

## Quick Reference VCP Comparison Table for RPG Operators

May 2017

Slices	Tilts	VCP	Time*	Usage	Limitations
<p>19.5° 16.7° 14.0° 12.0° 10.0° 8.7° 7.5° 6.2° 5.3° 4.3° 3.4° 2.4° 1.5° 0.5° 0.0°</p>	<b>14</b>	<b>11</b>	<b>5 min</b>	General precipitation events where vertical resolution is most important at midlevels. Local 11 has $R_{max} = 80\text{nm}$ . Remote 11 has $R_{max} = 94\text{nm}$ .	Fewer low elevation angles make this VCP less effective for long-range detection of storm features when compared to VCPs 12 and 212.
		<b>211</b>	<b>5 min</b>	Widespread precipitation events with embedded, severe convective activity (e.g. MCS, hurricane). Significantly reduces range-obscured V/SW data when compared to VCP 11.	All Bins clutter suppression is NOT available, nor are PRFs editable for split cut tilts, for SZ-2.
<p>19.5° 15.6° 12.5° 10.0° 8.0° 6.4° 5.1° 4.0° 3.1° 2.4° 1.8° 1.3° 0.9° 0.5° 0.0°</p>	<b>14</b>	<b>12</b>	<b>4 ½ min</b>	Severe convective events. Extra low elevation angles increase low-level vertical resolution when compared to VCP 11. SAILS/MESO-SAILS tilts available.	High antenna rotation rates slightly decrease accuracy of the base data estimates.
		<b>212</b>	<b>4 ½ min</b>	Rapidly evolving, widespread severe convective events (e.g. squall line, MCS). Increased low-level vertical resolution compared to VCP 11. Significantly reduces range-obscured V/SW data when compared to VCP 12. SAILS/MESO-SAILS tilts available.	All Bins clutter suppression is NOT available, nor are PRFs editable for split cut tilts, for SZ-2. High antenna rotation rates slightly decrease accuracy of the base data estimates.
<p>19.5° 14.6° 9.9° 6.0° 4.3° 3.4° 2.4° 1.5° 0.5° 0.0°</p>	<b>9</b>	<b>21</b>	<b>6 min</b>	General, non-severe convective precipitation events. Local 21 has $R_{max} = 80\text{nm}$ . Remote 21 has $R_{max} = 94\text{nm}$ .	Gaps in coverage above 5°.
		<b>121</b>	<b>6 min</b>	VCP of choice for hurricanes, tropical systems, and widespread stratiform precipitation events. Significantly reduces range obscured V/SW data within 230 km when compared to other VCPs.	All Bins clutter suppression is NOT recommended. High antenna rotation rates slightly decrease accuracy of the base data estimates. PRFs are not editable. Gaps in coverage above 5°.
		<b>221</b>	<b>6 min</b>	Widespread precipitation events with embedded, possibly severe convective activity (e.g. MCS, hurricane). Reduces range-obscured V/SW data out to 300 km when compared to other VCPs.	All Bins clutter suppression is NOT available, nor are PRFs editable for split cut tilts, for SZ-2. Gaps in coverage above 5°.
<p>4.5° 3.5° 2.5° 1.5° 0.5° 0.0°</p>	<b>5</b>	<b>31</b>	<b>10 min</b>	Clear-air, snow, and light stratiform precipitation. Best sensitivity. Detailed boundary layer structure often evident.	Susceptible to velocity dealiasing failures. No coverage above 5°. Rapidly developing convective echoes aloft might be missed.
		<b>32</b>	<b>10 min</b>	Clear-air, snow, and light stratiform precipitation.	No coverage above 5°. Rapidly developing convective echoes aloft might be missed.

\*VCP update times are approximated for volume scans with AVSET & SAILS/MESO-SAILS disabled