

High Altitude MMIC Sounding Radiometer (HAMSR)

TCSP Field Campaign

Flight Data Summary

July 15, 2005

I. High Level Summary

The instrument behaved normal during this flight. This was the first time in Costa Rica that LN2 load was used under the radome during the pre-flight power-on.

Pilot debrief: Fairly uneventful. P3 took off about 1 hour before ER-2 and the ER-2 flight was coordinated with it. Pilot reported that most interesting weather appeared (at least to him) to be between waypoints 22 and 23 (near end of flight; see debrief notes).. Pilot did observe some lightening during the flight. Flight plan was out to the West, then North, then back East towards Guatamala/Mexico border, and finally back South-East off the coast to return to San Jose.

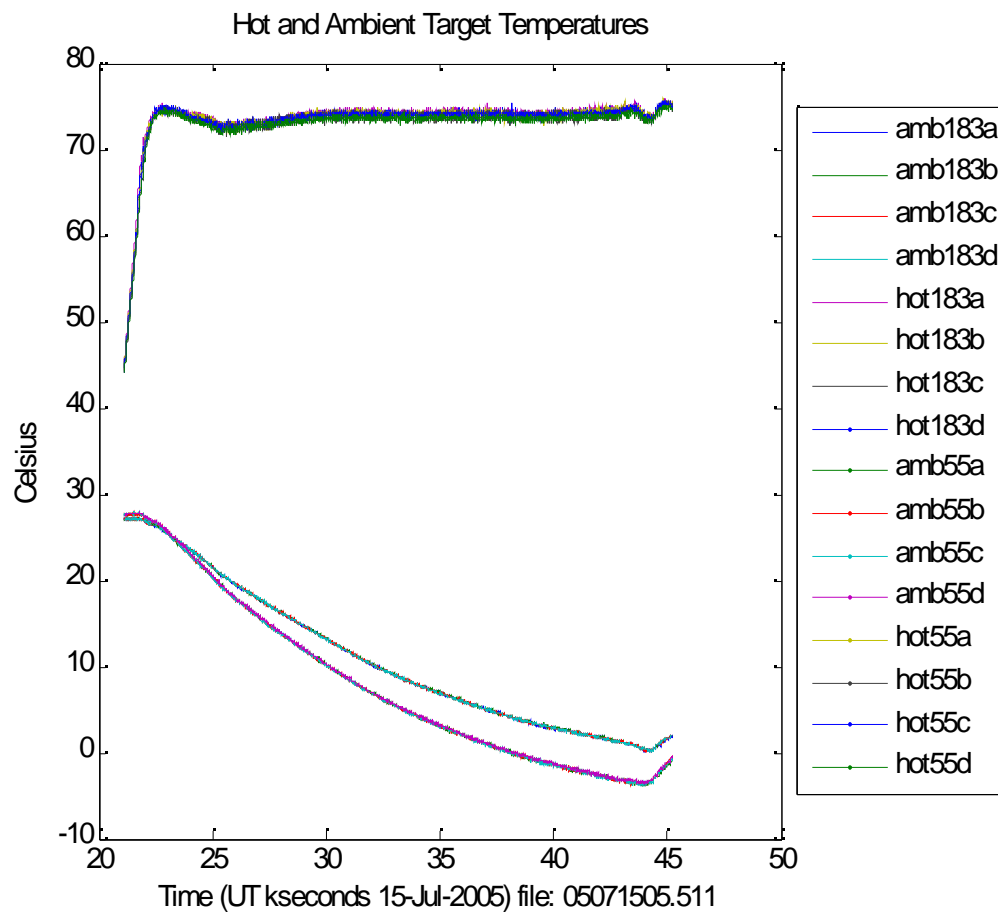
In reviewing the data after the flight it was noted that there was an oscillation observed in the 182.31/184.31 channel calibrated brightness temperature. In fact, reviewing previous data sets from earlier flight reveals that this oscillation was present, but to a lesser degree, and not very notable during the ferry flight. This behavior will continue to be observed.

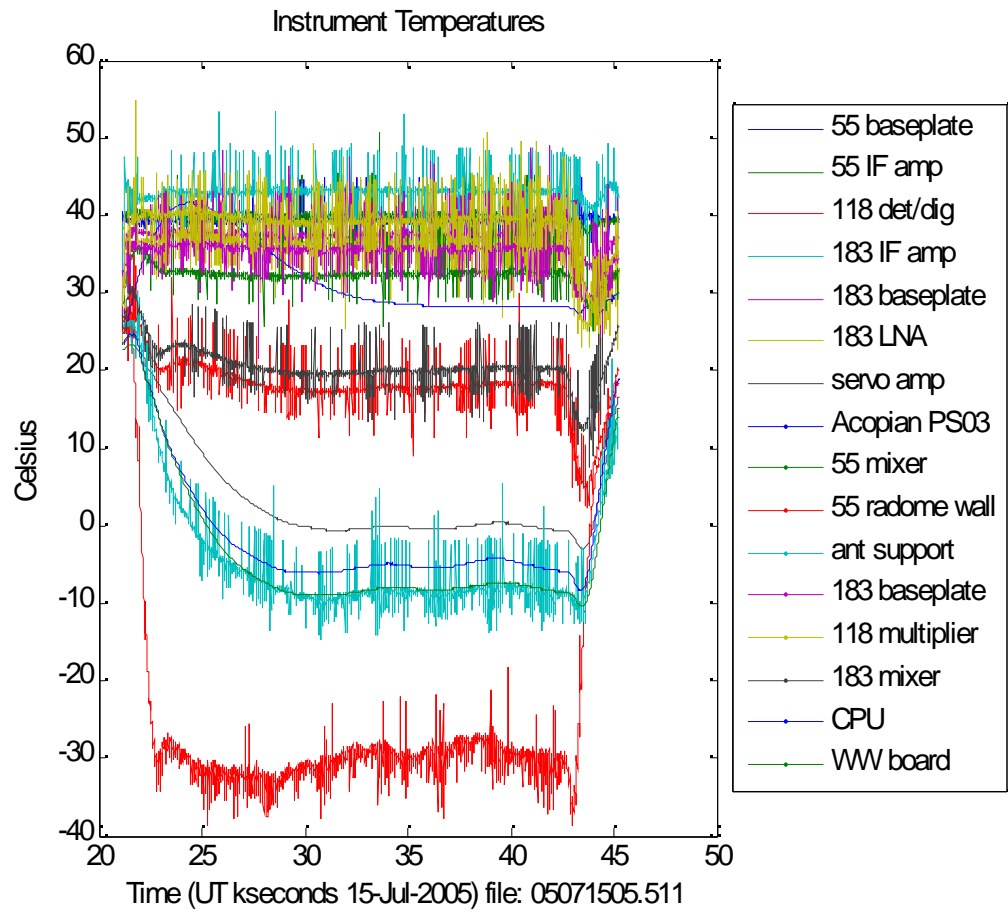
II. Instument State and Parameters

Instrument Power	ON
Fan Power	ON
Pod Heaters	ON
Seal Around Pod Window/Radome	Nothing additional added to block airflow
LN2 Load Used Pre-Flight	YES
Pre-Flight Data File Name	05071502.100
Flight Data File Name	05071505.511

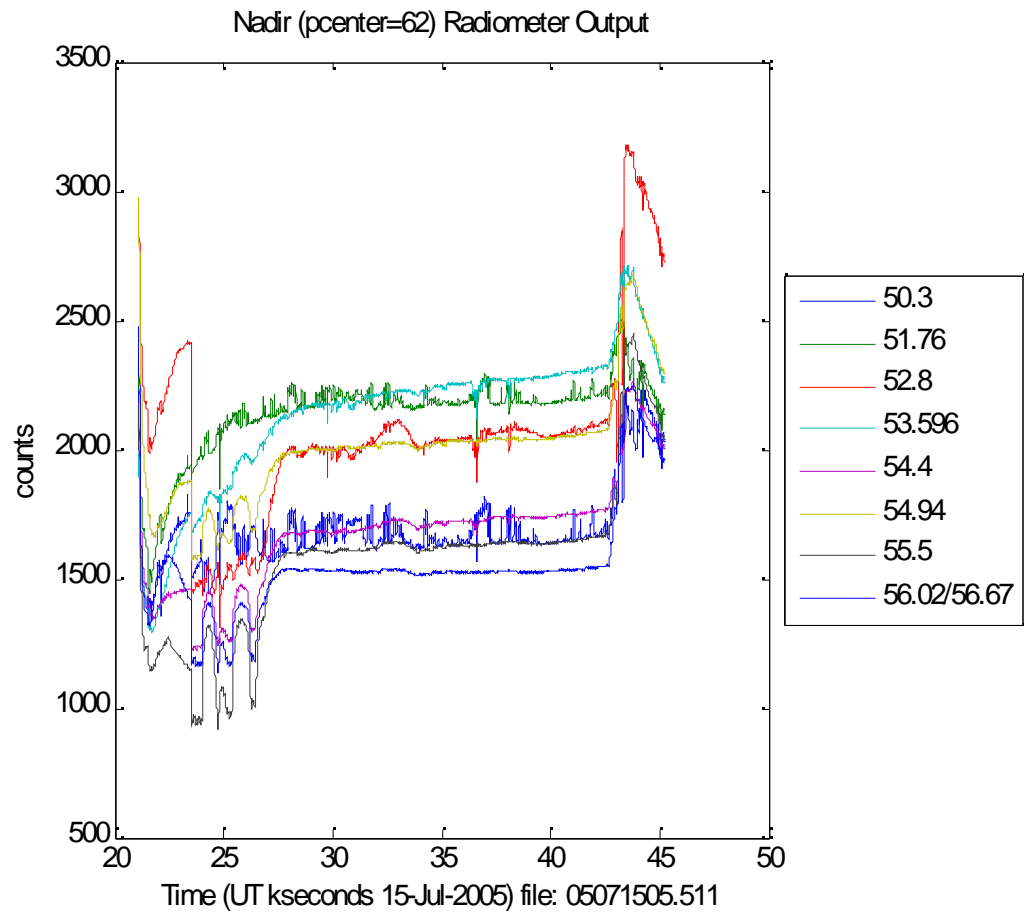
III.Data (nfold = 2 for data presented here)

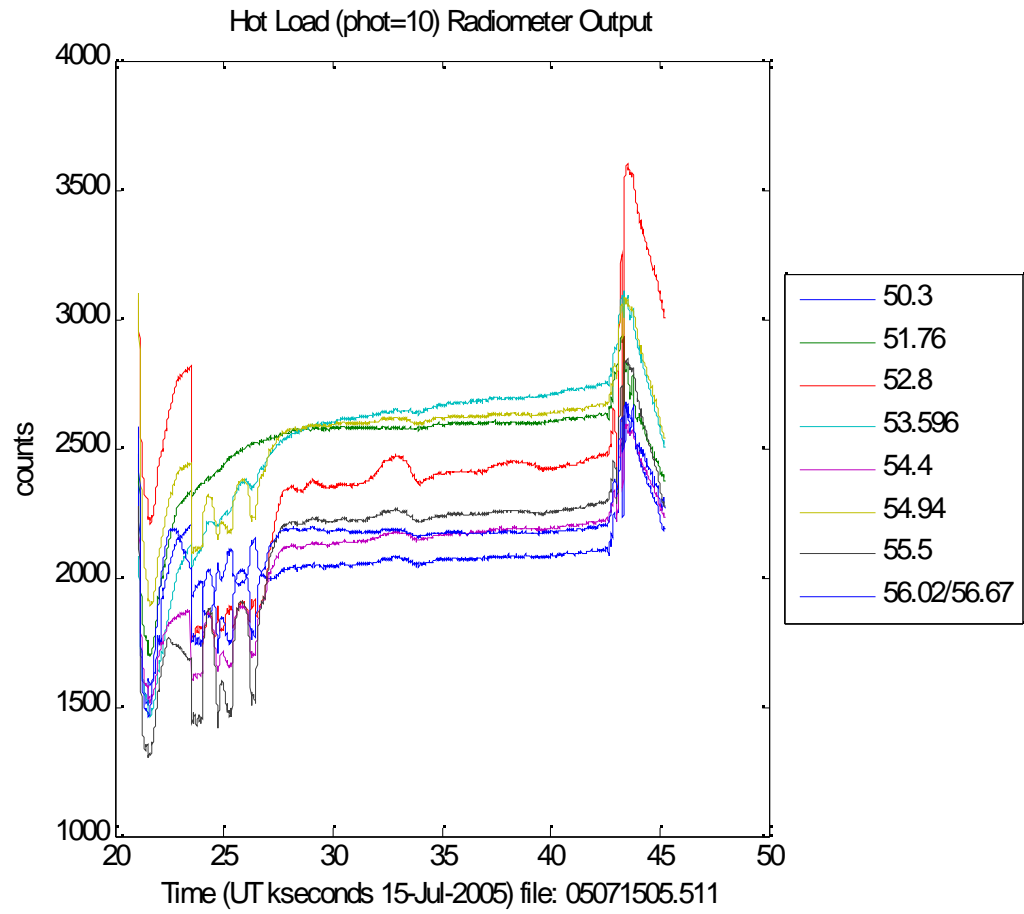
III-a. Physical Temperatures

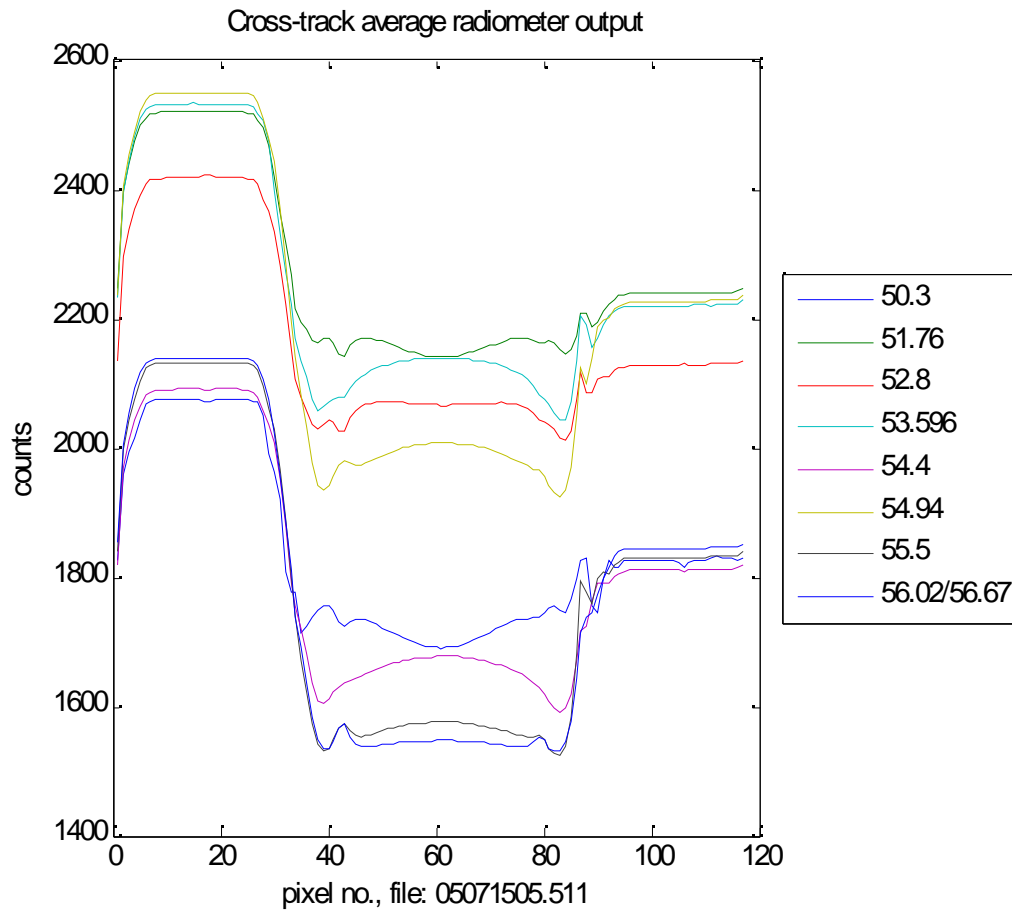


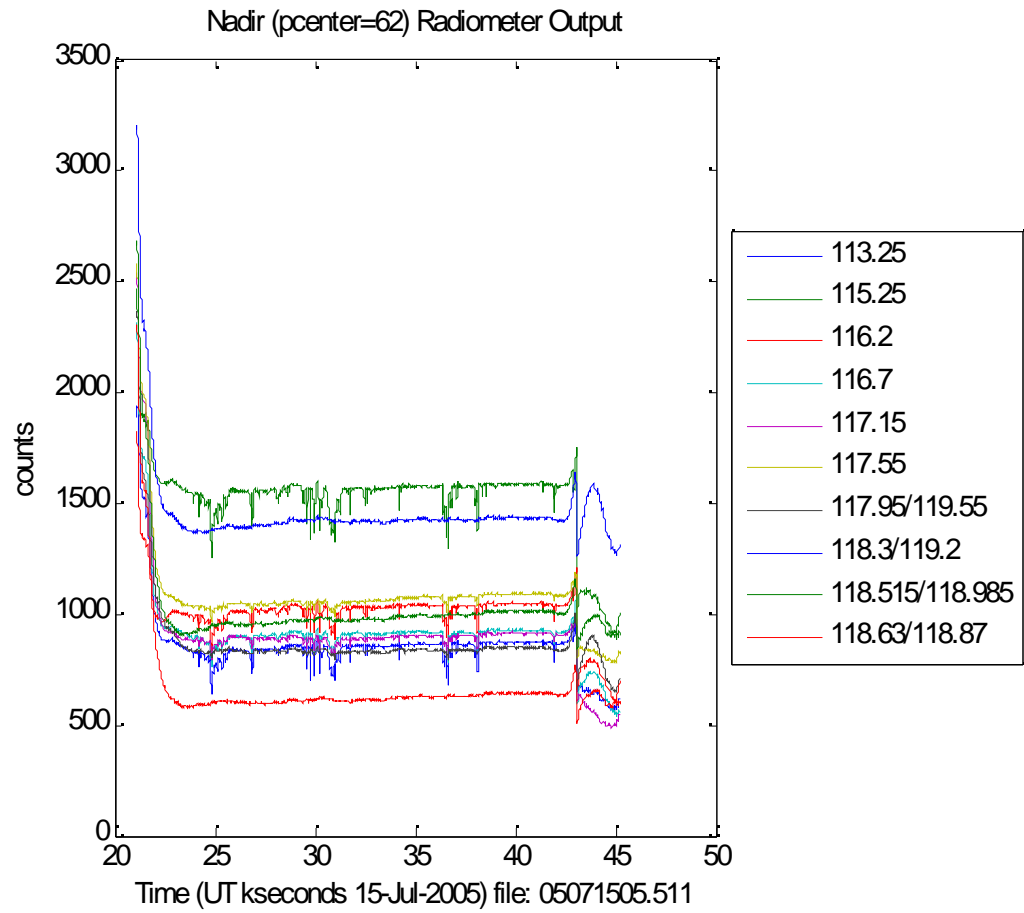


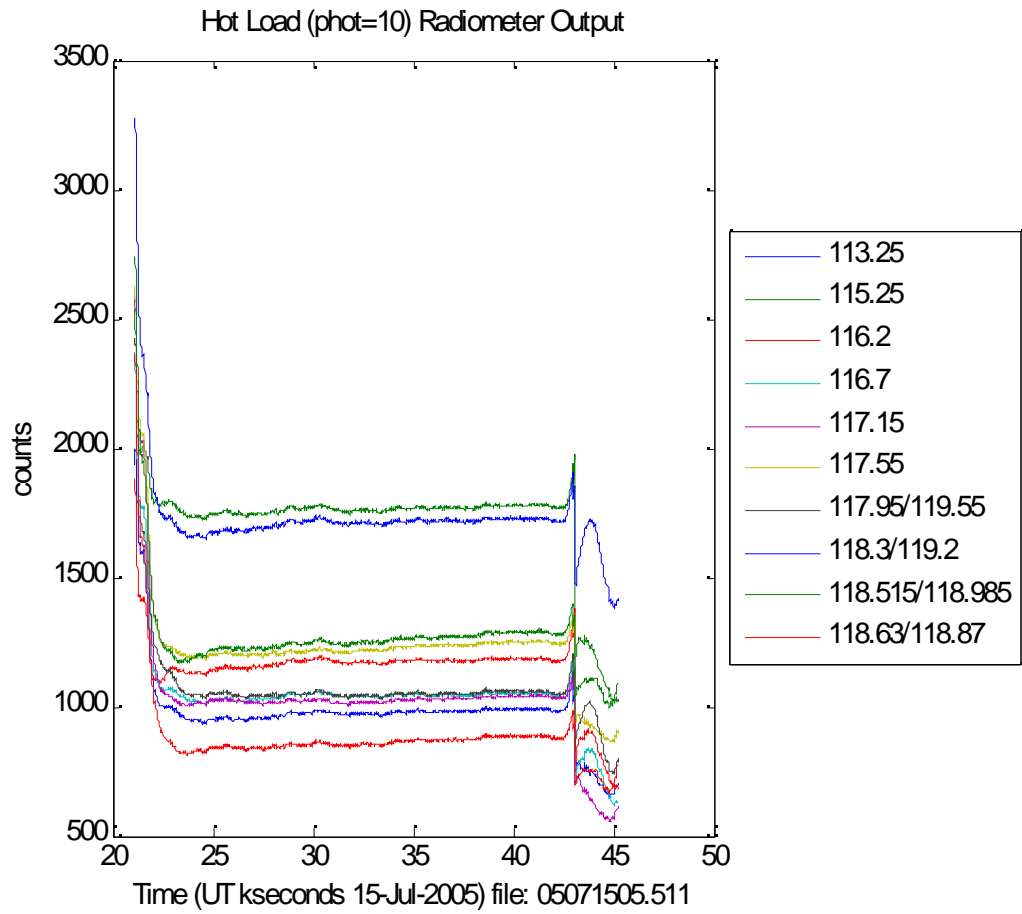
III-b. Digitizer Counts

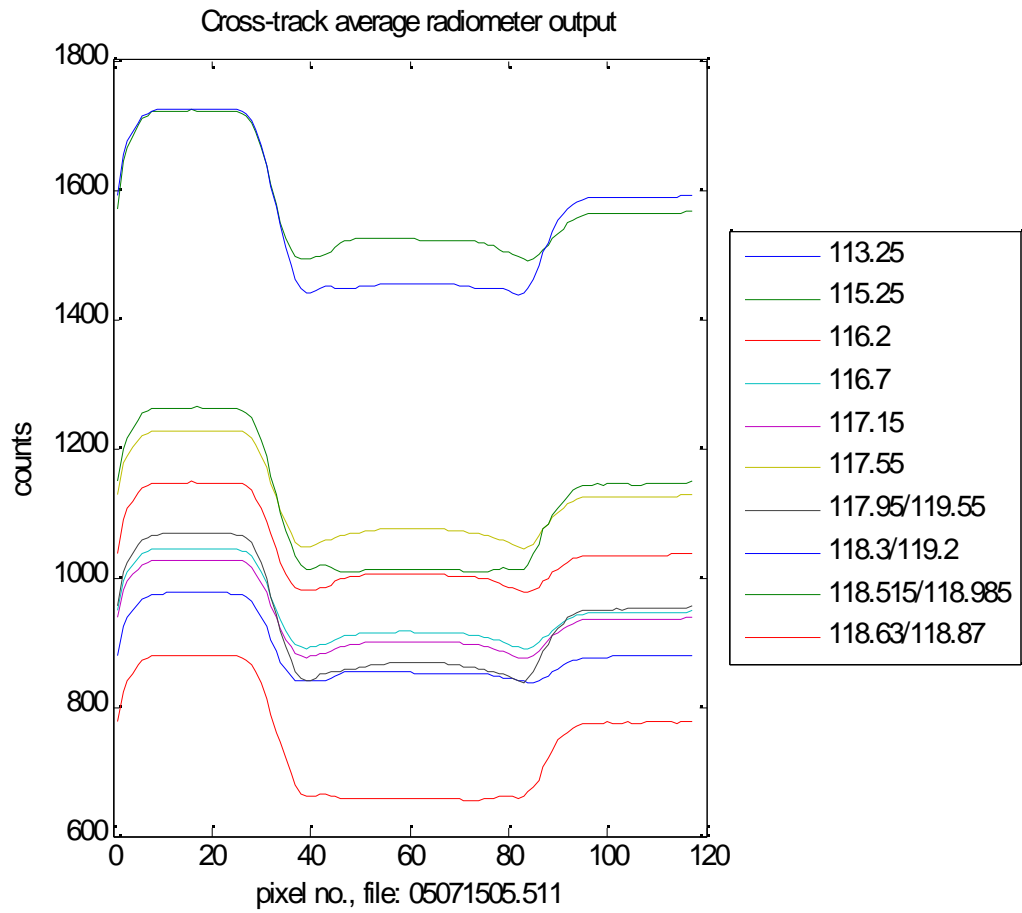


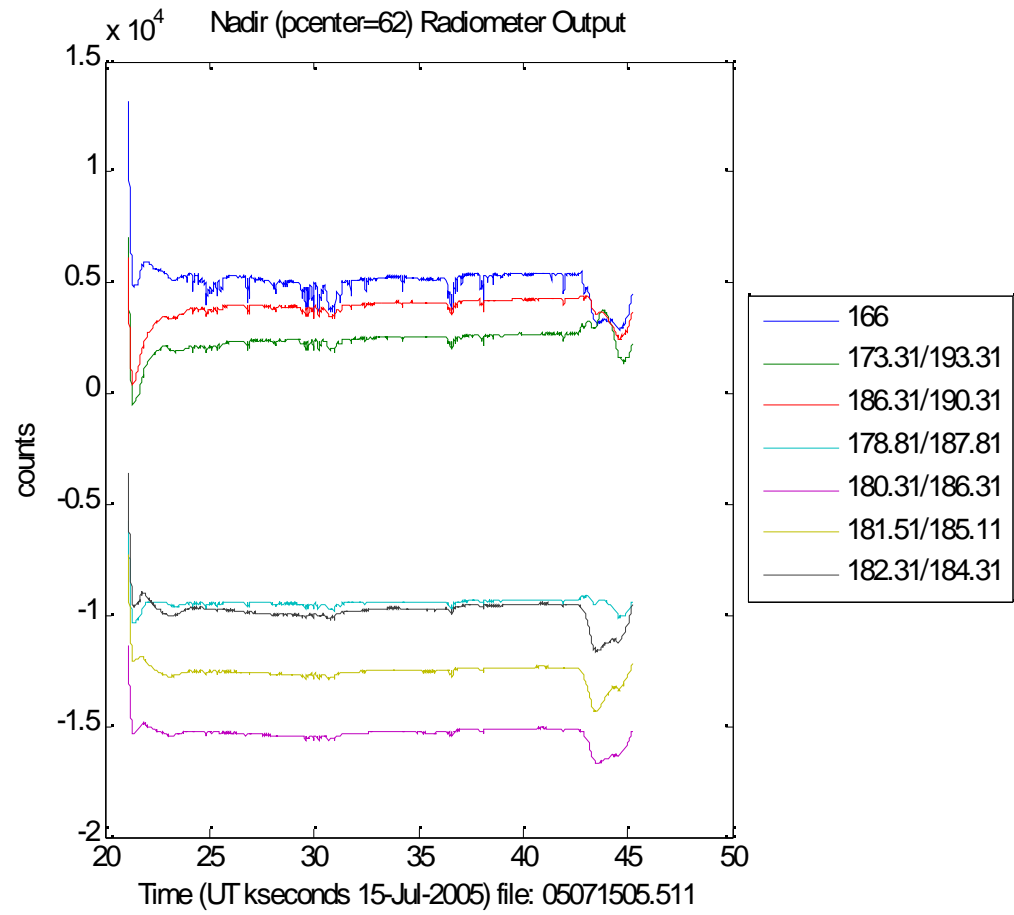


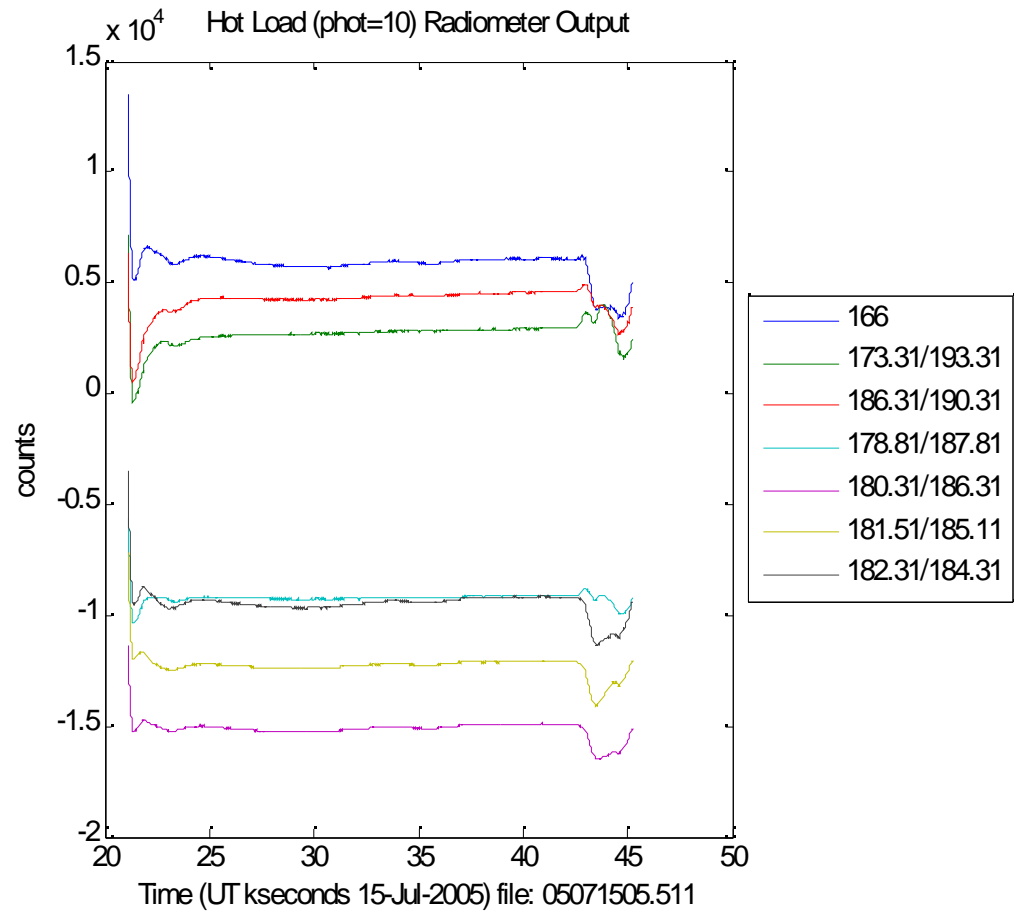


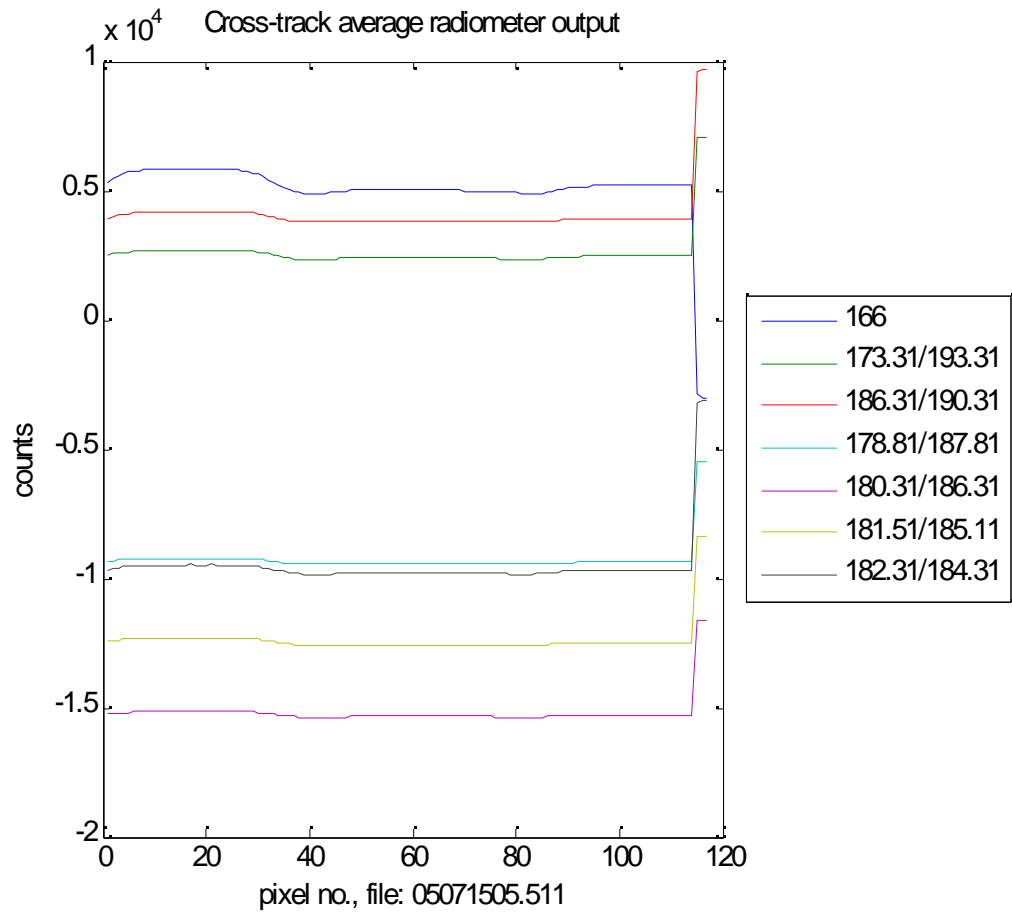




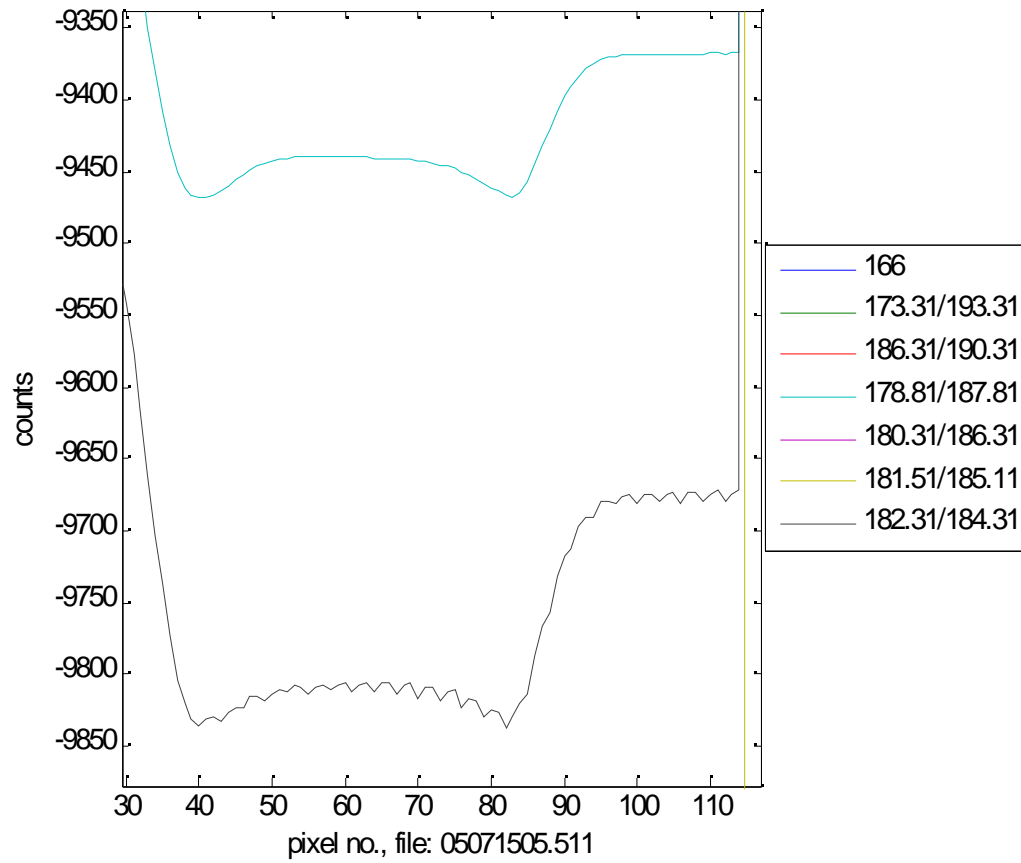




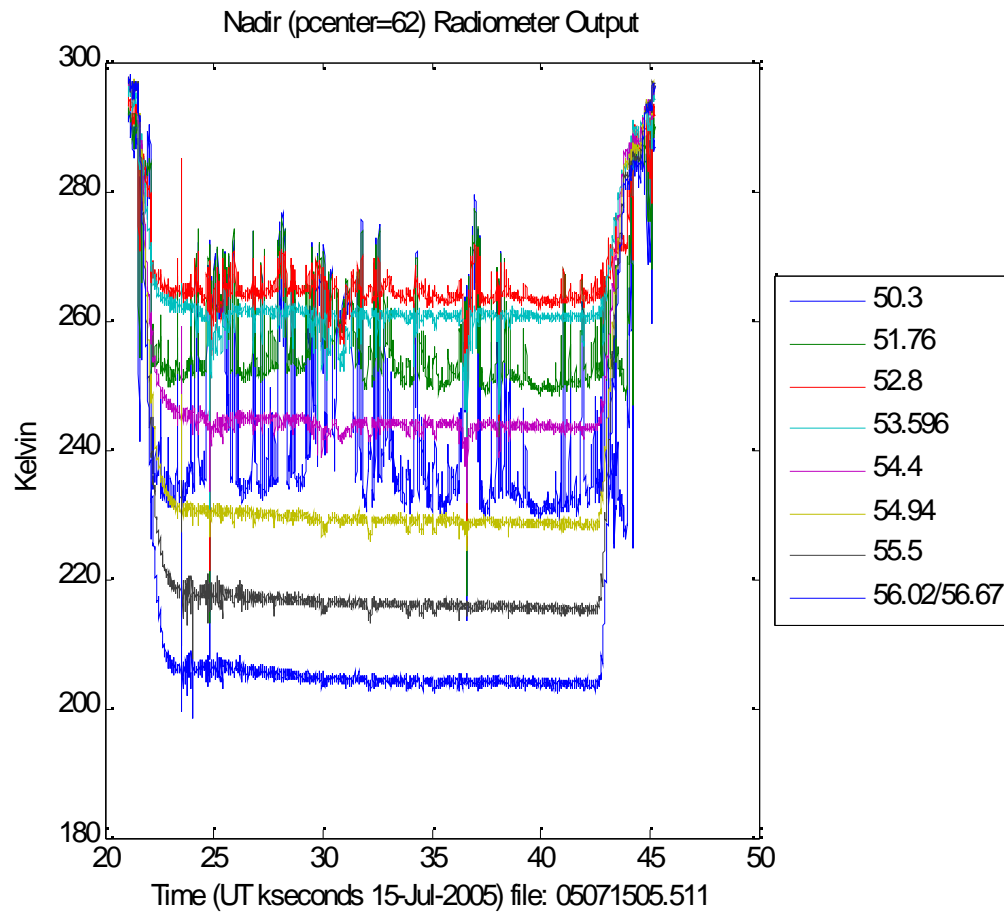


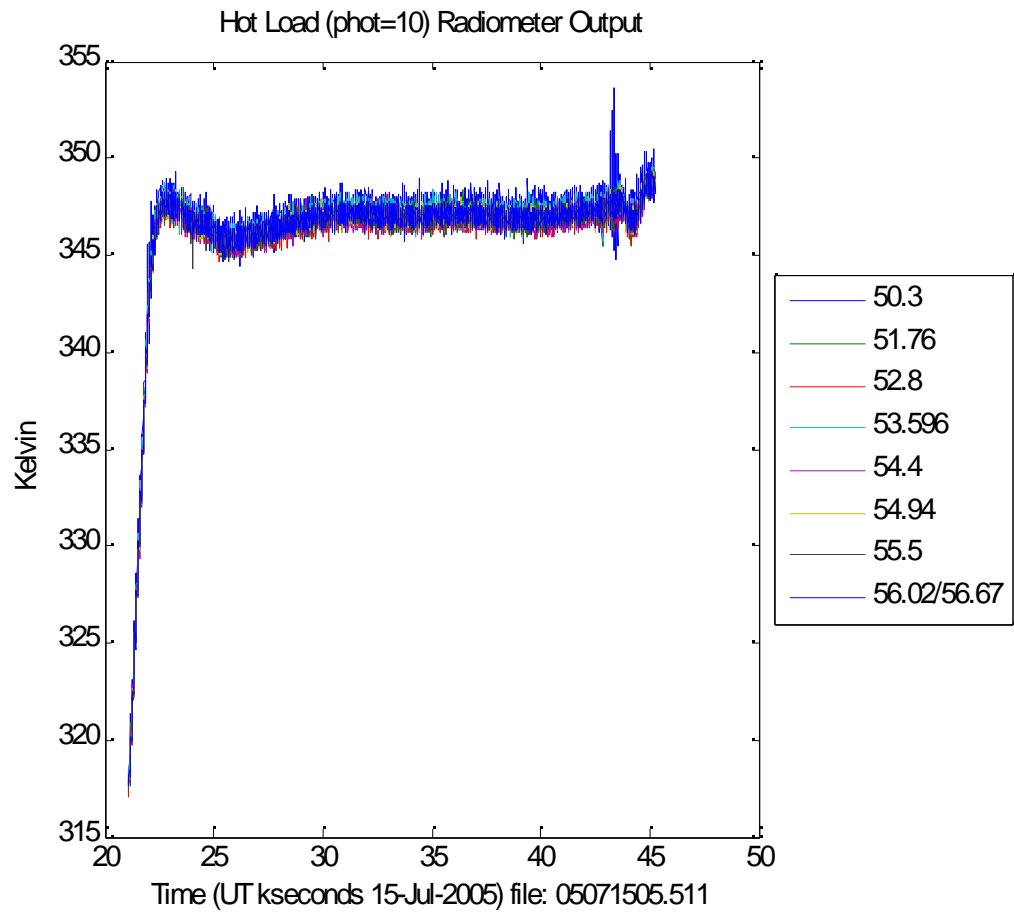


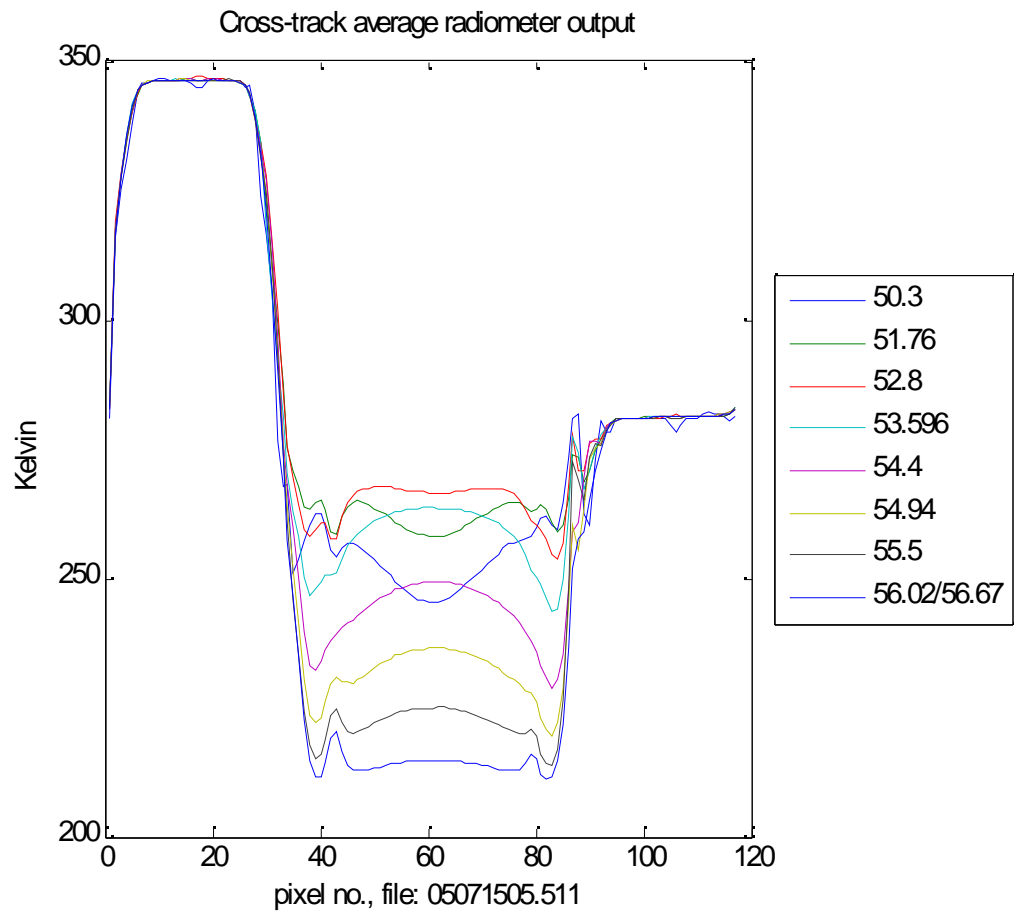
Cross-track average radiometer output

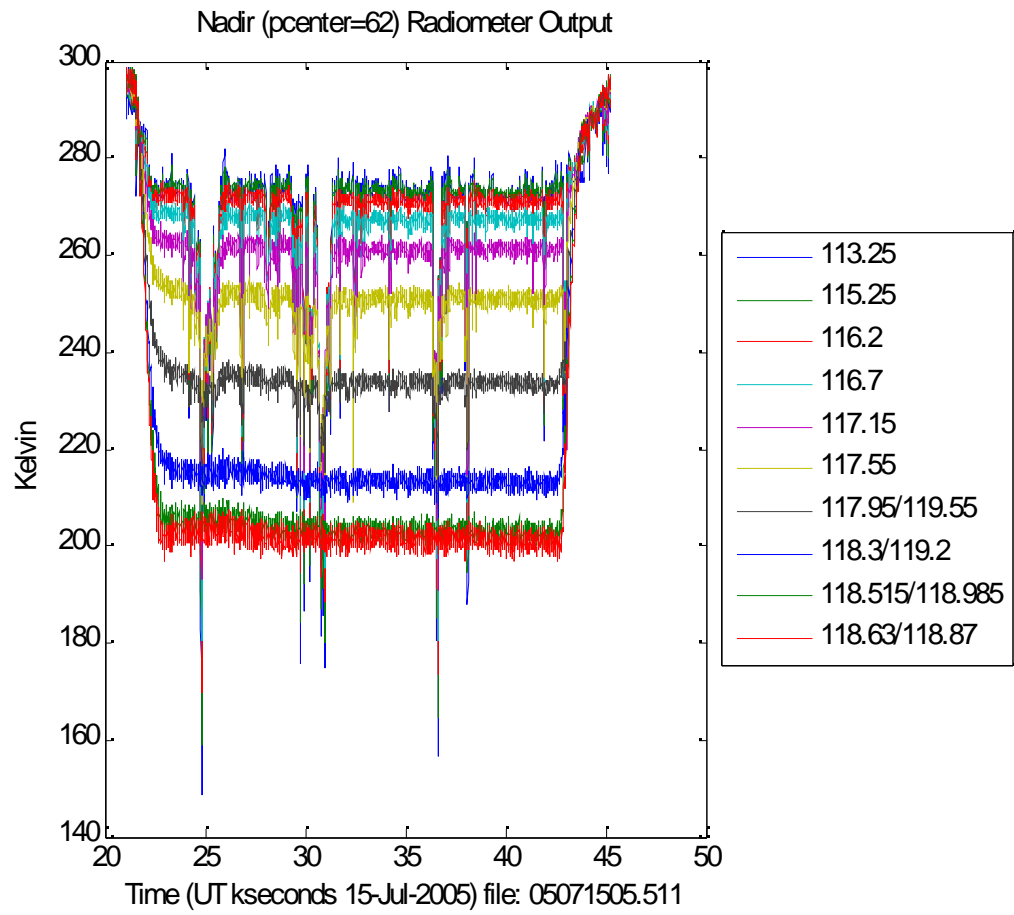


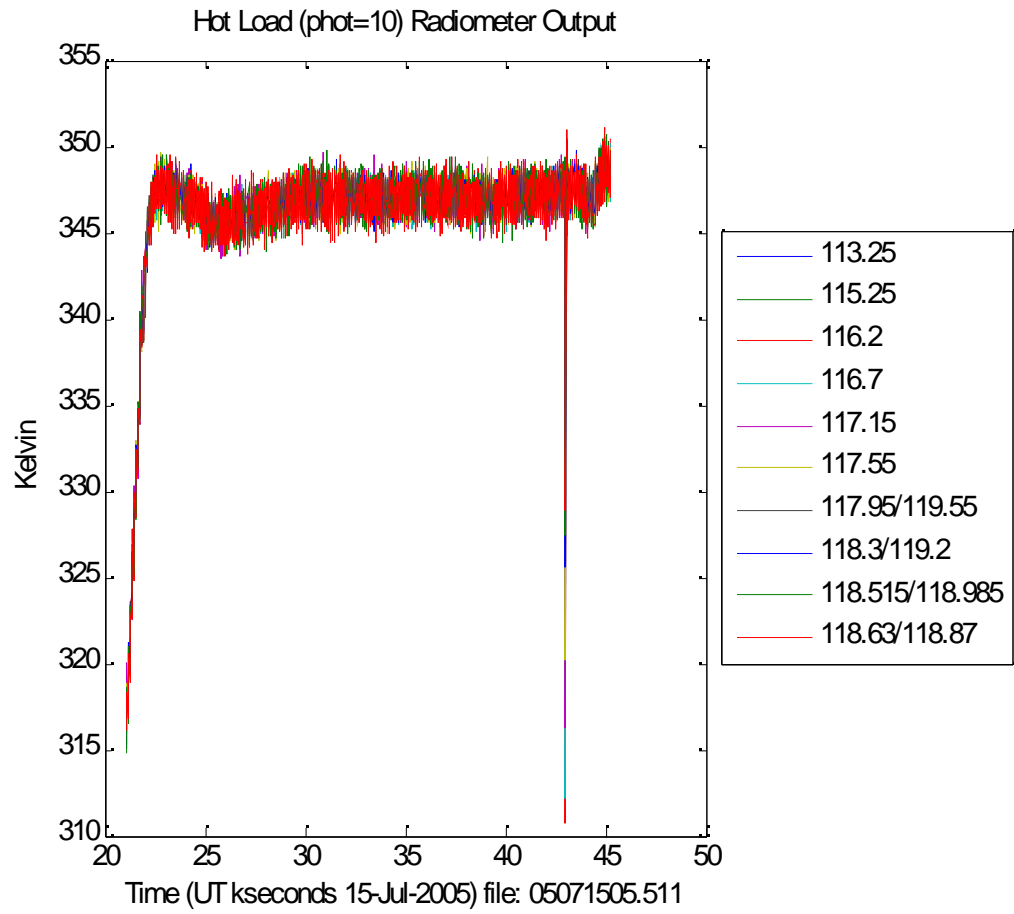
III-c. Calibrated Brightness Temperatures

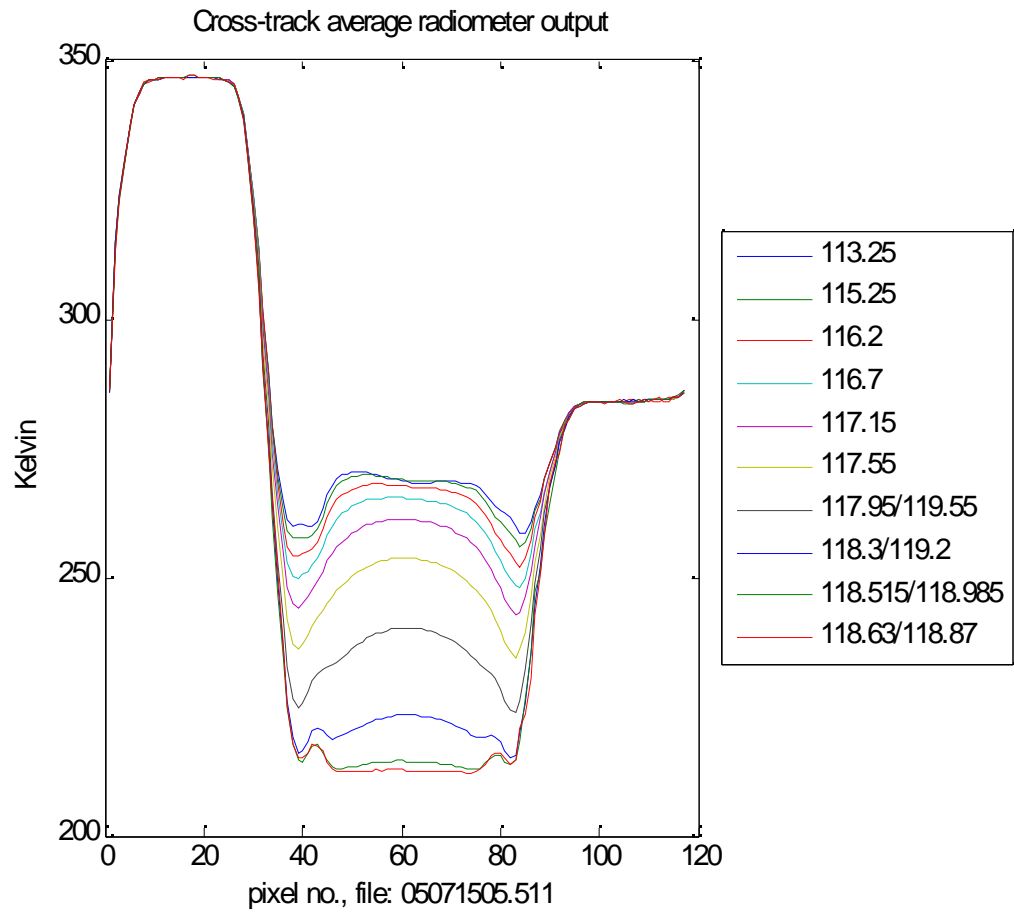


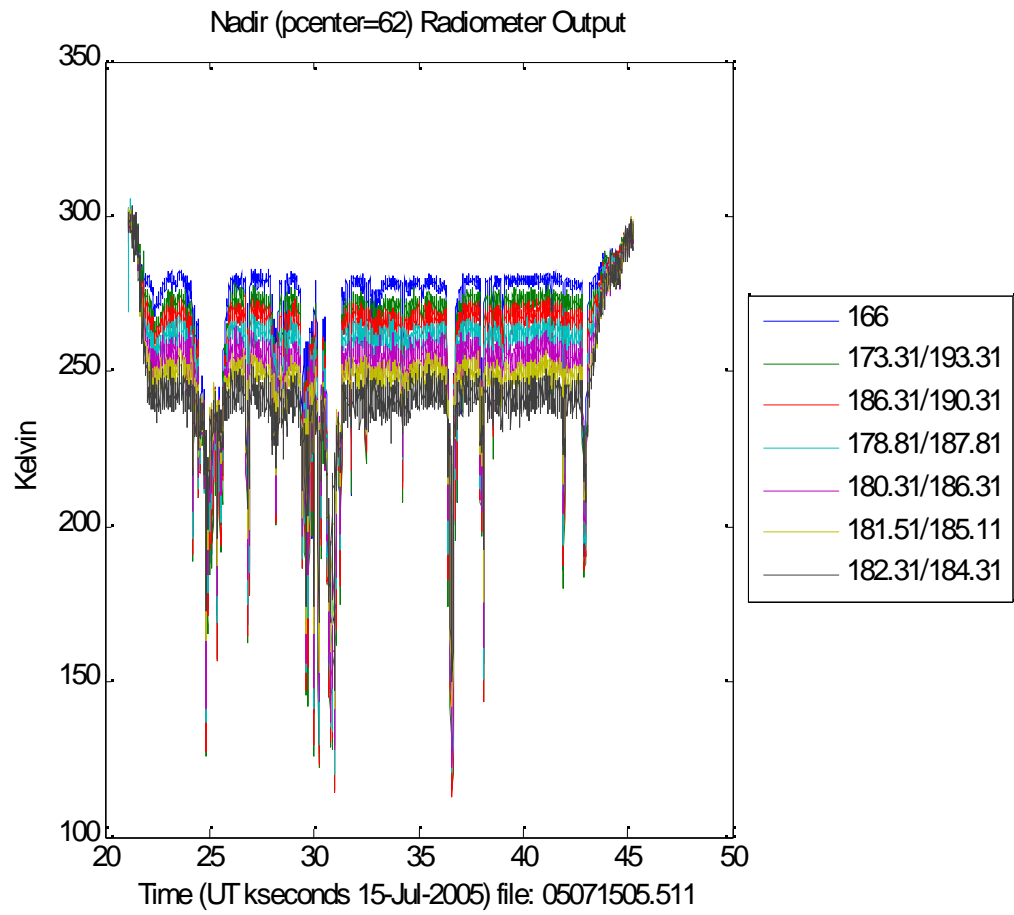


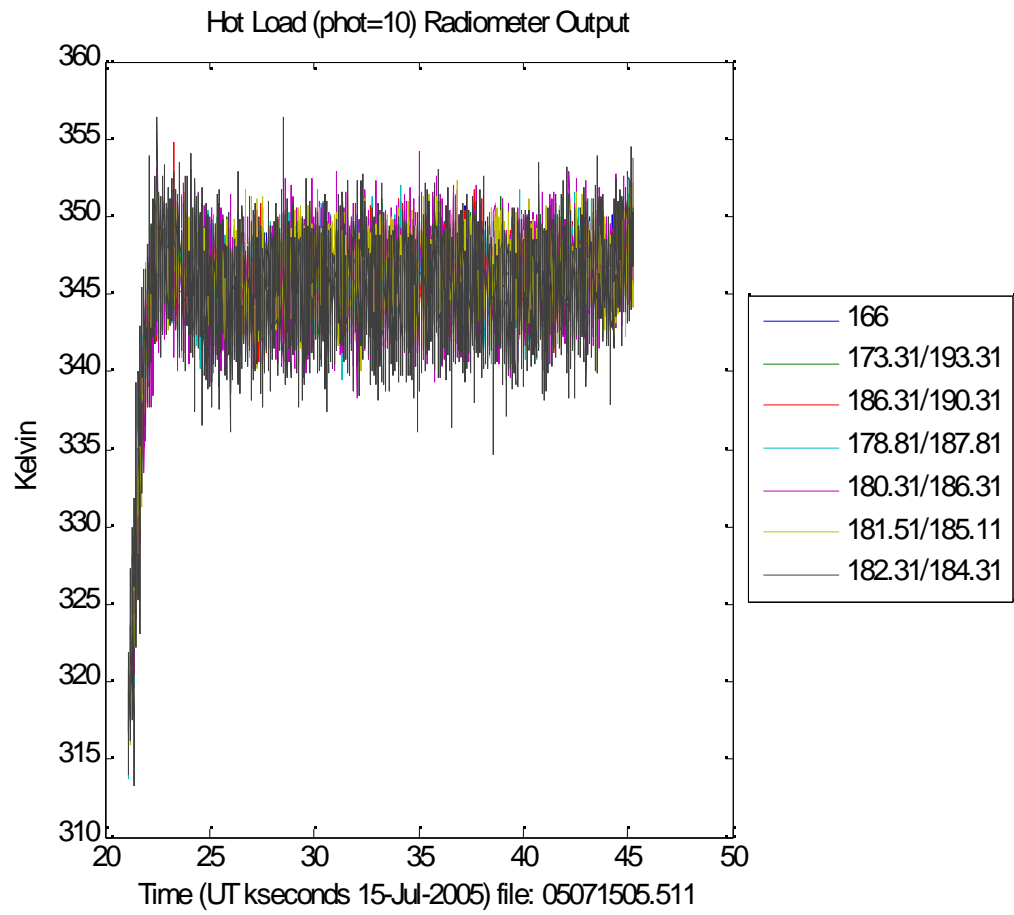


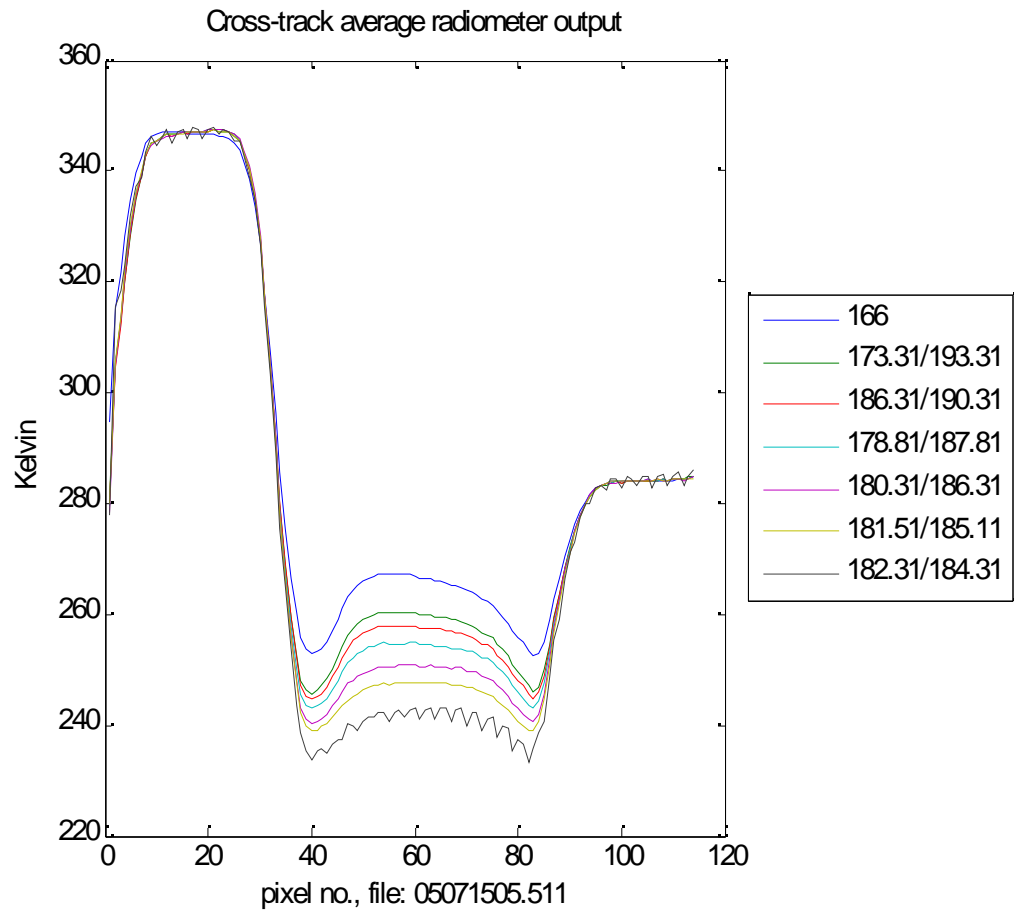






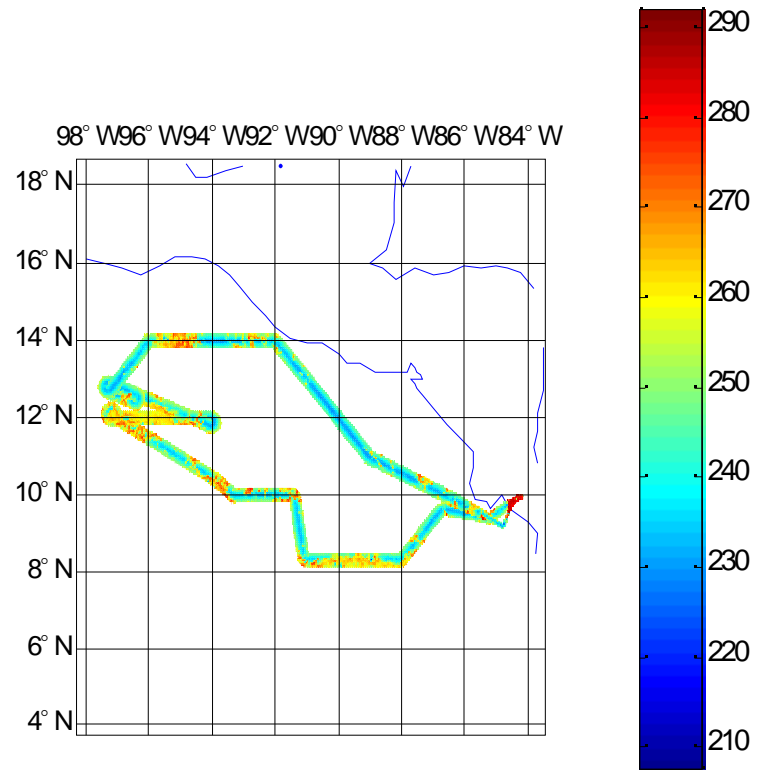




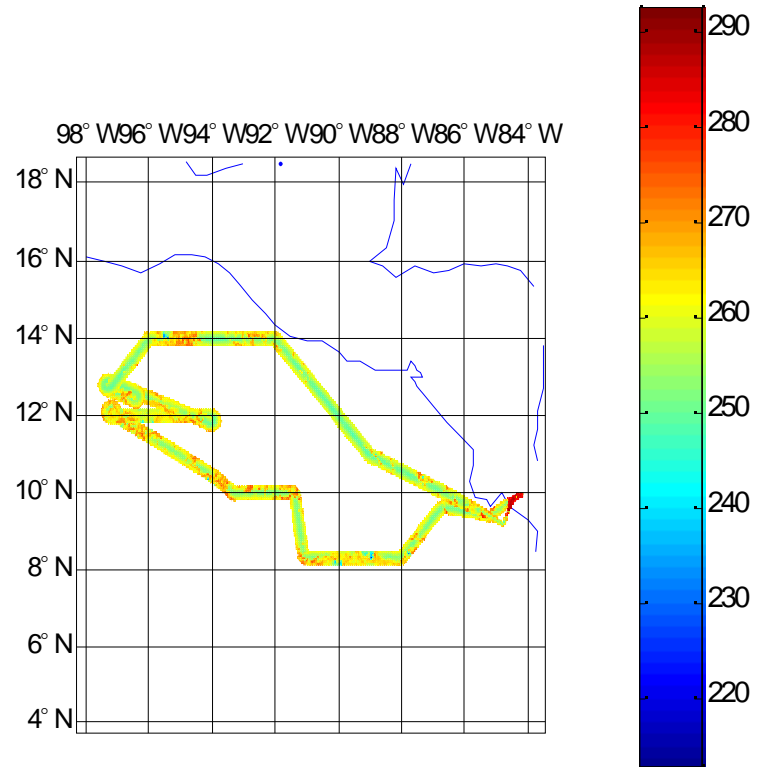


III-d. Selected Maps (nfold = 5 for map plots)

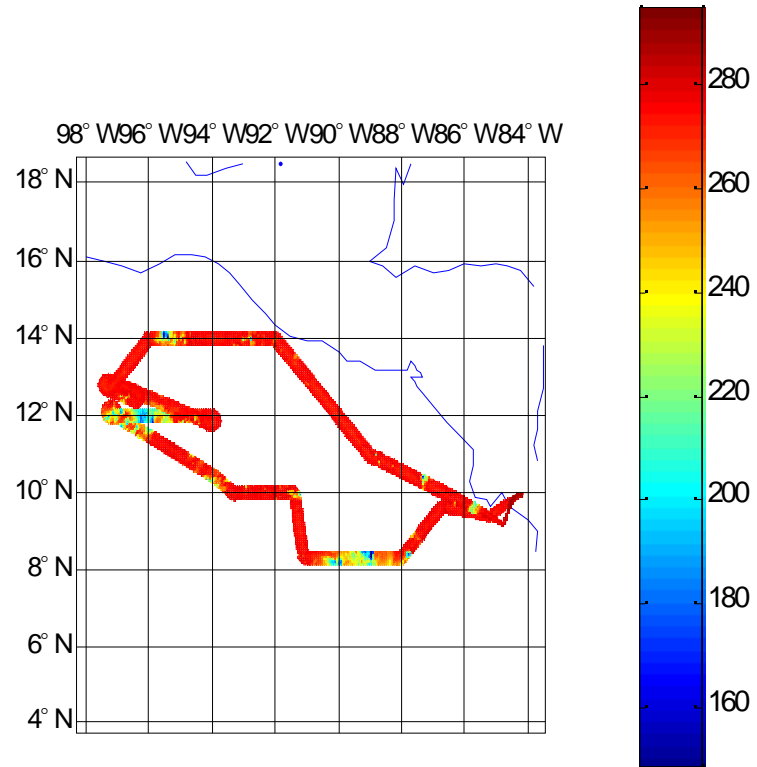
50.3 GHz brightness temperature(surface)
15-Jul-2005 05:51:47 -- 12:33:53



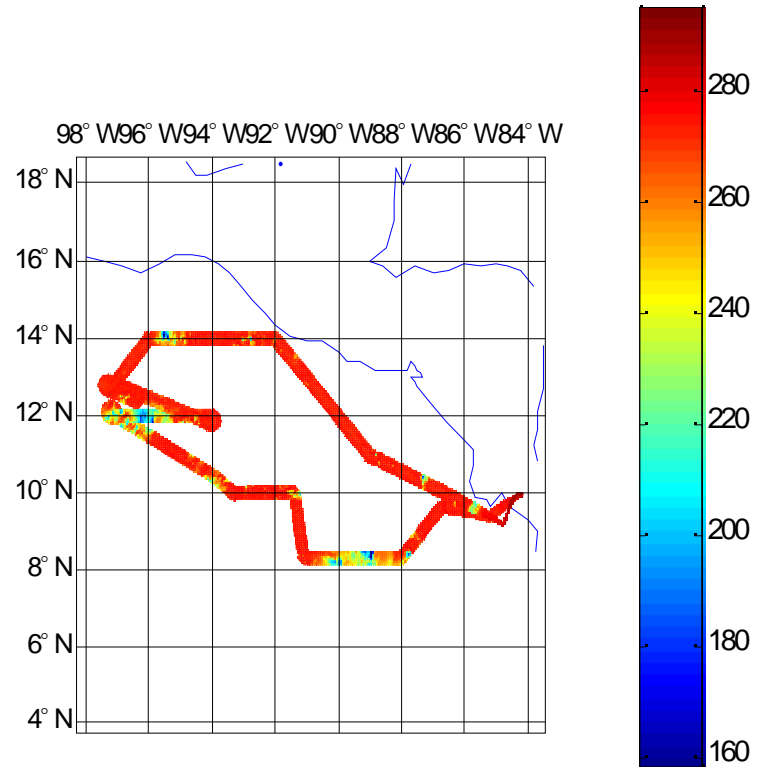
51.76 GHz brightness temperature(surface)
15-Jul-2005 05:51:47 -- 12:33:53



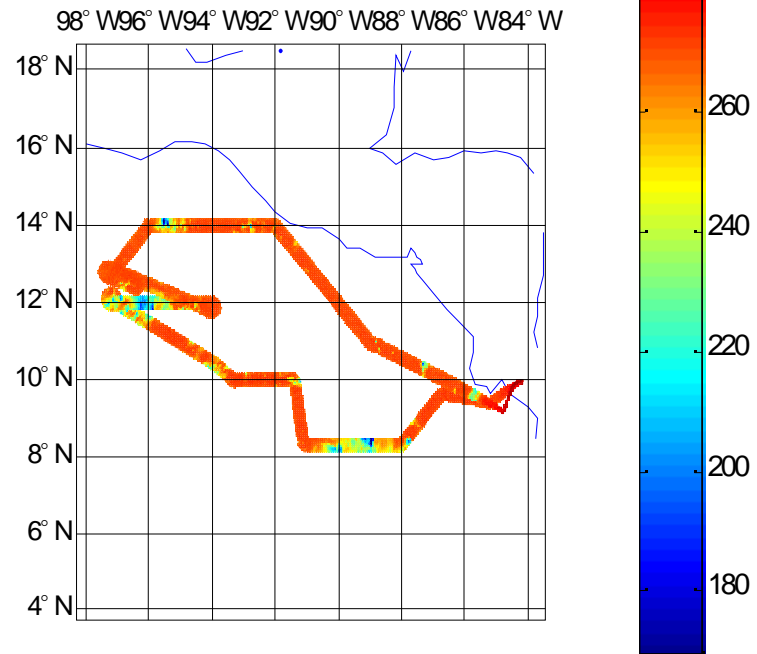
113.25 GHz brightness temperature(surface)
15-Jul-2005 05:51:47 -- 12:33:53



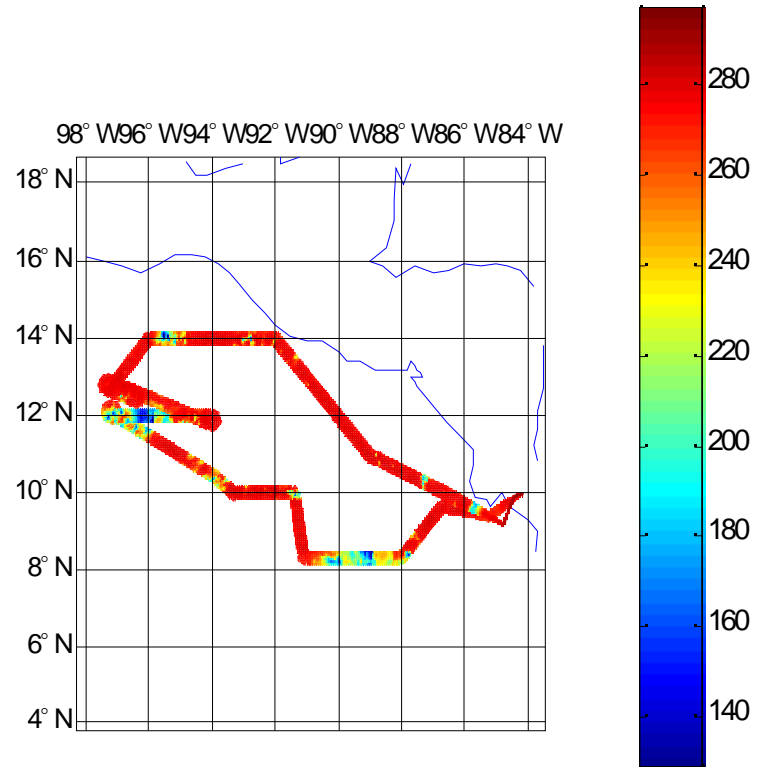
115.25 GHz brightness temperature(surface)
15-Jul-2005 05:51:47 -- 12:33:53



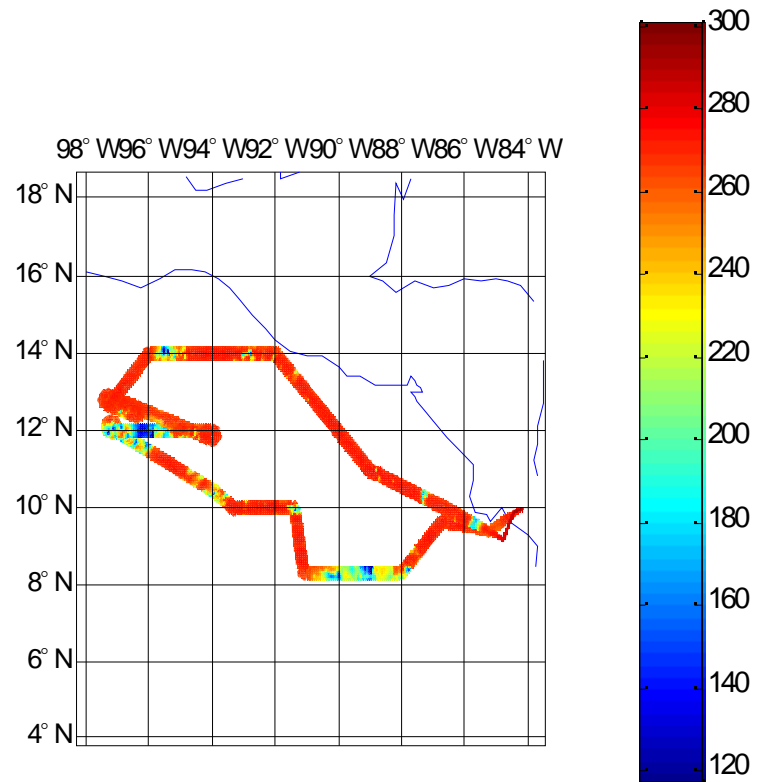
116.2 GHz brightness temperature(surface)
15-Jul-2005 05:51:47 -- 12:33:53



166 GHz brightness temperature
15-Jul-2005 05:51:51 -- 12:33:31

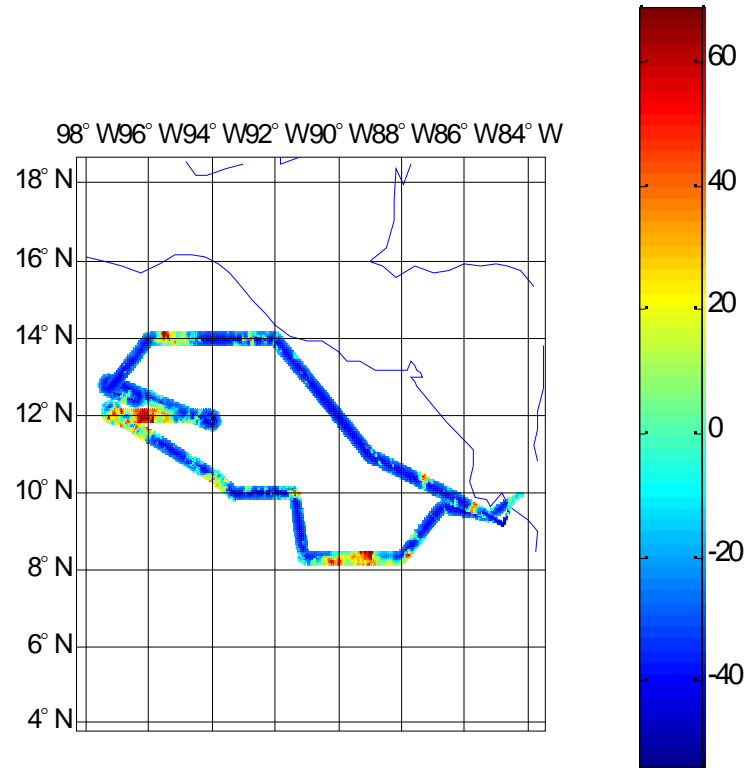


173.31/193.31 GHz brightness temperature
15-Jul-2005 05:51:51 -- 12:33:31

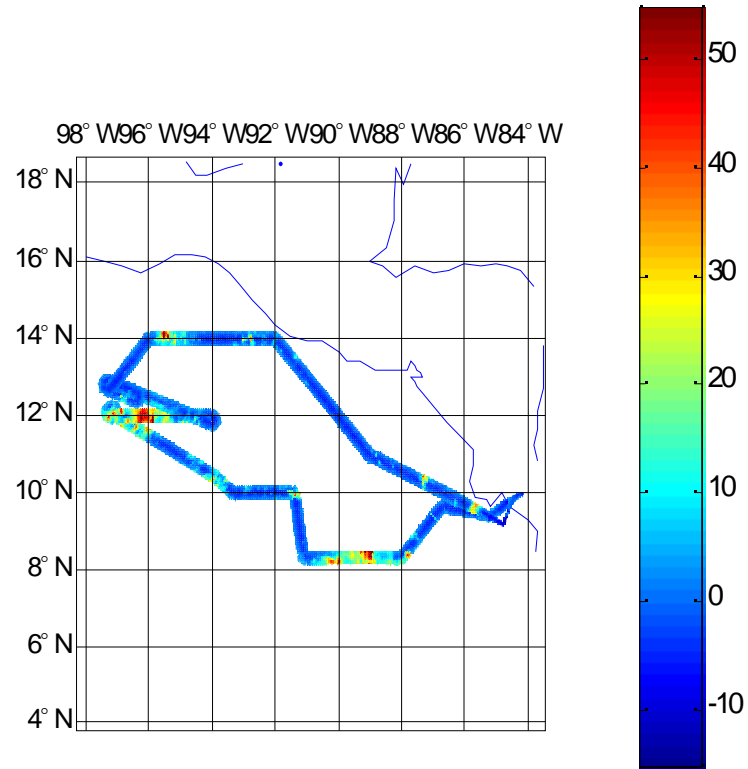


III-e. Selected 55-118 Ghz Radiometer Difference Maps

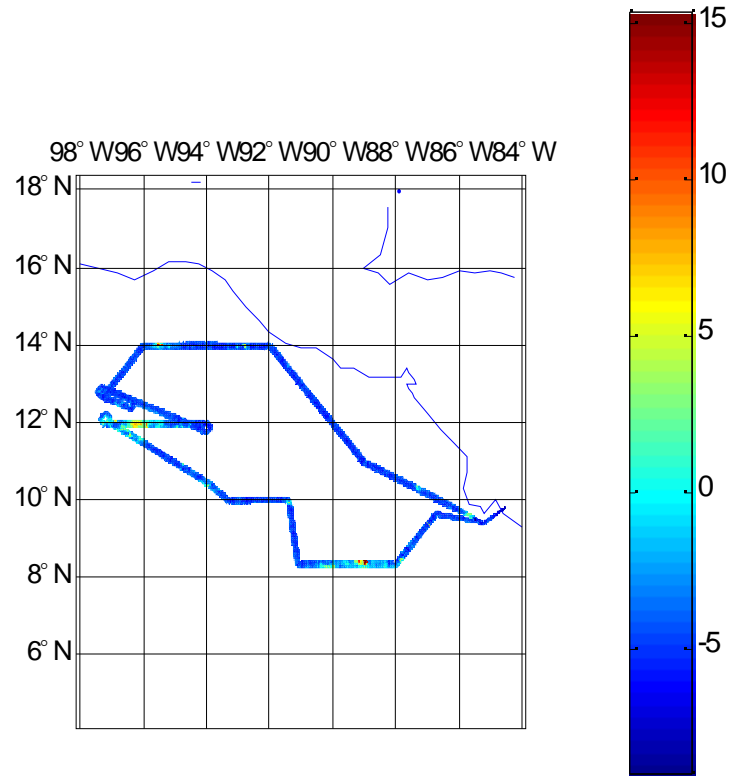
50.3-115.25 GHz brightness temperature difference(surface)
15-Jul-2005 05:51:51 -- 12:33:31



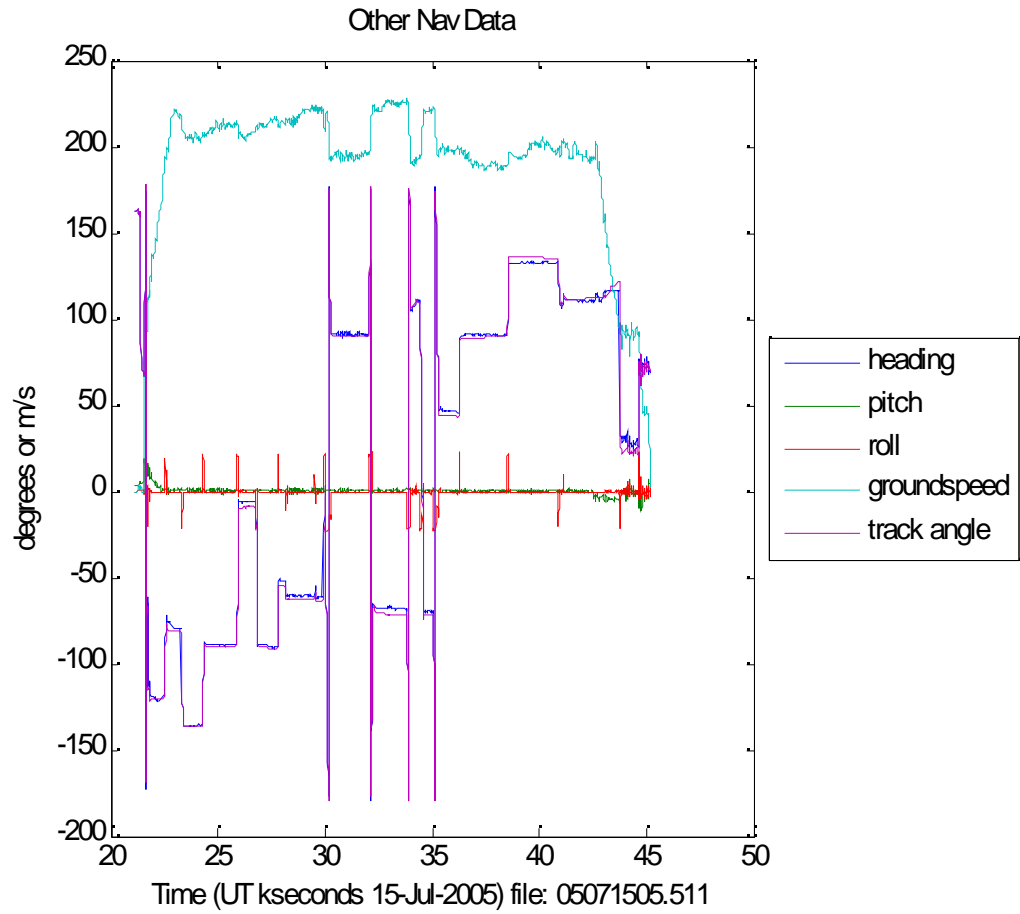
52.8-116.7 GHz brightness temperature difference(1000mB)
15-Jul-2005 05:51:51 -- 12:33:31



54.94-117.95/119.55 GHz brightness temperature difference(250mB)
15-Jul-2005 05:51:51 -- 12:33:31



III-f. Flight Nav Data



Flight Track, file: 05071505.511

