ARCS SMET Datalogger and Sensor Field Calibration Form

CAL(SMET)-0001

I. Calibration information

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

Date:	GMT Begin Time:	GMT End Date:	GMT End Time:	ARCS #
10/23/2001	4:45	10/23/2001	6:45	1
MM/DD/YY		MM/DD/YY		

Instrument / System:	TWP OMS Part Number(s):	TWP OMS Serial Number(s):
SMET Data Logger	ZENO-3200(SMET)	024 (WD2597)

Current Configuration Version:	New Configuration Version
V000404.00	

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

Reference Instrument(s):	TWP OMS Part Number(s):		TWP OMS Serial Number(s)
Fluke 8842A Voltmeter	8842A		
Anemometer Drive	18801		CA9873 OMS120023402
Vane Angle Bracket	18212		12001469
T/RH Indicator / Probe	HMI41 / HMP41/45		?
Digital Barometer	PA11A	BBSS	694560
Rain Calibraqtor	TST-700A		0043
Reference Thermometer	4600		95SH100180
Spare T/RH Probe			
Chilled Mirror	BA2/TP3		

Verify that reference instruments' serial numbers above are correct or modified(check box if true)	X
Verify that SMET instruments' serial numbers below are correct or modified(check box if true)	X
Correct system time and date	X

Document(s) Referenced:	Document(s) Updated:
PRO(DAQM)-005.001	PRO(DAQM)-005.007

II. Initial Values

Sensor / Element: Serial Number:	Reference: Target Actual	Reading: Actual or Range	Reference: Target Actual	Reading: Actual or Range	Reference: Target Actual	Reading: Actual or Range
SMET/WindHi	10Hz / 1ms^{-1}	m/s	40Hz / 4ms^{-1}	m/s	80Hz / 8ms^{-1}	m/s
31102/58342	250 rpm	1.3	800 rpm	4.2	1600 rpm	8.1
SMET/DirectionHi	10 deg.	45 deg.	90 deg.	180 deg.	270 deg.	355 deg.
31102/58342	10.5	46.1	92	178.0	267	355.0
SMET/WindLo	10Hz / 1ms^{-1}	m/s	40Hz / 4ms^{-1}	m/s	80Hz / 16ms^{-1}	m/s
31104/58319	225 rpm	1.5	800 rpm	4.2	1600 rpm	8.1
SMET/DirectionLo	0 deg.	45 deg.	90 deg.	180 deg.	270 deg.	355 deg.
31104/58319						
SMET/Barometer	mb	mb	bbss mb			
?		1006.3	1006.5			
SMET/Temperature	YSI 95H	Vaisala HMH95	YSI 95H	Tower Probe	YSI 95H	Vaisala HMI 31
T1120020				30.13		30.30
SMET/RH	HMH 95	Probe	HMH 95	Probe	Chilled-Mirror	Probe
T1120020	65.5	65.5			Tdew 22.7	Tdew 22.6
SMET/ORG	before V	unscaled V	before mm/hr	Scaled mm/hr		
03327c7	2.498	2.53	125	128.0		

Were there calibration changes? (yes / no) **No**

NOTES:
Bearing Torque Test W1 and W2 was at position 3
The T/RH probe was replaced after this with HMP45D WO120005

See plot of chilled mirror comparison below.

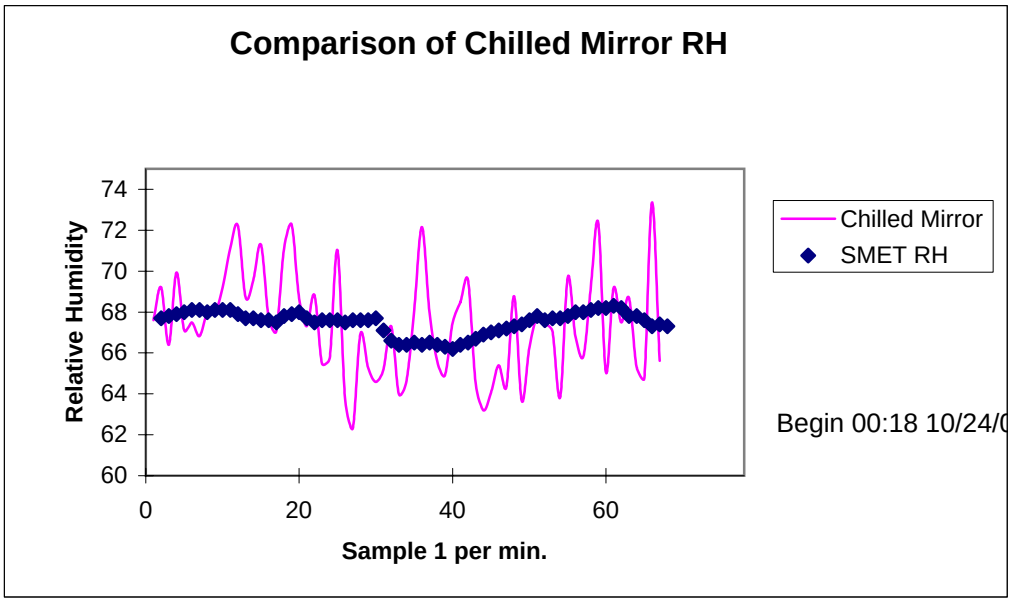
III. Calilbration Change(if applicable)

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

IV Final Values

Sensor / Element: Serial Number:	Reference: Target Actual	Reading: Actual or Range	Reference: Target Actual	Reading: Actual or Range	Reference: Target Actual	Reading: Actual or Range
SMET/WindHi	10Hz / 1ms^{-1}		40Hz / 4ms^{-1}		80Hz / 16ms^{-1}	
	250 rpm		800 rpm		1600 rpm	
SMET/DirectionHi	0 deg.	45 deg.	90 deg.	180 deg.	270 deg.	355 deg.
SMET/WindLo	10Hz / 1ms^{-1}		40Hz / 4ms^{-1}		80Hz / 16ms^{-1}	
	250 rpm		800 rpm		1600 rpm	
SMET/DirectionLo	0 deg.	45 deg.	90 deg.	180 deg.	270 deg.	355 deg.
SMET/Barometer			bbss			
SMET/Temperature	YSI 95H	Vaisala HMH95	YSI 95H	Tower Probe	YSI 95H	Vaisala HMI 31
SMET/RH	HMH 95	Probe	HMH 95	Probe	Chilled-Mirror	Probe
SMET/ORG	before	unscaled	before	Scaled		

V **Statistics**(if applicable)

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

PROBLEMS: