ARCS MFRSR Calibration Check Form

I. Calibration information

	Calibration	Calibration Check	Field Calibration
This is a (check which):		X	

Date:	GMT Begin Time:	GMT End Time:	ARCS #
10/18/2001	18:00	0:00	1

MM/DD/YY

Instrument / System:	TWP OMS Part Number(s):	TWP OMS Serial Number(s):
MFRSR SKYRAD	MFR7-Head/MFRSR-Logger Board	227c/B1DA

Location (eg. PNNL, Manus):	Participant(s):	Issued by:	Signature(s):

Reference Instrument(s):	TWP OMS Part Number(s):	TWP OMS Serial Number(s):
MFRSR Comparison Stand	MFR7-Head/MFRSR-Logger Board	905c/9172

Current Configuration File Name: (from status command S 0)	New Configuration File Name:
rsr011016.cfg	

What is local time for solar noon? (use ARM calculator or other technique)	11:55	Have the MFRSR levels been checked (yes/No)?	yes

Have the MFRSRs been aligned at solar noon (Yes/No)?	yes

II. Initial Values

Sensor/Element:	optical depth @415 nm	optical depth @500 nm	optical depth @615 nm	optical depth @670 nm	optical depth @867 nm	optical depth @940 nm
MFRSR SKYRAD						
MFRSR Comparison						

Sensor/Element:	Io (W/m2/nm) @415 nm	Io (W/m2/nm) @500 nm	Io (W/m2/nm) @615 nm	Io (W/m2/nm) @670 nm	Io (W/m2/nm) @867 nm	Io (W/m2/nm) @940 nm
MFRSR SKYRAD	2.49	1.89	1.99	1.69	1.07	
MFRSR Comparison						
extraterrestrial Io	1.75	1.95	1.75	1.6	1	0.85

III. Final Values

UNCHANGED: ☐ CHANGED: ☐

Sensor/Element:	optical depth @415 nm	optical depth @500 nm	optical depth @615 nm	optical depth @670 nm	optical depth @867 nm	optical depth @940 nm
MFRSR SKYRAD						
MFRSR Comparison						

Sensor/Element:	Io (W/m2/nm) @415 nm	Io (W/m2/nm) @500 nm	Io (W/m2/nm) @615 nm	Io (W/m2/nm) @670 nm	Io (W/m2/nm) @867 nm	Io (W/m2/nm) @940 nm
MFRSR SKYRAD						
MFRSR Comparison						
extraterrestrial Io	1.75	1.95	1.75	1.6	1	0.85

IV. Statistics(if applicable)

No. of Samples:	Std. Dev.	CF Range %	Uncertanty %

V. Calilbration Change(if applicable)

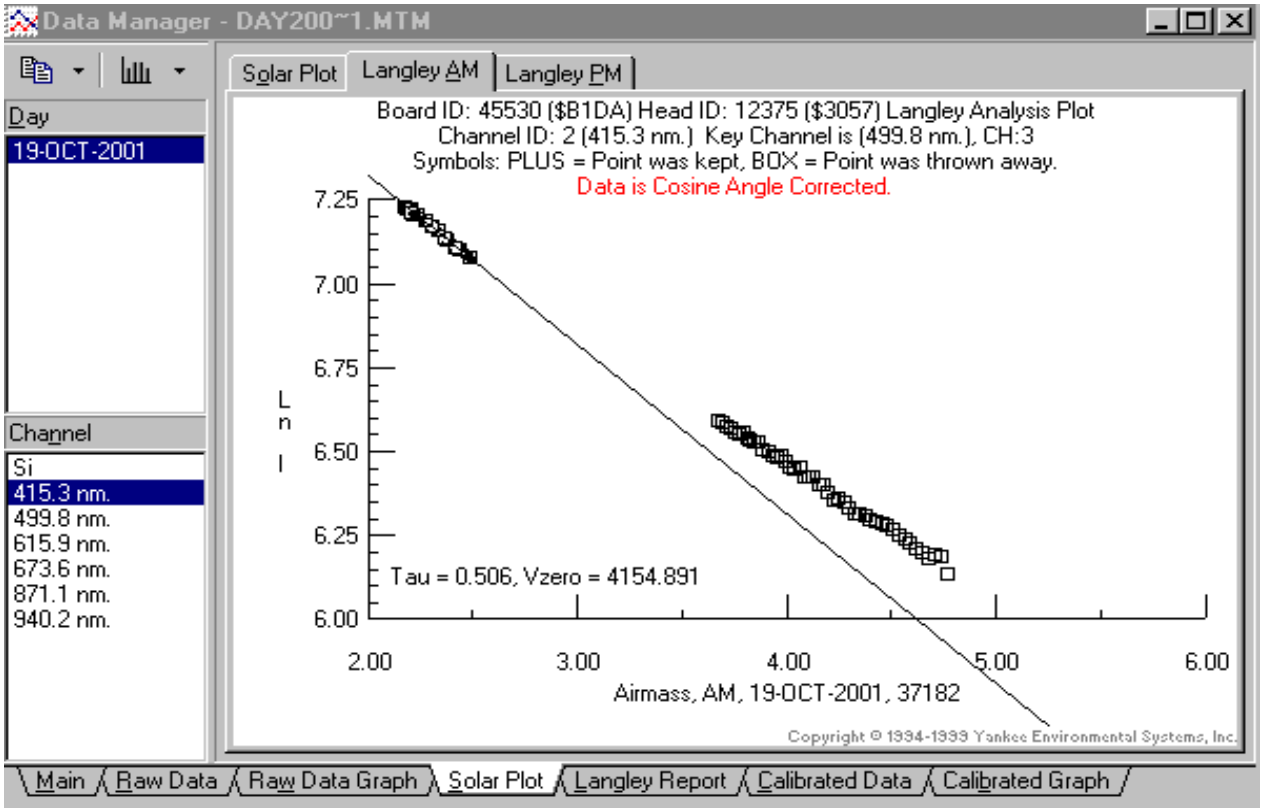
Sensor or Parameter	Sensor Serial No.	Internal Resistance (Ohms)	Original Sensitivity (Volts/Unit)	Offset	Quadratic
	Old / New	Old / New	Old / New	Old / New	Old / New
MFRSR SKYRAD					

Document(s) Referenced:	Document(s) Updated:
PRO(RSR)-004.003	PRO(RSR)-004.004
PRO(RSR)-005.002	PRO(RSR)-005.003

PROBLEMS:

Data for Langley had two distictly different slopes. See below

NOTES:


Data Manager - DAY200~1.MTM
Day
19-OCT-2001
Channel
Si
415.3 nm.
499.8 nm.
615.9 nm.
673.6 nm.
871.1 nm.
940.2 nm.
Solar Plot
Langley AM
Langley PM
Board ID: 45530 ($B1DA) Head ID: 12375 ($3057) Langley Analysis Plot
Channel ID: 2 (415.3 nm.) Key Channel is (499.8 nm.), CH:3
Symbols: PLUS = Point was kept, BOX = Point was thrown away.
Data is Cosine Angle Corrected.
Ln I
7.25
7.00
6.75
6.50
6.25
6.00
Tau = 0.506, Vzero = 4154.891
2.00
3.00
4.00
5.00
6.00
Airmass, AM, 19-OCT-2001, 37182
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Main
Raw Data
Raw Data Graph
Solar Plot
Langley Report
Calibrated Data
Calibrated Graph