
STRATOSPHERIC WIND PROFILER RADAR

20km stratospheric wind profiler radar

The 20km stratospheric wind profiler radar adopts solid-state active phased-array technology to continuously and automatically detect the air current distribution of three-dimensional atmospheric wind field between 1km and 20km in the form of remote control and unattended state. It can give time-altitude profiles of atmospheric horizontal wind direction, wind speed, vertical air current speed and atmospheric refraction structural constant $cn2$. The radar can automatically monitor the operating state of all its assemblies, automatically store meteorologic data and provide functions of remote operating and browsing.

Main technical specifications

Detection altitude range	1km~ 20km
Altitude resolution	200rn (in low mode), 400m (in high mode)
Time resolution	$\leq 10\text{min}$
Wind speed measurement range	Horizontal wind speed: $\geq 80\text{m/s}$ Vertical air current: $-24\text{m/s} \sim +24\text{m/s}$
Wind measurement error (RMS)	Wind speed: $\leq 1\text{m/s}$ (when wind speed $\leq 10\text{m/s}$) 10% (when wind speed $> 10\text{m/s}$) Wind direction: 10° (when wind speed $\geq 6\text{m/s}$)
Vertical wind measurement error	$\leq 0.25\text{m/s}$



Wind Profile figure



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