

Table 1. Basic characteristics of the X-POL radar (adapted from Martner et al. 2001)

Major Capabilities	transportable, scanning, Doppler, polarization diversity.
Primary Uses	measurements of precipitation, boundary layer air flow, and ocean surface features.
Frequency	9.34 GHz ( $\lambda = 3.2$ cm)
Peak Transmit Power	30 kW
Antenna	3.1 m diameter, 44 dB gain
Beam Width	0.9 deg., circular
Sensitivity	$\sim 0$ dBZ at 25 km range
Doppler Processing	pulse pairs or time series

Table 2. Terminal fall speeds of the raindrops at selected sizes. The time delay of a given drop to reach the surface for a height of 113 m (X-POL measurement height at disdrometer site) is given in the third column. The last column denotes the disdrometer sample volume.

Drop Size	Still Air Fall Velocity	Time Delay	Disdrometer Sample Volume
0.5 mm	200 cm s <sup>-1</sup>	56 s	0.6 m <sup>3</sup>
1 mm	400 cm s <sup>-1</sup>	30 s	1.2 m <sup>3</sup>
1.5 mm	540 cm s <sup>-1</sup>	22 s	1.6 m <sup>3</sup>
2 mm	650 cm s <sup>-1</sup>	18 s	1.9 m <sup>3</sup>
3 mm	800 cm s <sup>-1</sup>	16 s	2.4 m <sup>3</sup>
4 mm	880 cm s <sup>-1</sup>	13 s	2.6 m <sup>3</sup>