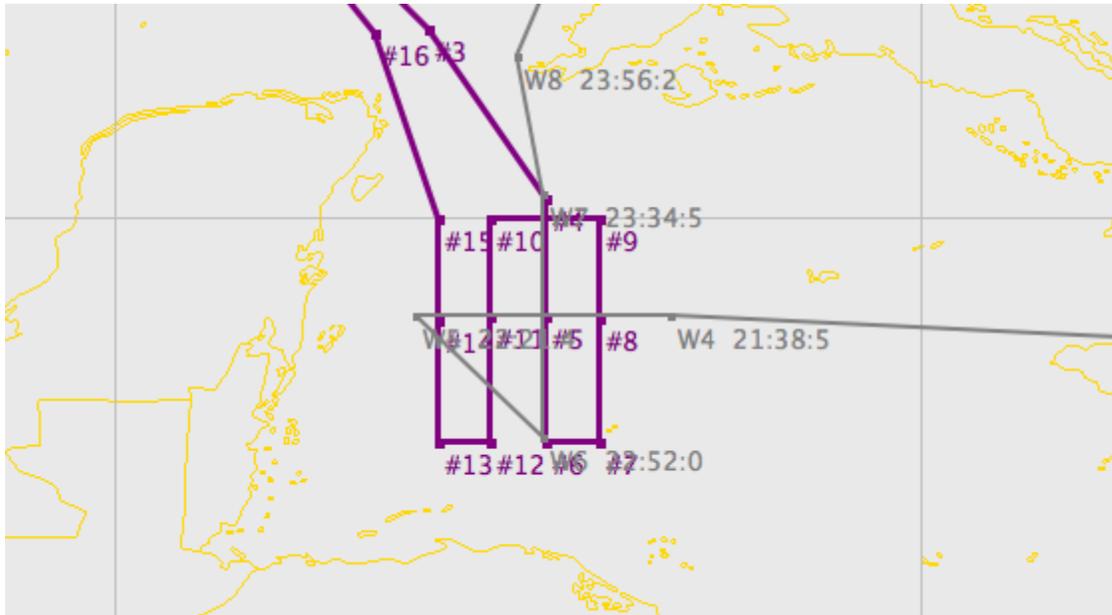


T.S. Karl was flown on the evening of 14 Sept 2010 from Ellington Field in Houston. The planned flight pattern was a series of four parallel north-south flight legs, separated by 35-40 km. The first leg was planned to be the one that the NOAA P-3 was flying at the time, presuming on-time take-offs for both. That leg was from north to south, the second leg just east of it, running south to north, and third leg (north to south) was just west of the first one, and the last leg to the west of the third one. These legs were approximately 300 km long. A drawing of the flight pattern is below, along with the planned NOAA P-3 flight (which did not take place due to equipment problems).



Take-off was planned for 2100 UTC and actually occurred at 2133 UTC.

Prior to the flight, the pilot expressed concern about the length of the flight and asked for options in the event that he felt that he needed to shorten it during operations. We directed him to cut short legs 3 and 4, i.e. not travelling the full distance to the south, should he decide that he needs to shorten it. As it turned out, that is what happened. At about halfway through leg 3, the aircraft turned west and then north to fly the northern half of leg 4.

The HIRAD instrument functioned nominally by all appearances. REVEAL had a short data outage at about 0018 UTC for several minutes, and then again late in the flight on the return home. These outages had no impact to our mission.

A separate report by the WB-57 project office will say more about flight details (e.g. altitude) and why the flight pattern was shortened.

The storm developed an evident circulation just prior to and during our flight, and was identified as tropical storm Karl during that time. An image of the GOES 13 IR data, along with the WB-57 planned and actual (thin plum-colored line) flight track, is below. The WB-57 flight pattern was very near to the

center of circulation, as planned. Unfortunately, the shortening of legs 3 and 4 resulted in lack of data in the area directly south of the circulation center. Landing occurred at 0327 UTC (10:27 CDT).

