



Idealized schematic of DOW and TIV deployments ahead of a tornado.

Deployment occurs at $t = 0$ s. Closest approach of tornado center to instruments is $t = 240$ - 420 s. Center passes at 1.5-2.0 km from DOWs, but closer to TIV and SCOUT vehicles which can move for safety during $t = 0$ - 180 s if tornado path, size, or intensity varies.

DOW3 provides rapid-update low-level scans for safety and coordination. Scans every 10 s at ~ 100 m agl will permit characterization of peak winds and extent of damaging wind swath.

Rapid-Scan DOW collects 12 tilt volumes from 0.5° - 11.5° at 10 s intervals.

DOW3 (250 kW) rarely sector scans through Rapid-DOW during deployment. Rapid-DOW sectors through DOW3 early in deployment, offset by 40 MHz and not into DOW3 main beam.

SCOUT collects thermodynamic data to south of tornado. TIV collects thermodynamic and film data up to edge of debris cloud and 40 ms^{-1} wind swath.