

HI-2015-03 , Day09 = BS01cfg02 testing (MF data proc. while SF on vaca.)

File: \data\2015\HI-2015-03\doc\Day09_Results(MF).pptx (rev: 06Aug2015,MF)

Setup:

BS01cfg02, Es head #Es40 on rotation stage, FO #500 = long 12.1 m, splitter #1

Source = Oriel incandescent, ~ 6Vdc / 5.5 A / 30 W = **dimmer than Day04:08**

Auxiliary data collected: 3x internal BS1 thermistors = Slit, Near-camera, Under-cap;

BS1 %RH = Vdc in (~3.3 Vdc), Vdc out; ambient thermistor; thermistor at splitter

Intent:

Look again at track signal ratio vs Es head rotation angle:

A.) Trk #5,10 with longer exposure time via dimmer lamp (day8 was 0.45 sec) <MY>

B.) Trk #5,10 with exposure time adjusted for rotation angle to keep high ADU <SF>

C,D.) with different input fibers at BS1 bundle = Trk #3,12 <MY>

Data:

Collected aux file (aux20150801.txt), Andor signal & background (s20150805xx.fits & b*.fits)

Day09

#A: s,b*01:10 = FO# 5,10 / longer int time but same for all Es angles 10:10:90 deg

#B: s,b*11:20 = FO# 5,10 / vary int time to keep high ADU for all Es angles

#C: s,b*21:30 = **FO# 3,12** / longer int time but same for all Es angles

#D: s,b*31:40 = **FO# 3,12** / vary int time to keep high ADU for all Es angles

#A exposure time = 1.8 sec, #B = 1.8 to 90 sec

#C exposure time = 1.8 sec, #D = 1.8 to 90 sec

Data Processing:

I estimated track locations from SF's figures at webpage: Hawaii-2015-03 / page 2.01 Track selection

1.) full image Net ADU = Sig – Bac

2.) spectral ADU/pix = net image binned (sum) over each track divided by track pixel width

...to check my data processing I ran Day8 data to make sure I could reproduce (approximately) SF's webpage figures, including spectral ADU/pix/sec = ADU/pix divided by exposure time (not shown here)

Below is auxiliary data timeseries with vertical lines at time of Andor camera acquisition:

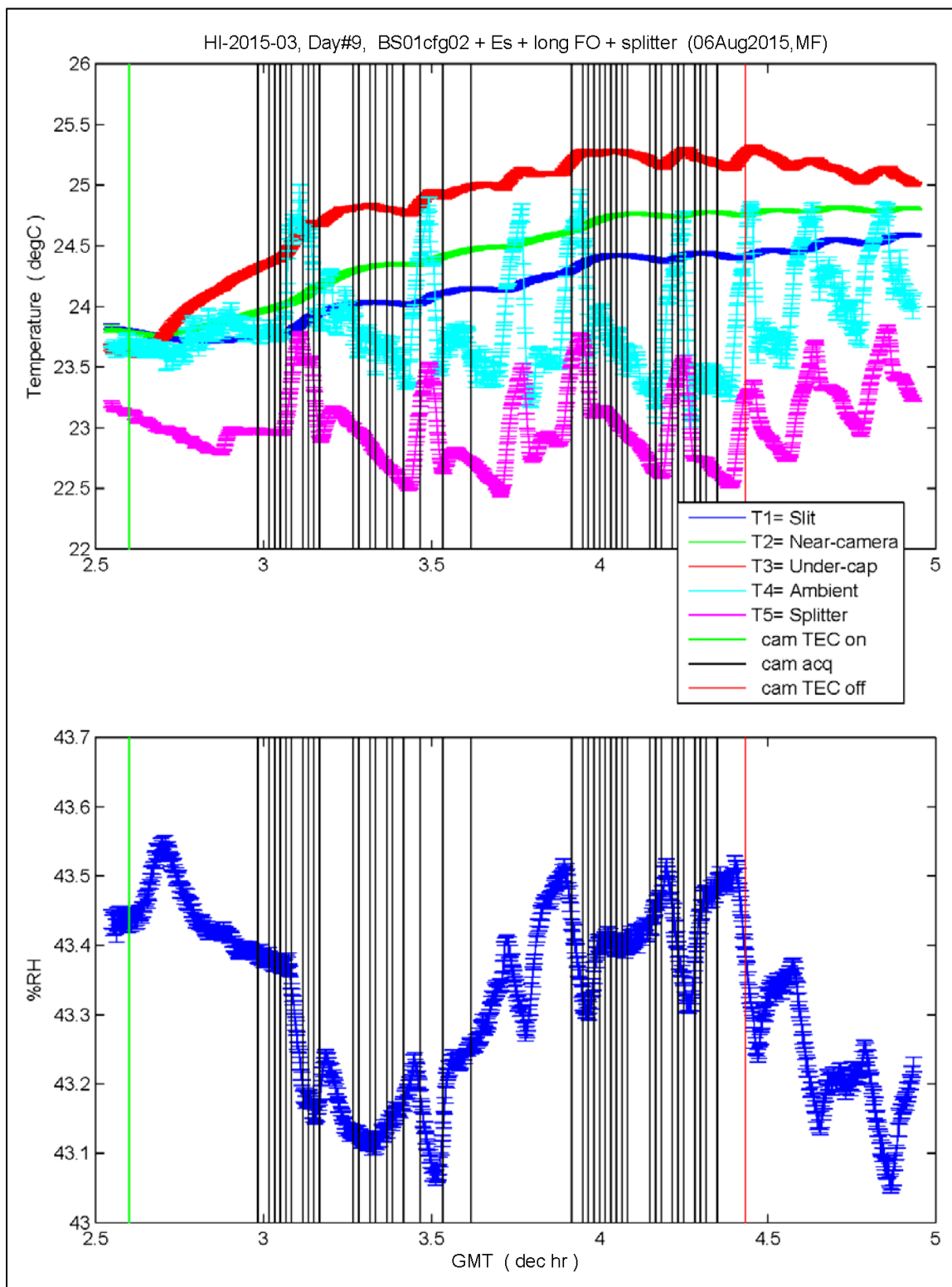


Figure 1, Day9 Aux. Temperature & %RH

Below are plots of spectral ADU/pix for #A, #B, #C, #D:

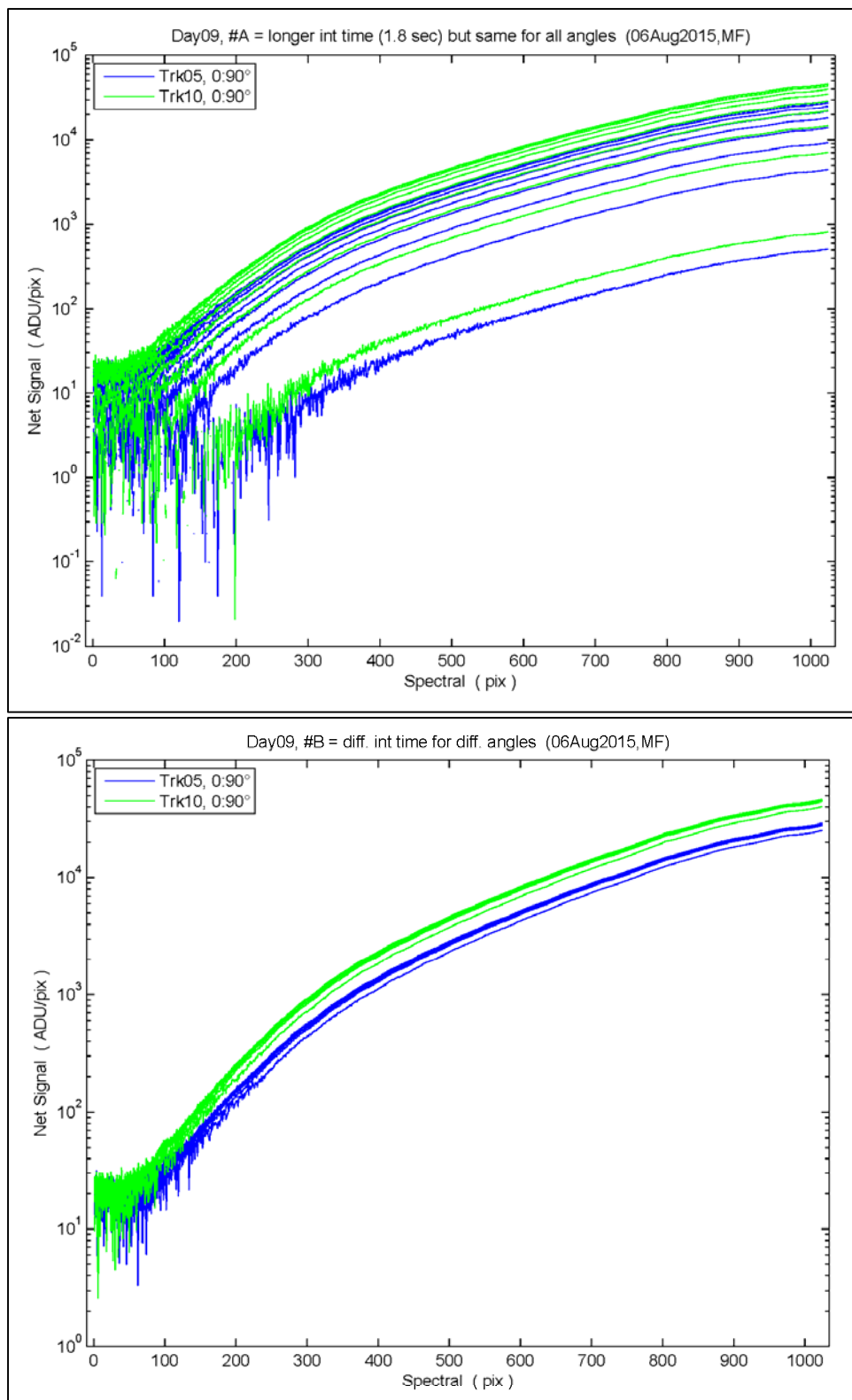


Figure 2, Top = #A, Bot = #B

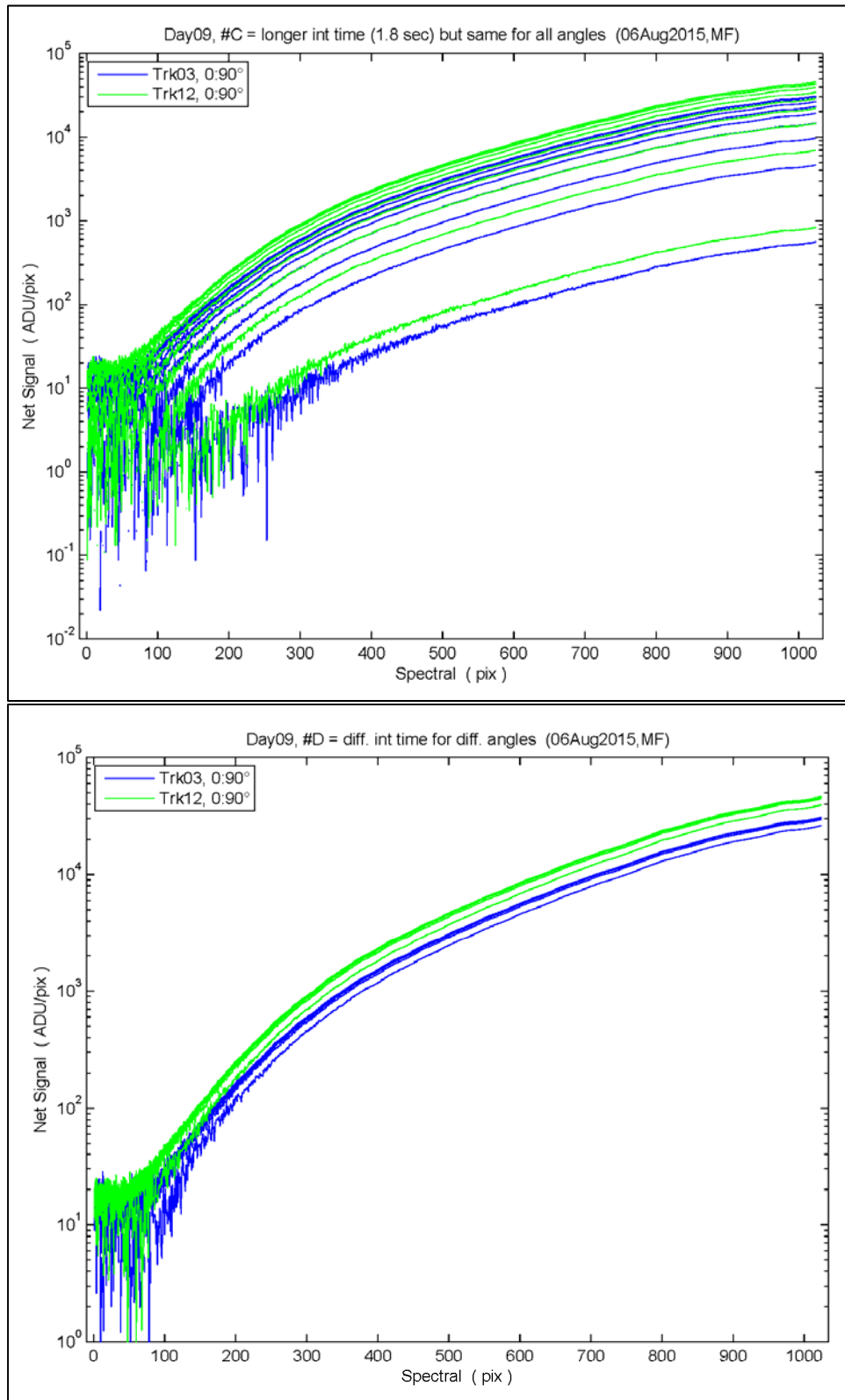


Figure 3, Top = #C, Bot = #D

Below are the track signal ratios = Trk #5 vs 10, for #A & #B:

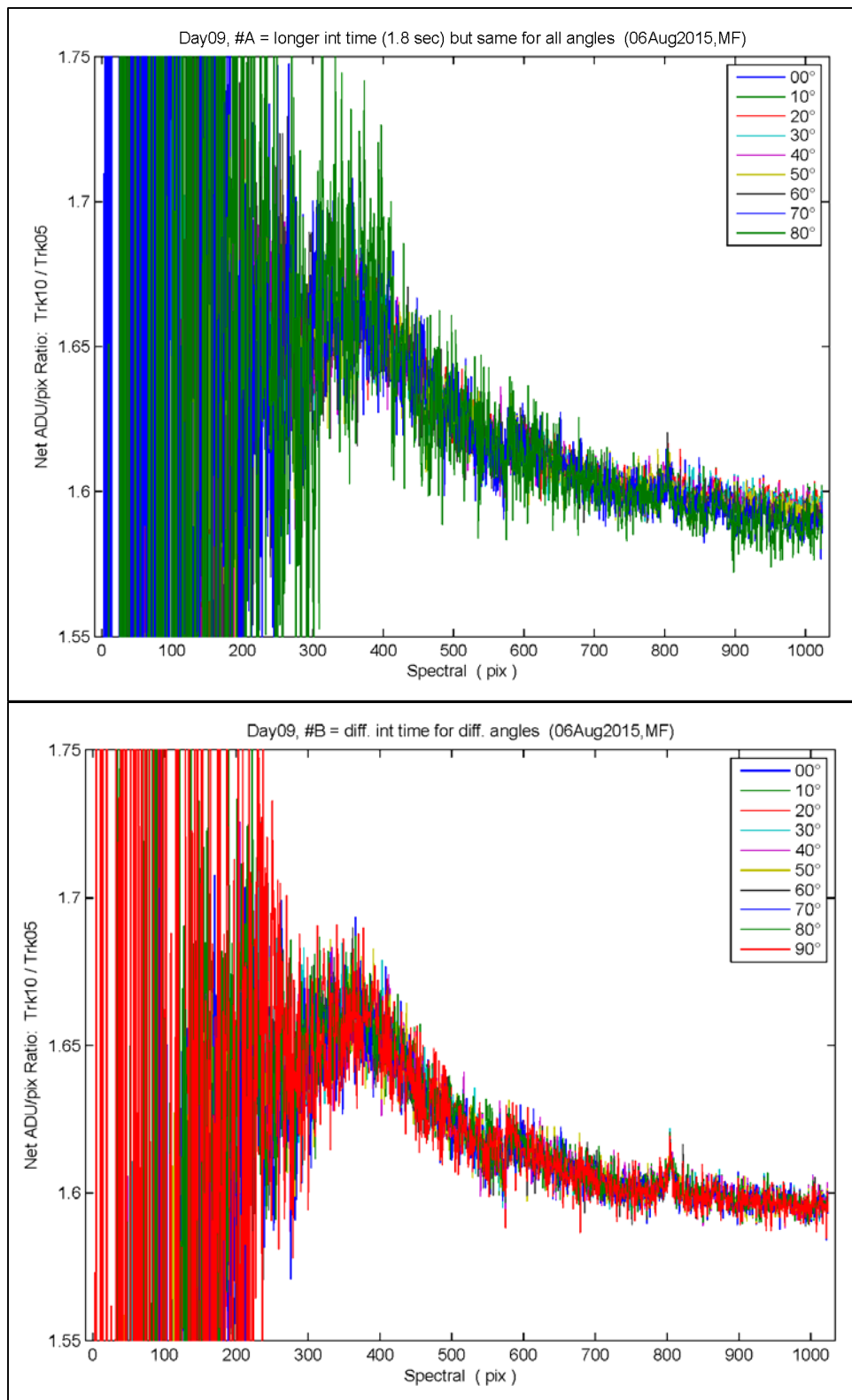


Figure 4, Top = #A, Bot = #B

Below are the track signal ratios = Trk #3 vs 12, for #C & #D:

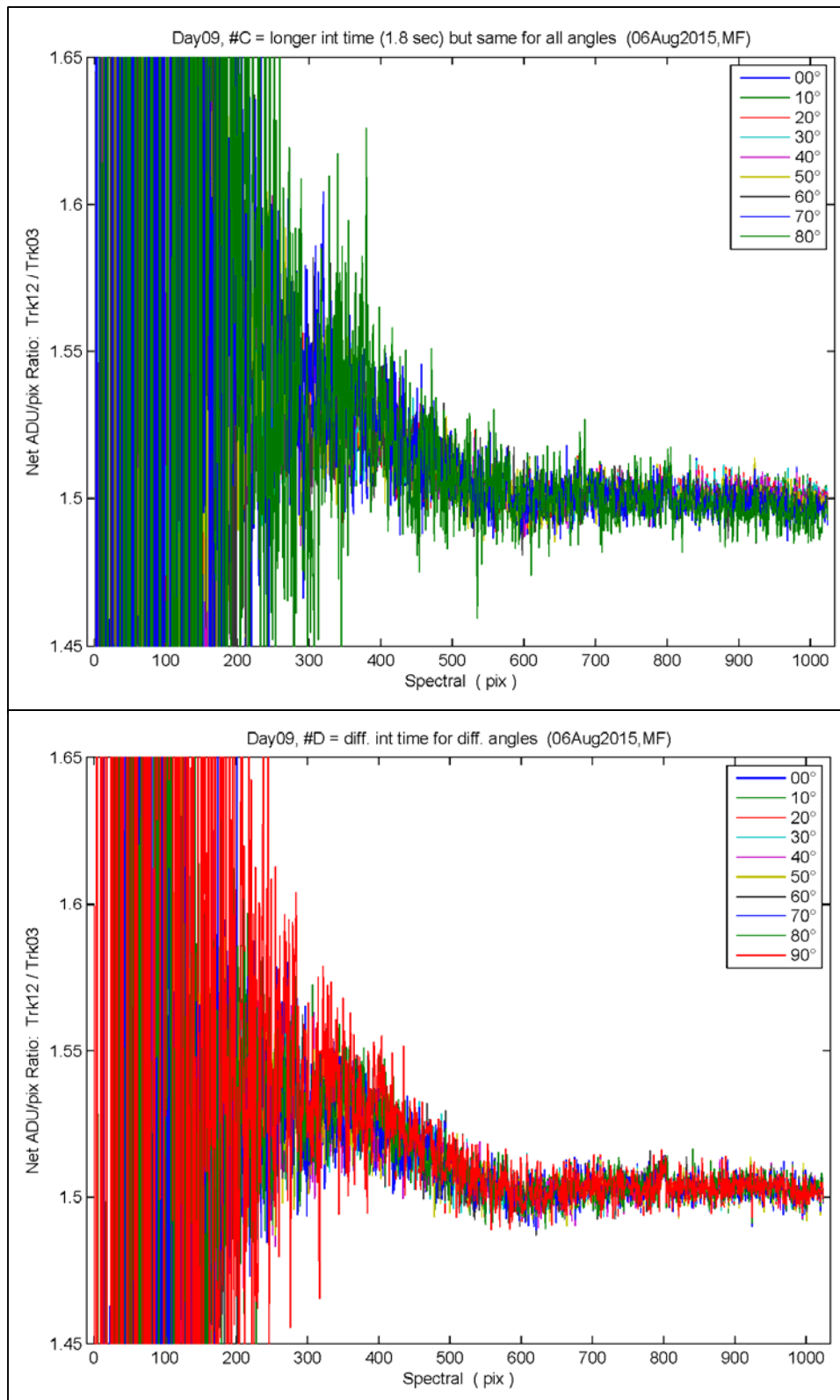


Figure 5, Top = #C, Bot = #D