SSMIS Data at RSS

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Remote Sensing Systems (RSS) has provided compilations of satellite microwave data and products for roughly two decades

They are now starting to produce datasets and products for the SSMIS sensors

- F16 is available now
- F17 is just being released

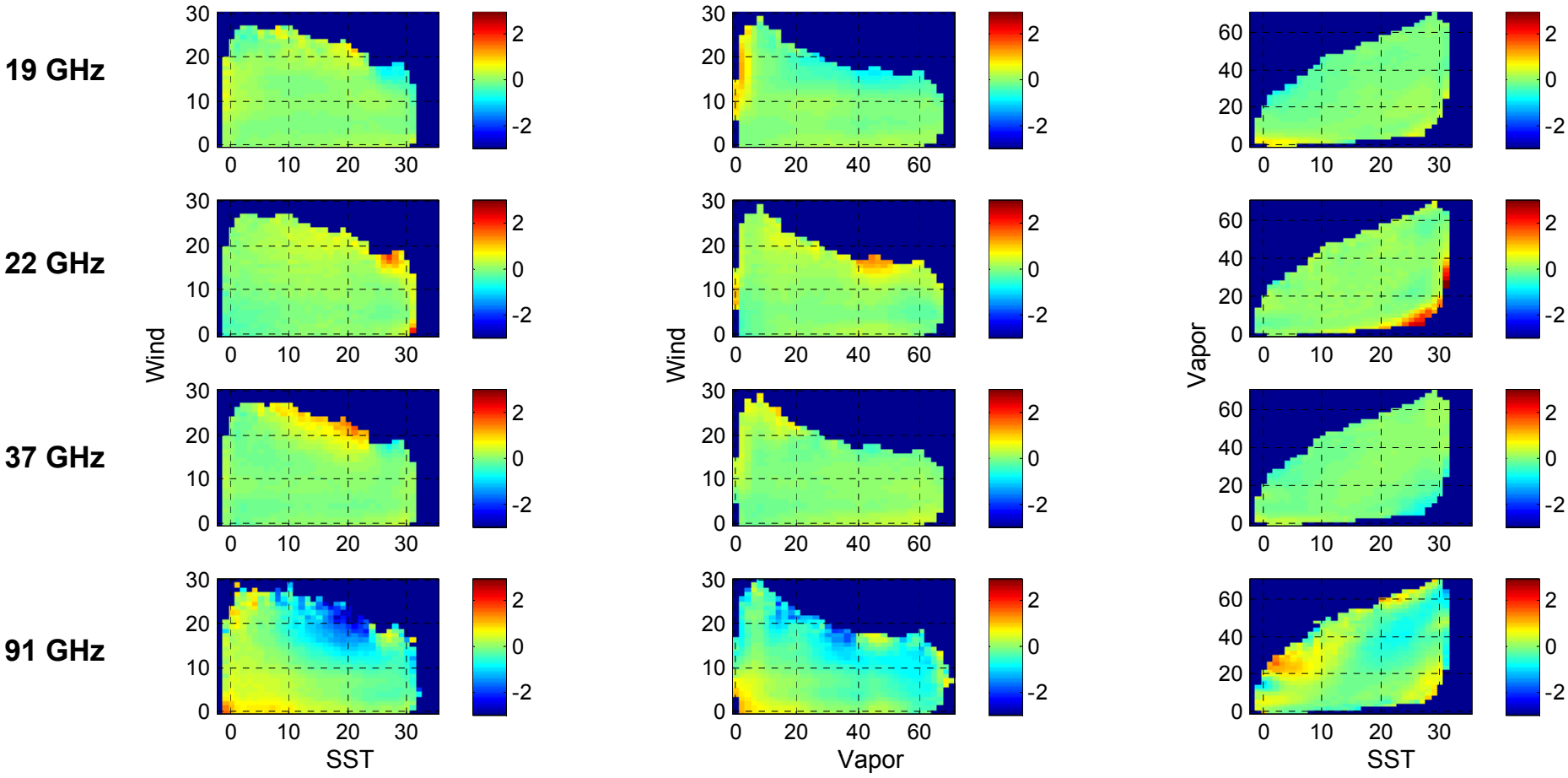
As with the other SSMIS efforts, they've been wrestling with the defects in the SSMIS record

F16 Intercalibration Results:

Distinguishing Sensor Errors from Radiative Transfer Model Errors

RTM Error Diagnostics

Same ΔTa (simulated minus measured) plotted versus different parameters
Same color scale: ΔTa goes from -3K to +3K



F16 Intercalibration Results:

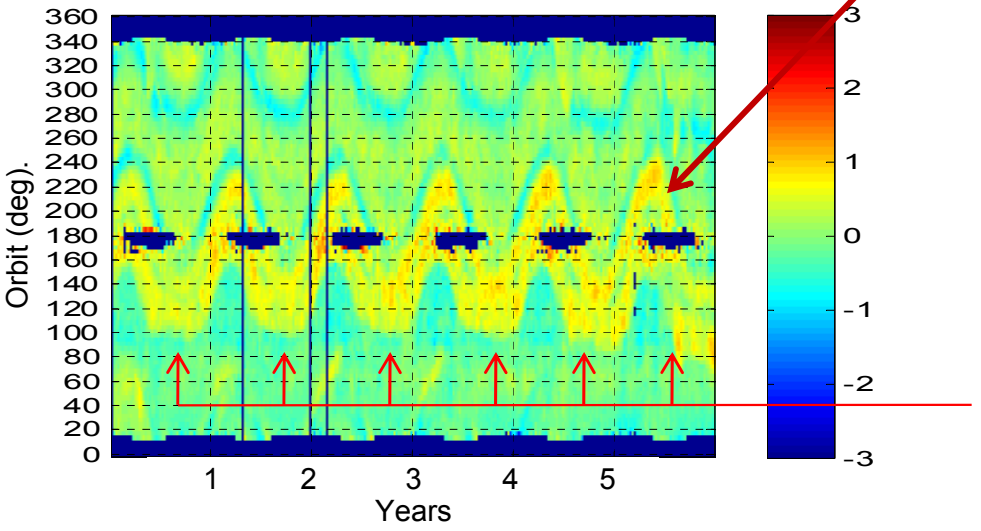
Distinguishing Sensor Errors from Radiative Transfer Model Errors (2/2)

Sensor Calibration Error Diagnostics

37 GHz H-pol ΔTa Simulated-Measured

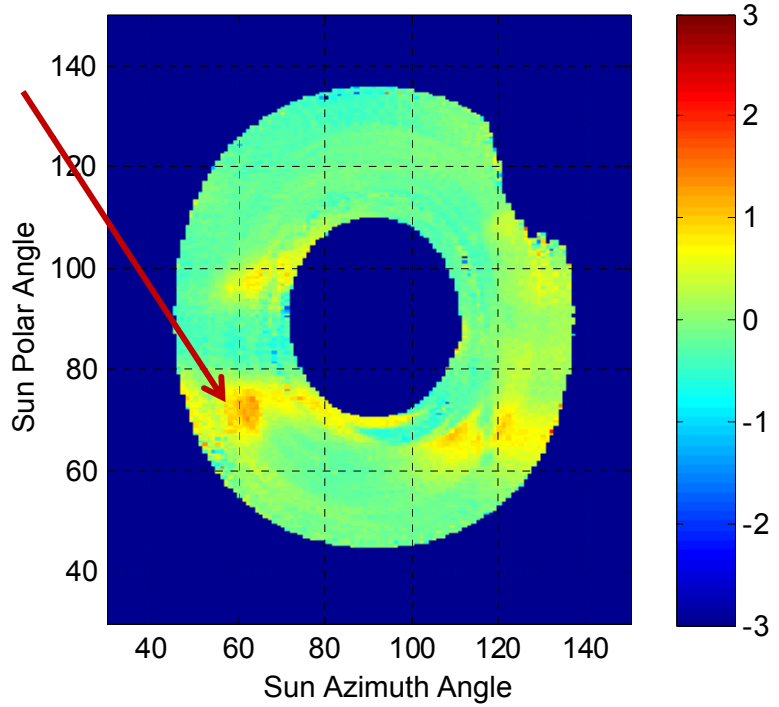
Same ΔTa (simulated minus measured) plotted versus different parameters

Same color scale: ΔTa goes from -3K to +3K



Sun intruding into hot load

Emissive antenna

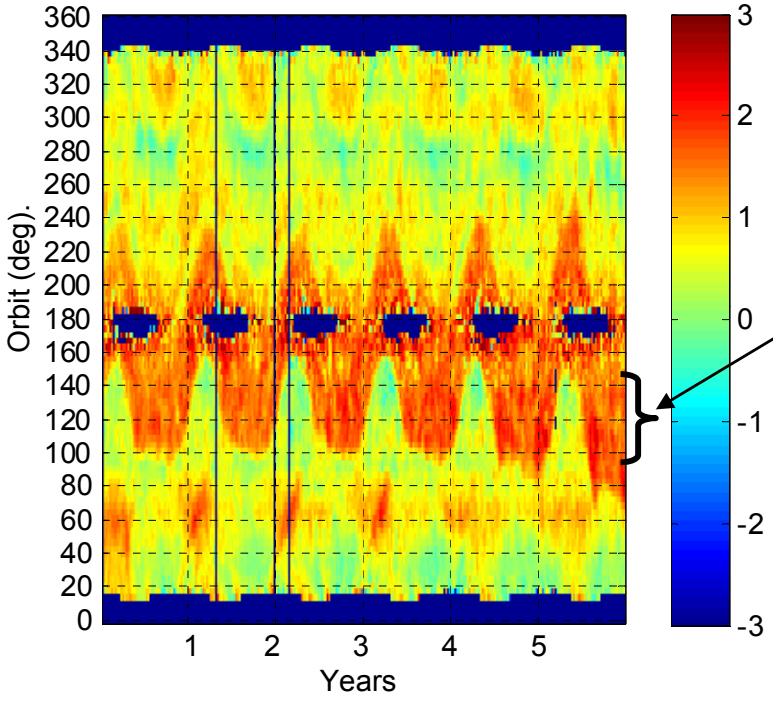


Y=Orbit Position, South Pole to South Pole
X=1000 Orbits (6 years)

Y=Sun Polar Angle, X=Sun Azimuth Angle

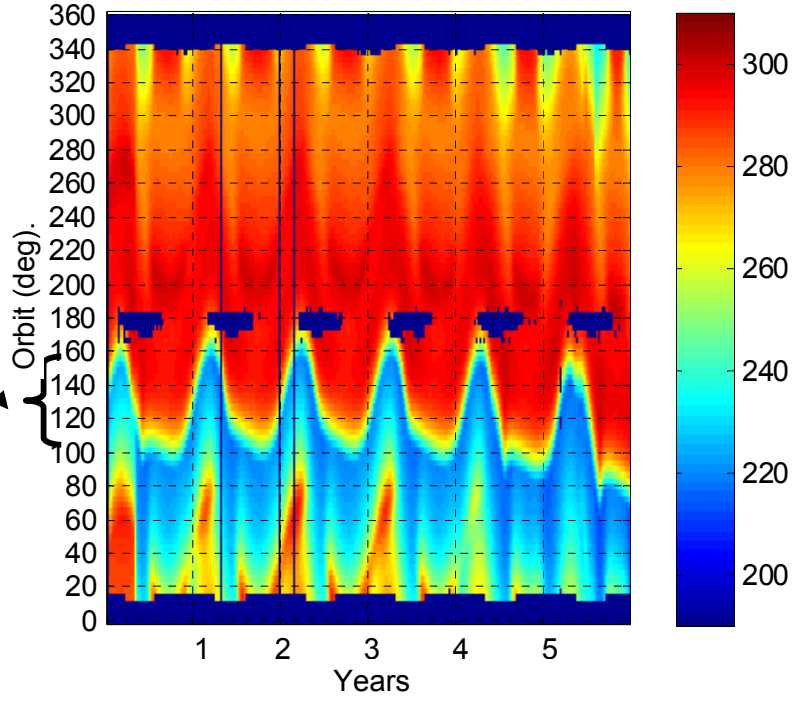
F16: Effect of Emissive Antenna

37 GHz H-pol ΔTa
Simulated-Measured



Emissive antenna

Arm Temperature



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Magnitude of emissive antenna: 1-4% over 19-92 GHz