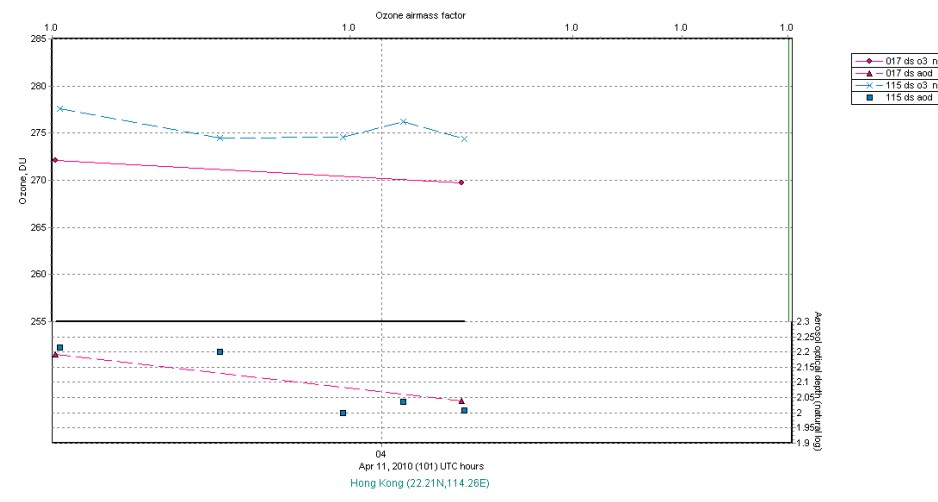


## Hong Kong Brewer #115 Calibration and Service Report – April 2010

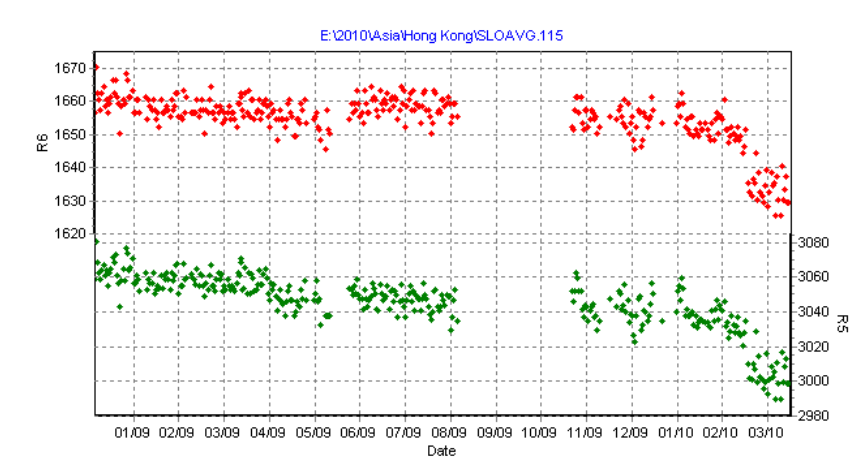
Int'l Ozone Services (IOS) completed the annual calibration and service of Hong Kong Brewer #115 during the period of April 8-11, 2010. In the past year the standard lamp (SL) ratios R6/R5 have decreased by ~ 2% (-30/-60 units), to values of 1630/3000, reference graph at bottom of this page. The weather did not co-operate well except for the final half day to allow some direct sun measurements.

### Ozone calibration results:

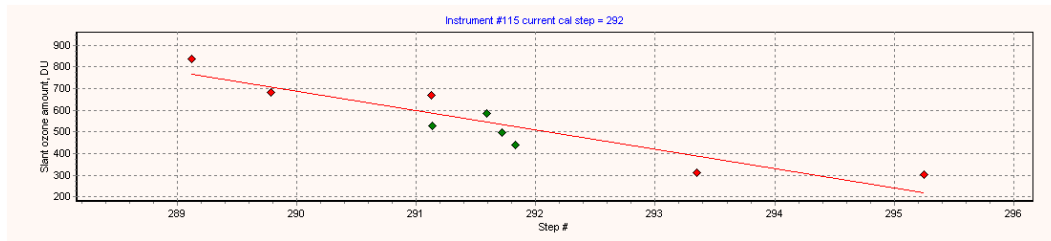
Below are the final ozone/AOD direct sun results from #115 and traveling standard instrument #017 during this visit. The ETC constants were corrected to values of 2848/2660 by applying the change in SL ratios, less 20 for the SO<sub>2</sub> constant to improve agreement to #017. The AOD constants from 2005 were not changed. The new ozone constants file was named (icf07510.115) since this was day when ratios changed.



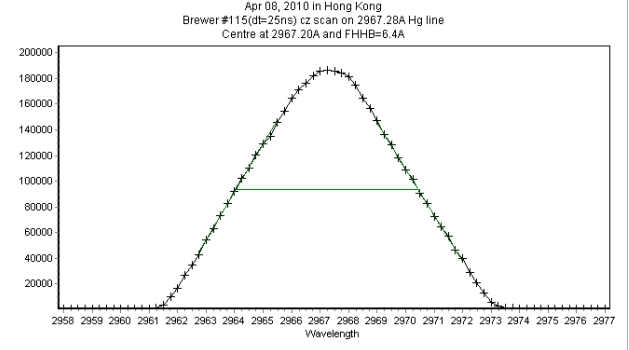
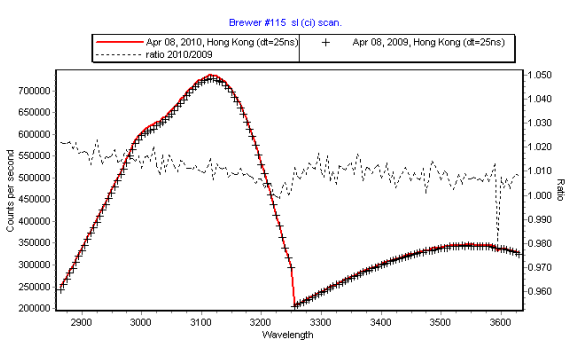
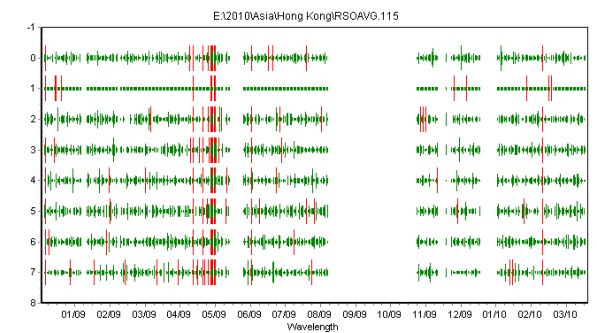
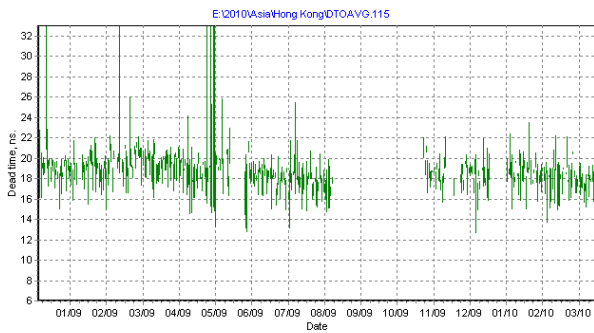
Next are the SL ratios for the past year showing change to values of 1630/3000 and note that the instrument was turned off for 2.5 months while the station was revised.



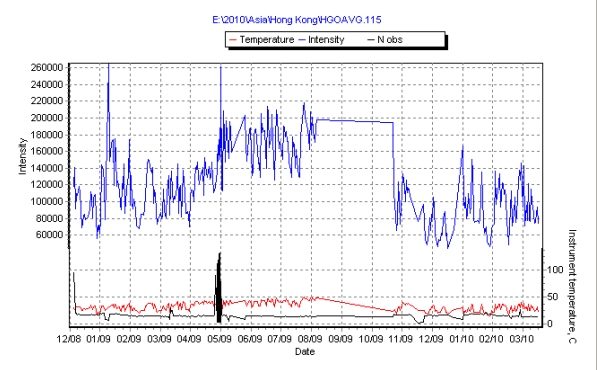
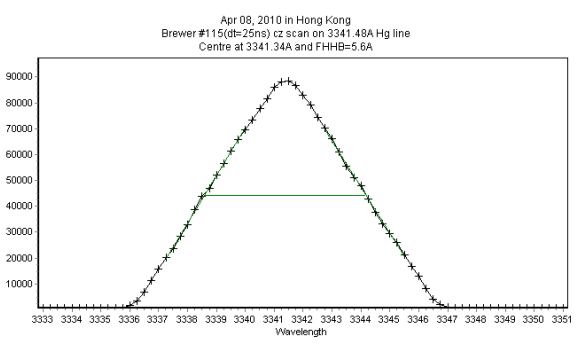
Next are sun scan results showing that the cal step of 292 is still proper.



Below are graphs of the stable DT and RS test results for the past year and a scan of standard lamp compared to a 2009 scan. Then a CZ scan of Hg 2967A line, which shows normal slit function.



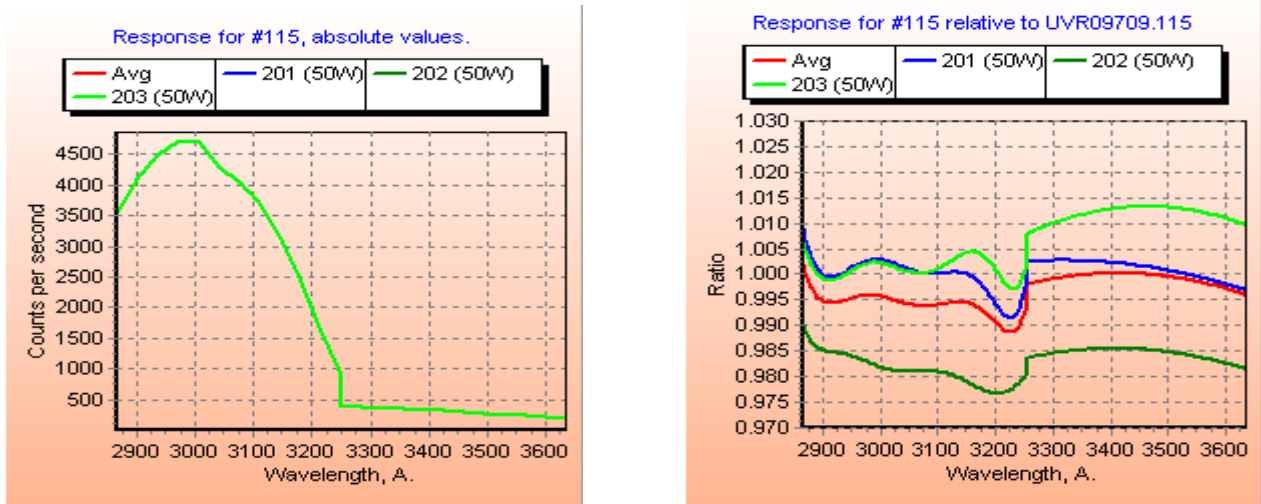
The next graph is from HL routine and is scan of Hg line 3341A and then a graph of the HGOAVG results for the past year.



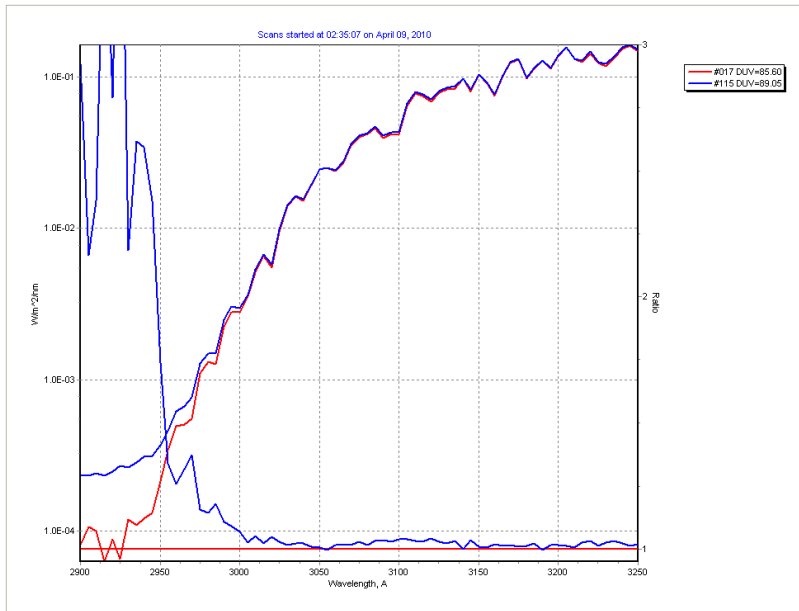
**UV Calibration:**

The UV calibration was completed and the new response file (uvr09810.115) compared well to file in use (uvr09709.115) and so no change is necessary. Wavelength accuracy was checked with dispersion test and when processed the results were very similar to constants in use (dcf06205) and so no changes were made.

Below is new response file calculated from IOS lamps #201, #202 and #203 and then the ratio to the 2009 file which shows ~-0.5% change in the past year.



Below is graphing of near simultaneous processed UF scans from the two instruments on a cloudy day that show good agreement.



**Software change:**

The latest routines in the control software (v377) were installed but the reset routine (re-mb.rtn) still had to be the older version for operation with the Dell (XP) notebook computer. The clock runs slow on computer and so a time server was put into use to set time every 15 minutes along with TD commands in schedules.