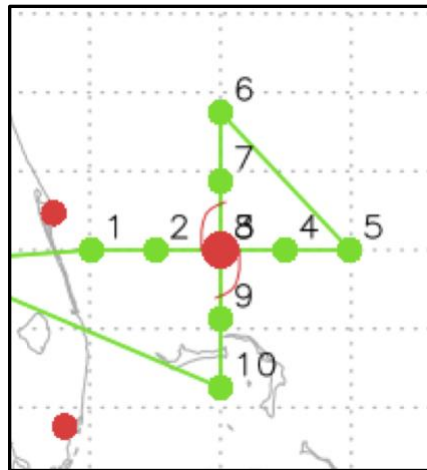**APPENDIX A**
Standard Patterns and Expendable Locations

Figure-4:

In-Pattern Duration: ~ 2 h 15 min (P-3), ~ 1 h 20 min (G-IV)
Leg Lengths: 105 n mi (195 km)
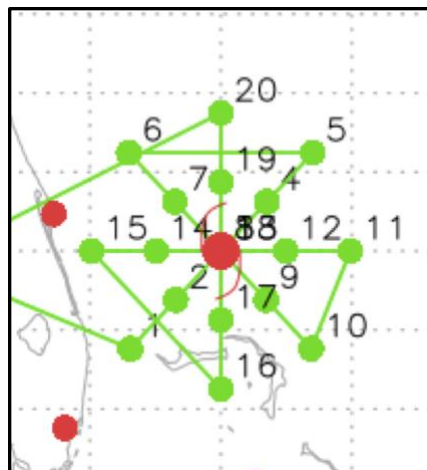**Dropsondes:** centers, mid-points and turn points of each leg [10 sondes total]

Rotated Figure-4:

In-Pattern Duration: ~ 5 h (P-3), ~ 2 h 55 min (G-IV)
Leg Lengths: 105 n mi (195 km)
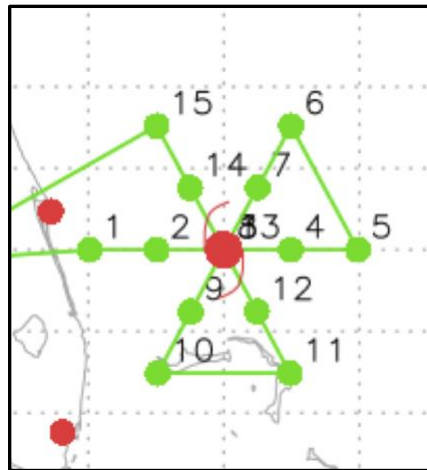**Dropsondes:** centers, mid-points and turn points of each leg [20 sondes total]

APPENDIX A
Standard Patterns and Expendable Locations

Butterfly:

In-Pattern Duration: ~ 3 h 25 min (P-3), ~2 h (G-IV)
Leg Lengths: 105 n mi (195 km)
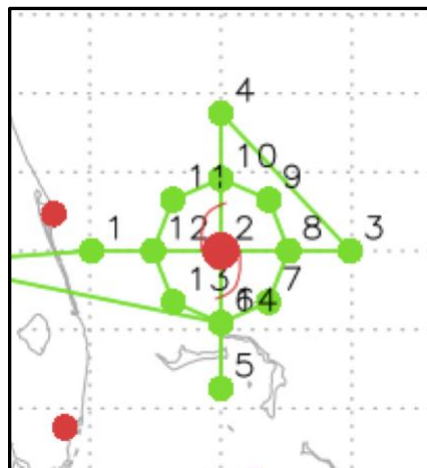**Dropsondes:** centers, mid-points and turn points of each leg [15 sondes total]

P-3 Circumnavigation:

In-Pattern Duration: ~ 4 h 5 min
Leg Lengths (Figure-4): 105 n mi (195 km)
Circumnavigation Radius: 50 n mi (95 km)
Dropsondes: center of 1st pass, end points of Figure-4 and vertices of octagon [14 sondes total]
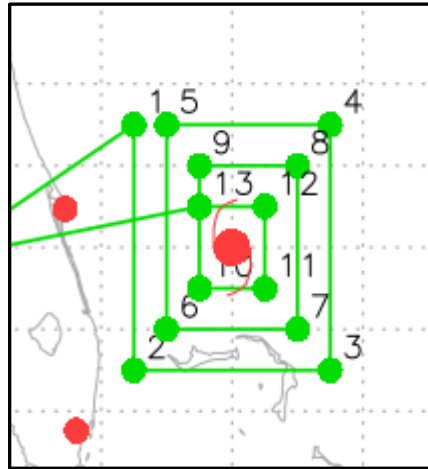
Square Spiral:

In-Pattern Duration: ~ 5 h 50 min (P-3), ~ 3 h 20 min (G-IV)
Leg Lengths: 180 n mi (335 km) on a side
Leg Increments: 0.5 deg (30 n mi)
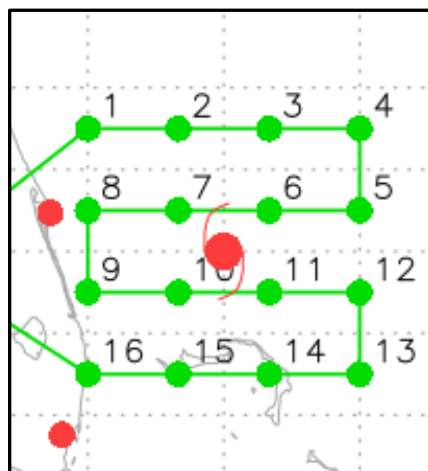**Dropsondes:** turn points [13 sondes total]

Lawn Mower:

In-Pattern Duration: ~ 4 h 20 min (P-3), ~ 2 h 25 min (G-IV)
Leg Lengths: 4 deg (240 n mi) x 3 deg (180 n mi) box
Leg Increments: 1.0 deg (60 n mi)
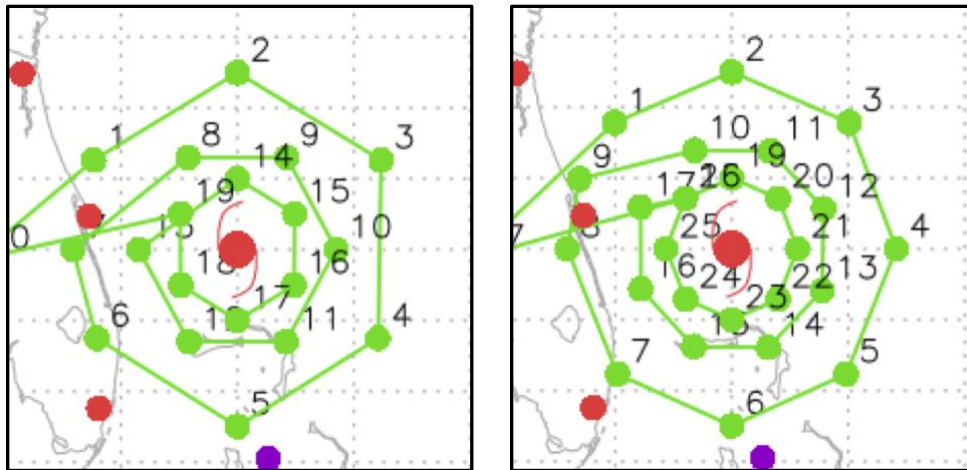**Dropsondes:** turn points and 2 equally spaced mid-points along E-W legs [16 sondes total]

G-IV Circumnavigation:

In-Pattern Duration: ~ 4 h 25 min (hexagon), ~ 4 h 35 min (octagon)
Circumnavigation Radii: 150, 90, 60 n mi (280, 165, 110 km)
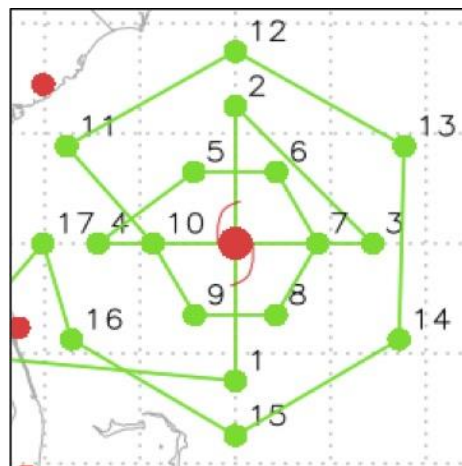**Dropsondes:** vertices of hexagon (octagon) [19 (26) sondes total]

G-IV Figure-4 with Double Circumnavigation:

In-Pattern Duration: ~ 6 h 20 min (G-IV)
Fig.-4 Leg Lengths: 150 n mi (275 km)
Circumnavigation Radii: 90, 210 n mi (165, 390 km)
Dropsondes: center of 1st pass, end points of Fig-4, vertices of inner & outer hexagons [17 sondes total]

APPENDIX A
Standard Patterns and Expendable Locations

G-IV Star (Star 1) & Star with Circumnavigation (Star 2):

In-Pattern Duration: ~ 4 h (Star 1), ~ 5 h 15 min (Star 2)
Inner Point Radius (Star 1 & 2): 90 n mi (165 km)
Outer Point Radius (Star 1 & 2): 210 n mi (390 km)
Circumnavigation Radius (Hexagon): 90 n mi (165 km)
Dropsondes: vertices of star (Star 1 & 2) and hexagon (Star 2) [13 (19) sondes total]

Note: for outer points: every 0.5° adjustment inward/outward, subtracts/adds ~45 min from/to the pattern
Note: for inner points: adjusting from 90 n mi to 60 n mi subtracts ~15 min from the pattern