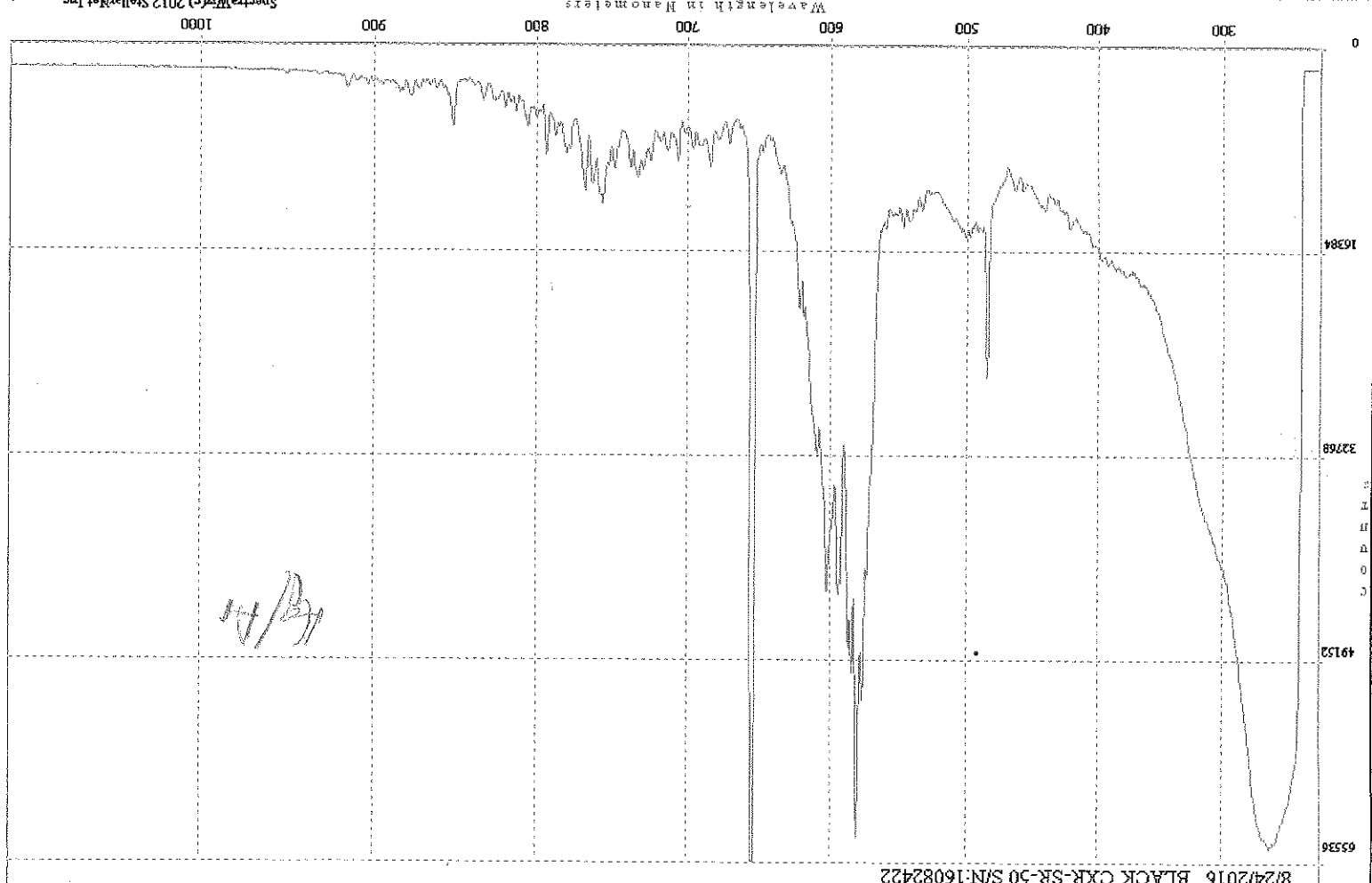


SCOPE-> Wave:508.67nm Pix:565 Val:1875.000 Time:30ms Avg:1 Sm:0 Sg:0 Tcoff Xt:3 Ch:1

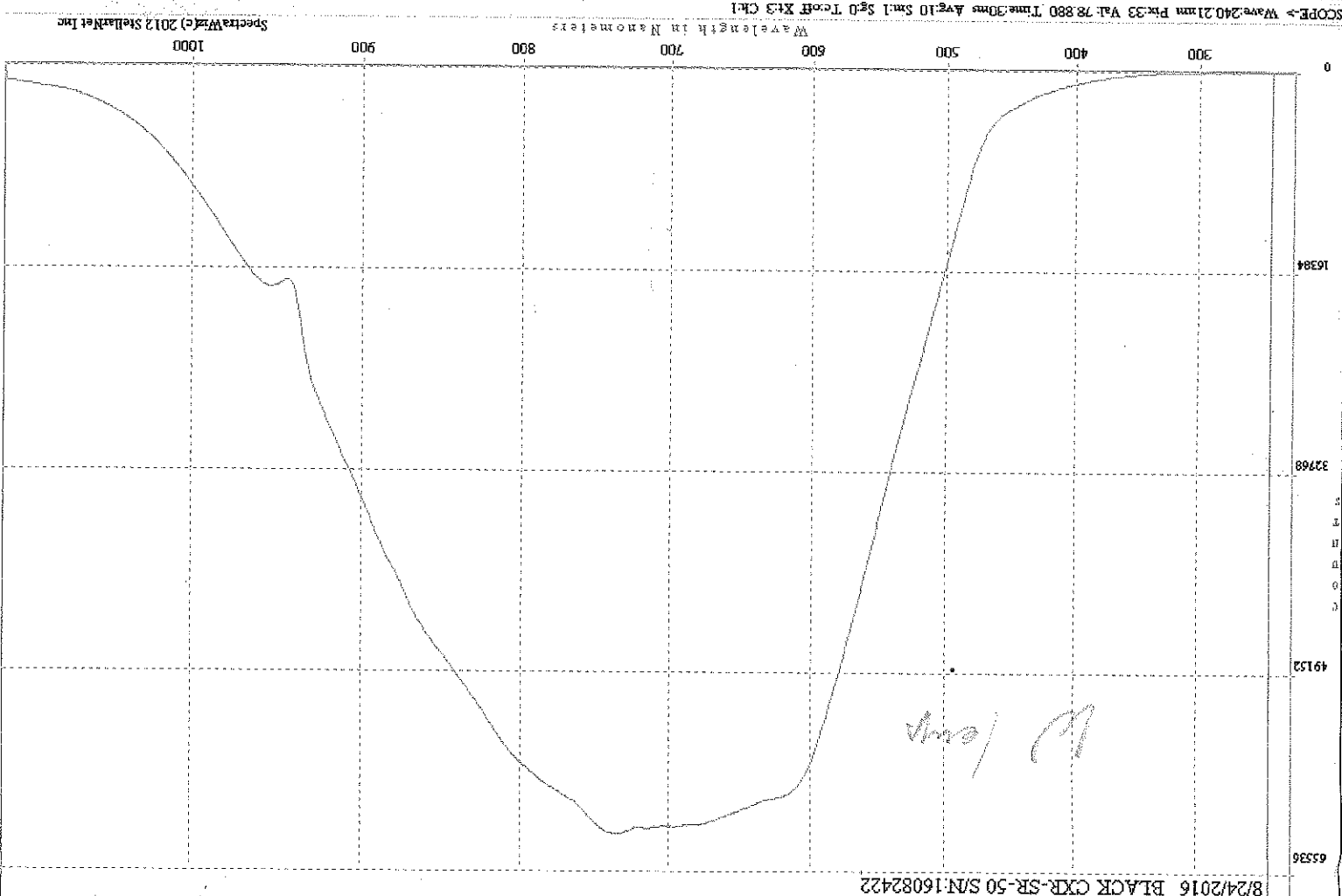
SCOPE-> Wave:511.53nm Pix:571 Val:14087.000 Time:30ms Avg:1 Sm:0 Sg:0 Tcoff Xt:3 Ch:1



Wavelength	Pixel/2	Pixel^2	WaveEst	WaveError	Pixel #
253.65	29	841	253.48	0.17	58
312.56	85.5	7310.25	312.68	-0.12	171
365.01	136.5	18632.25	364.97	0.04	273
404.66	176	30976	404.73	-0.07	352
435.83	207.5	43056.25	435.96	-0.13	415
546.07	322	103684	546.01	0.06	644
579.07	357.5	127806.25	579.02	0.05	715
696.54	489	239121	696.70	-0.16	978
706.72	500.5	250500.25	706.64	0.08	1001
727.29	524.5	275100.25	727.23	0.06	1049
738.40	537.5	288906.25	738.28	0.12	1075
750.39	552	304704	750.52	-0.13	1104
763.51	567.5	322056.25	763.50	0.01	1135
772.38	578	334084	772.24	0.14	1156
794.82	605.5	366630.25	794.92	-0.10	1211
801.48	613.5	376382.25	801.45	0.03	1227
811.53	626	391876	811.61	-0.08	1252
826.45	644.5	415380.25	826.53	-0.08	1289
842.46	664.5	441560.25	842.50	-0.04	1329
852.14	676.5	457652.25	852.00	0.14	1353
912.30	754.5	569270.25	912.28	0.02	1509
922.45	768	589824	922.45	0.00	1536
965.78	826.5	683102.25	965.67	0.11	1653
1013.98	894.5	800130.25	1014.10	-0.12	1789

*0603
calibration*

Wavelength Calibration Coefficients
 BLACK-Comet CXR-SR-50 Spectrometer
 S/N: 16082422 BW16 tob RoHS e 1101
 C1 = 1.07169 dispersion
 C2 = -0.0002088 2nd order
 C3 = 222.58 starting wavelength
 M:367,368,369





Certificate of Irradiance Calibration - # 16082422-UVVIS-CR2

StellarNet Inc. hereby certifies that the spectrometer instrument identified below has been irradiance calibrated; using equipment whose accuracy is traceable to NIST (U.S. National Institute of Standards and Testing) by LI-COR Certificate of Calibration.

Customer: California Institute of Technology
MODEL: BLACK-Comet CXR-SR-50
SERIAL NUMBER: 16082422
ACCESSORIES: F600 UVVIS-SR fiber optic cable with CR2
CERTIFICATE NUMBER: 16082422-UVVIS-CR2
DATE ISSUED: November 9, 2016
VALID: 12 Months

SPECTRAL IRRADIANCE CALIBRATION DETAILS:

Calibration types: UV for range 200-600
VIS for range 300-1100
Cal Equipment: StellarNet spectral UV irradiance lamp – model# SL3, serial#06072616
LI-COR spectral irradiance lamp – model# 1800-02L, serial# ORL1027L

CALIBRATION NOTES:

1. Absolute calibration accuracy +/- 5.0% @ cal detector integration setting.
2. Irradiance calibration file, sw1.icf was generated by the StellarNet SpectraWiz software.
3. MyCal-C16082422-UVVIS-CR2.exe file was generated and saved to the calibration USB.
4. Temperature +25 ° ± 2 ° Centigrade and Relative Humidity 45% ± 20% R.H.

Calibrated by: Stefanie K. Dahl..... *SKD: OAH*.....