

Radar Estimated Hail Type/Size

10

Storm-Top Divergence		DUAL-POL RADAR HAIL SIGNATURES		
Peak ΔV(kts)	Max Hail Size (in.)		Z: 45-59 dBZ = Hail poss ≥60 dBZ = Hail likely	ZDR: -0.3 to 1 dB ≈ Dry or large hail > 1 dB ≈ More liquid
70-102	Quarter (1")			
103-134	Ping Pong (1 ½")			
115-147	Golf ball (1 ¾")			
130-162	Hen Egg/Lime (2")			
159-192	Tennis Ball (2 ½")			
174-207	Baseball (2 ¾")			
233-267	Grapefruit (4")			
		CC: 0.93 - 0.97 ≈ 1-2" hail 0.70 - 0.90 ≈ ≥2" hail	KDP: <1°/km ≈ Mostly dry hail >3°/km ≈ Rain/hail combo or melting hail	
		Hail Event Type	Signature	
		Severe Hail (with little rain)	Z > 55 dBZ	ZDR < 1 dB
			CC ≈ 0.95-0.97	KDP < 1°/km
		Severe Hail Mixed w/Rain	Z > 55 dBZ	ZDR ≈ 1-2 dB
			CC ~0.93-0.96	KDP > 0.5°/km
		Sub-Severe Dry Hail	Z ≈ 45-55 dBZ	ZDR ≈ 0 dB
			CC > 0.98	KDP ≈ 0°/km
		Sub-Severe Melting Hail	Z > 55 dBZ	ZDR > 2 dB
			CC ≈ 0.92-0.96	KDP > 4-5°/km
		Significant (≥2") Hail	Z > 55 dBZ (>45 dBZ)	ZDR ≈ 0 dB or lower
			CC < 0.9 (possibly 0.7)	KDP not displayed

TBSS ≥ 0.8" Hail*

Z

SW

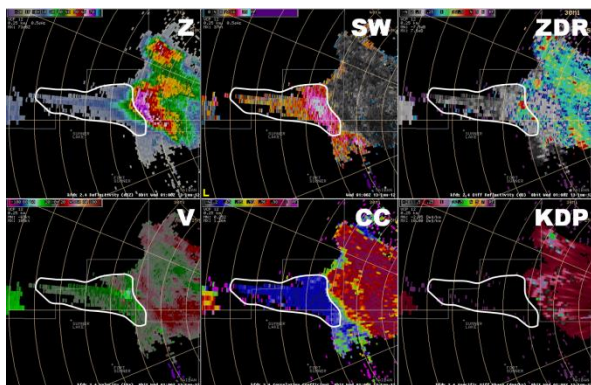
ZDR

V

CC

KDP

TBSS ≥ 0.8" Hail*



*Valid for S-band radar only