


**From:** Emiel Hall (NOAA Affiliate) emiel.hall@noaa.gov   
**Subject:** Cavity Data and scale factors  
**Date:** July 20, 2017 at 5:06 AM  
**To:** Byron Blomquist - NOAA Affiliate byron.blomquist@noaa.gov



Hi Byron,

The cavity data is not available on Dave's website. That sensor has its own logger and computer which stores daily files. I can give you a file with the Irradiance data from the dates you need. The cavity data set is kinda odd because of the way the cavity self calibrates during the day. Because of this, there are missing irradiances while the cavity does its calibration. I have attached a folder with the daily raw data files from 6/15 through 7/11. I will also give you a single file with all of the days concatenated and the rows during the calibration are removed. This file has only the relevant Irradiance data and a decimal day of year time stamp (this is the format I use for my calibrations). You can use whichever format works for you.

The diffuse values can be found on Dave's website. We have three diffuse radiometers: 32347, 34266, and 32637

32347: Cal = 8.788

34266: Cal = 8.726

32637: Cal = 9.021

The PIR calibration factors are labeled C and k like they are written in the Albrecht and Cox formula seen in the link below (formula 10.4 on page 209).

<https://books.google.com/books?id=PSbOBQAAQBAJ&pg=PA209&lpg=PA209&dq=albrecht+cox+equation&source=bl&ots=Gwd90R2IfZ&sig=Li2sHNre8cRjTLBaTmjmd0eVNo8&hl=en&sa=X&ved=0ahUKEwiVrv29iZjVAhUC9GMKHSp5DWMQ6AEIPzAD#v=onepage&q=albrecht%20cox%20equation&f=false>

C is the responsivity factor and k is a dome correction.

Hope that helps,

Emiel

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2017CavityDOY1 For Byron.zip  
66to192.csv