**7. SFMR High-Incidence Angle Measurements Module**

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**Mission Description:** Collect high-incidence angle (off-nadir) SFMR data in regions with different wind speeds (> 15 m/s), rain rates, storm relative quadrants, and radii from the storm center.

**P-3 Module 1**

**What to Target:** Regions of wind speeds > 15 m/s with homogenous rain rates (or no rain) and wind direction (e.g. not in eye). Avoid regions with large wind speed or rain rate gradients.

**When to Target:** This module can be flown at any point during the flight while in the storm.

**Pattern:** This module can be flown with any of the traditional in-storm flight patterns. The module consists of flying at least 3 consecutive circles at a given roll angle. Roll angles to be sampled are 15°, 30°, and 45°. Best to begin circles by turning upwind for station keeping.

**Flight altitude:** 7–12 kft

**Leg length or radii:** Any

**Estimated in-pattern flight duration:** 3 circles at 15° takes ~17 min., 3 circles at 30° takes ~7 min., and 3 circles at 45° takes ~4.5 min. for a total time of ~28.5 min. If time is a concern, remove 15° circles for a total time of ~11.5 min.

**Expendable distribution:** Release a dropsonde/AXBT combo at the beginning of the module. If no AXBTs are available, this module can still be flown while only releasing a dropsonde at the beginning of the module.

**Instrumentation Notes:** Use standard SFMR set-up. Important to maintain as constant of a roll angle, pitch angle, and altitude as possible. Ideal to fly this module while the WSRA is also operating and gathering surface wave data. However, any data collected is useful as long as there is a dropsonde for comparison.