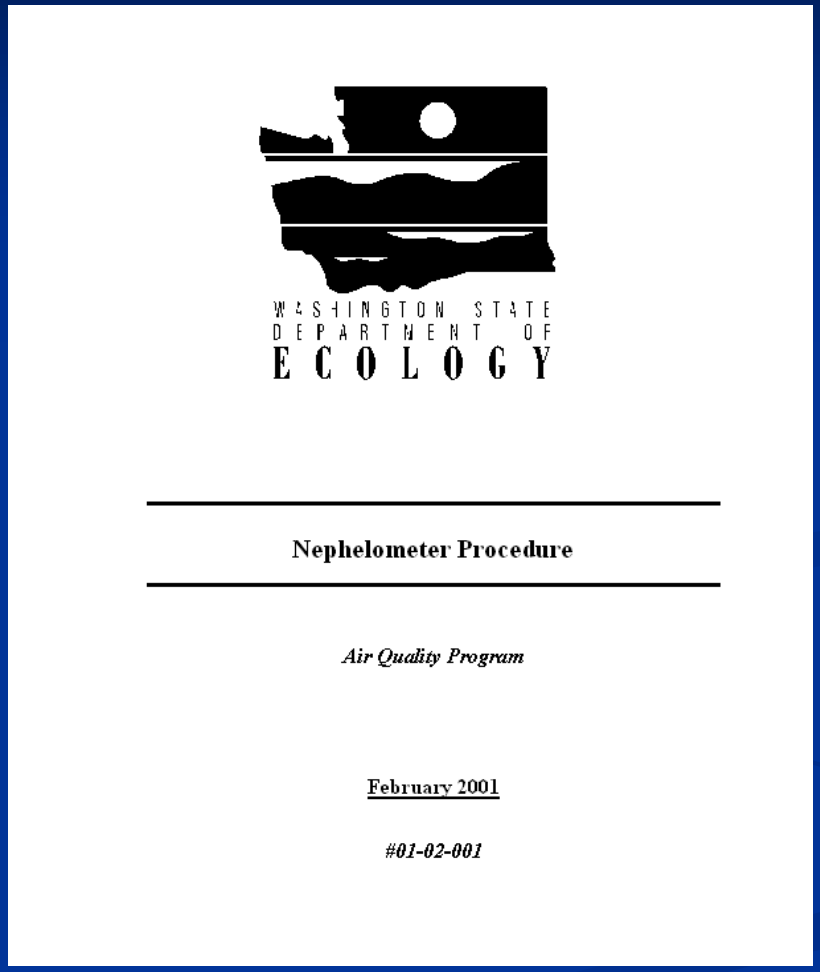
Nephelometer Operations and Maintenance

QA Manual



WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Nephelometer Procedure

Air Quality Program

February 2001

#01-02-001

http://www.ecy.wa.gov/programs/air/other/Air_Monitoring_Procedures.htm

Zero / Span Log Sheet

NEPHELOMETER ZERO / SPAN LOG SHEET

Station Name _____ Date _____
Station Number _____ Operator _____
Analyzer ID Number _____
Shelter Temperature Current _____
Min _____ Max _____

Screen 1 bscat _____
tc _____
mode _____

Screen 3 den _____
zden _____
zero _____
set ZERO_____

Screen 5 high voltage _____
flashlamp _____ (30K-60K)
Is the reference voltage steady? [ ]
Are the dark & lamp currents steady? [ ]

Screen 6 AR@STP _____
P _____ T _____ Rh _____
set Rsct _____

Screen 7 calgas/rayleigh _____
set Rgas_____

Zero & Span Values

DCN offline at _____PST
Screen 3 bscat _____

Screen 6 P _____ T _____ Rh _____

Screen 4 bscat_____
gas _____
span _____
wall _____%
set SPAN _____
DCN online at _____PST

Post-Adjustment Values

Screen 3 bscat _____
set ZERO _____

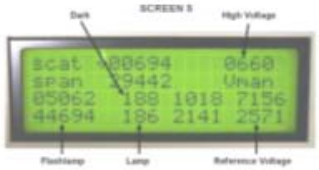
Screen 4 bscat _____
set SPAN _____
wall _____%

DCN online at _____PST

Final Checks

Do the DCN & nephelometer values compare? [ ]
Is the DCN enabled? [ ]
Is the calibration gas turned off? [ ]

Notes:



Step 1

NEPHELOMETER ZERO / SPAN LOG SHEET

Station Name _____ Date _____
Station Number _____ Operator _____
Analyzer ID Number _____
Shelter Temperature Current _____
Min _____ Max _____

Screen 1
bscat _____
tc _____
mode _____

Screen 3
den _____
zden _____
zero _____
set ZERO_____

Screen 5
high voltage _____
flashlamp _____ (30K-60K)
Is the reference voltage steady? [ ]
Are the dark & lamp currents steady? [ ]

Screen 6
AR@STP _____
P _____ T_____ Rh _____
set Rsct _____

Screen 7
calgas/rayleigh _____
set Rgas_____

Zero & Span Values

DCN offline at _____PST
Screen 3 bscat _____

Screen 4
bscat_____
gas _____
span _____
wall _____%
set SPAN _____
DCN online at _____PST

Screen 6 P _____ T _____ Rh _____

Step 2

NEPHELOMETER ZERO / SPAN LOG SHEET

Station Name _____
Station Number _____
Analyzer ID Number _____
Shelter Temperature Current _____
Min _____ Max _____

Date _____
Operator _____

Screen 1	bscat _____	Screen 5	high voltage _____
	tc _____		flashlamp _____ (30K-60K)
	mode _____		Is the reference voltage steady? [ ]
			Are the dark & lamp currents steady? [ ]
Screen 3	den _____	Screen 6	AR@STP _____
	zden _____		P _____ T_____ Rh _____
	zero _____		set Rsct _____
	set ZERO_____		
		Screen 7	calgas/rayleigh _____
			set Rgas_____

Zero & Span Values

DCN offline at _____PST

Screen 3 bscat _____

Screen 4 bscat_____
gas _____
span _____
wall _____%
set SPAN _____

DCN online at _____PST

Screen 6 P _____ T _____ Rh _____

Step 3

NEPHELOMETER ZERO / SPAN LOG SHEET

Station Name _____
Station Number _____
Analyzer ID Number _____
Shelter Temperature Current _____
Min _____ Max _____

Date _____
Operator _____

Screen 1
bscat _____
tc _____
mode _____

Screen 3
den _____
zden _____
zero _____
set ZERO_____

Screen 5
high voltage _____
flashlamp _____ (30K-60K)
Is the reference voltage steady? [ ]
Are the dark & lamp currents steady? [ ]

Screen 6
AR@STP _____
P _____ T_____ Rh _____
set Rsct _____

Screen 7
calgas/rayleigh _____
set Rgas_____

Zero & Span Values

DCN offline at _____PST
Screen 3 bscat _____

Screen 4 bscat_____
gas _____
span _____
wall _____%
set SPAN _____
DCN online at _____PST

Screen 6 P _____ T _____ Rh _____

Step 4

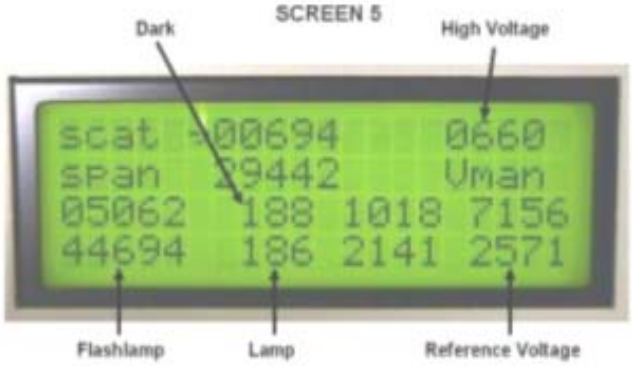
Post-Adjustment Values

Screen 3	bscat _____	Screen 4	bscat _____
	set ZERO _____		set SPAN _____
			wall _____%
DCN online at _____PST			

Final Checks

Do the DCN & nephelometer values compare? [ ]
Is the DCN enabled? [ ]
Is the calibration gas turned off? [ ]

Notes:



Step 5

Post-Adjustment Values

Screen 3 bscat _____
set ZERO _____

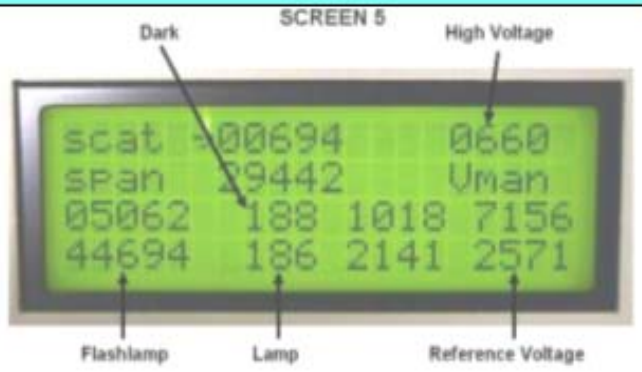
Screen 4 bscat _____
set SPAN _____
wall _____%

DCN online at _____PST

Final Checks

Do the DCN & nephelometer values compare? [ ]
Is the DCN enabled? [ ]
Is the calibration gas turned off? [ ]

Notes:



Suggestions?

NEPHELOMETER ZERO / SPAN LOG SHEET

Station Name _____ Date _____
Station Number _____ Operator _____
Analyzer ID Number _____
Shelter Temperature Current _____
Min _____ Max _____

Screen 1 bscat _____
tc _____
mode _____

Screen 3 den _____
zden _____
zero _____
set ZERO_____

Screen 5 high voltage _____
flashlamp _____ (30K-60K)
Is the reference voltage steady? [ ]
Are the dark & lamp currents steady? [ ]

Screen 6 AR@STP _____
P _____ T _____ Rh _____
set Rsct _____

Screen 7 calgas/rayleigh _____
set Rgas_____

Zero & Span Values

DCN offline at _____PST
Screen 3 bscat _____

Screen 6 P _____ T _____ Rh _____

Screen 4 bscat_____
gas _____
span _____
wall _____%
set SPAN _____
DCN online at _____PST

Post-Adjustment Values

Screen 3 bscat _____
set ZERO _____

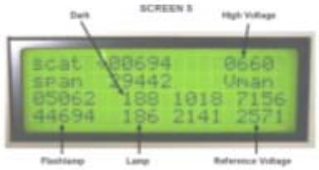
Screen 4 bscat _____
set SPAN _____
wall _____%

DCN online at _____PST

Final Checks

Do the DCN & nephelometer values compare? [ ]
Is the DCN enabled? [ ]
Is the calibration gas turned off? [ ]

Notes:



What's wrong with this picture?

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 122

METHOD: 11

PARAMETER NAME: NEPH
PARAMETER CODE: 11203
UNITS: BSCAT

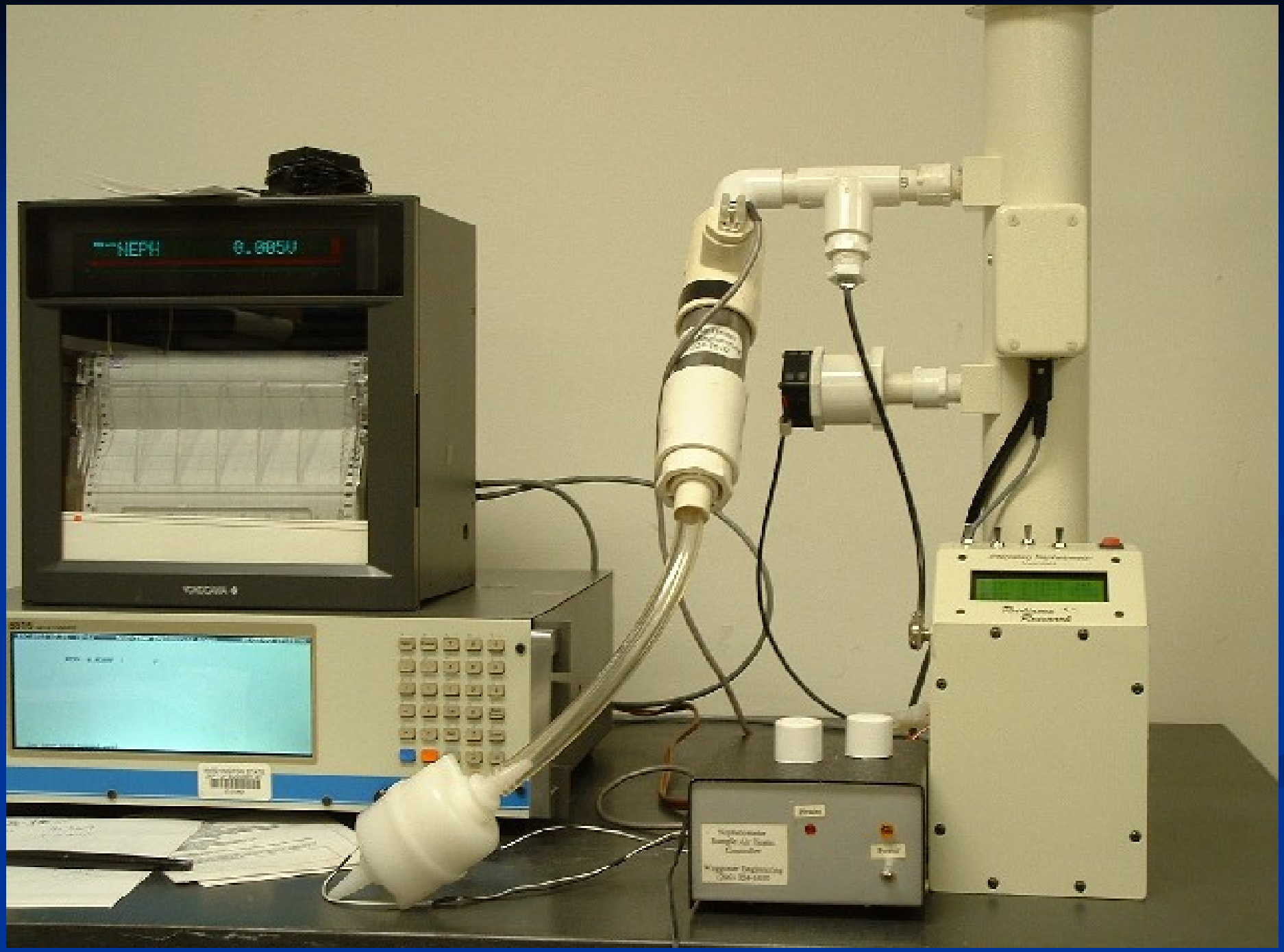
MONTH: December
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	WE	93	112	112	112	115	131	106	140	70	82	61	45	33	42	51	58	50	52	71	79	74	62	48	53	0.77	1.40	24
02	TH	56	43	34	45	50	53	50	68	57	52	49	46	47	62	63	74	93	76	73	95	80	115	83	93	0.65	1.15	24
03	FR	94	97	105	97	65	68	67	90	90	55	39	40	37	37	44	51	45	68	77	103	86	106	89	86	0.72	1.06	24
04	SA	107	68	83	54	84	74	88	86	64	77	115	95	64	64	86	58	94	155	170	100	122	115	147	87	0.94	1.70	24
05	SU	70	49	38	34	36	47	47	35	50	39	31	38	35	30	29	41	40	48	48	81	109	103	114	72	0.53	1.14	24
06	MO	106	80	79	54	51	51	58	35	44	60	51	62	59	66	59	79	71	79	84	116	132	120	123	185	0.79	1.85	24
07	TU	134	78	52	44	27	39	57	102	100	64	60	42	41	48	65	75	98	129	127	110	115	161	126	132	0.84	1.61	24
08	WE	109	67	32	32	52	44	68	36	69	91	51	28	25	104	84	40	47	58	54	57	43	43	48	67	0.56	1.09	24
09	TH	51	52	52	31	98	124	114	175	155	80	87	79	90	104	84	92	126	159	117	135	120	136	103	100	1.03	1.75	24
10	FR	123	127	106	100	71	111	101	102	111	101	74	81	89	90	100	91	109	86	132	176	158	99	75	32	1.02	1.76	24
11	SA	36	44	31	27	25	19	14	21	14	3	4	5	7	7	10	19	68	43	37	35	48	42	32	31	0.26	0.68	24
12	SU	11	16	9	22	11	16	26	25	29	28	11	10	11	10	9	15	45	40	43	39	40	11	22	42	0.23	0.45	24
13	MO	38	11	15	25	46	31	33	38	59	50	44	33	31	31	37	43	56	86	96	105	118	87	88	78	0.53	1.18	24
14	TU	74	74	59	47	52	47	50	64	94	84	52	37	34	43	45D	D	3	3	3	3	2	3	3	2	0.02	0.94	23
15	WE	2	2	2	3	2	3	2	3	2	2	2	1	2	2	2	2	2	3	2	2	2	2	1	1	0.02	0.03	24
16	TH	2	2	2	2	2	2	2	3	2	2	3	1	2	1	3	2	1	2	2	3	3	2	1	2	0.02	0.03	24
17	FR	1	3	2	1	2	3	1	2	3	2	3	2	3	2	3	3	3	3	3	3	4	4	2	3	0.02	0.04	24
18	SA	2	3	2	3	2	3	1	3	2	2	2	1	2	2	2	2	2	3	4	2	2	2	1	1	0.03	0.04	24
19	SU	2	2	2	3	2	3	3	3	2	2	2	1	2	3	2	2	2	3	4	2	2	2	1	1	0.02	0.04	24
20	MO	1	3	2	1	2	3	1	2	3	2	3	2	3	2	3	2	2	3	3	3	4	4	2	3	0.02	0.04	24
21	TU	1	3	2	1	2	3	1	2	3D	81	81	82	116	99	155	164	240	234	243	258	216	188	230	225	0.78	2.58	24
22	WE	197	158	83	80	90	73	70	59	54	60	70	78	62	51	60	74	145	125	199	148	150	125	150	185	1.06	1.99	24
23	TH	187	167	233	167	108	103	118	145	120	109	91	64	61	60	63	75	63	70	102	172	115	112	91	90	1.12	2.33	24
24	FR	66	69	66	102	106	139	125	146	152	119	133	120	149	101	94	139	129	188	168	170	193	179	205	206	1.36	2.06	24
25	SA	159	171	161	200	189	130	106	109	131	92	74	85	71	74	56	75	72	85	75	62	73	70	77	76	1.03	2.00	24
26	SU	93	114	146	156	179	142	129	140	126	135	138	129	116	86	85	131	198	185	177	141	114	127	159	150	1.37	1.98	24
27	MO	266	130	144	174	157	142	83	89	66	85	102	107	92	67	58	66	55	60	83	118	130	184	155	163	1.16	2.66	24
28	TU	155	95	102	118	128	173	165	128	110	101	93	42	29	29	27	34	39	38	38	35	47	46	113	129	0.84	1.73	24
29	WE	143	95	88	77	83	97	129	101	85	70	66	81	85	75	79	59	86	102	98	96	161	115	94	124	0.95	1.61	24
30	TH	177	112	149	131	139	129	47	44	52	61	83	61	60	62	70	54	120	180	136	92	96	162	158	201	1.07	2.01	24
31	FR	171	132	141	129	131	131	100	76	66	95	78	59	59	66	54	48	106	78	83	72	71	83	102	109	0.93	1.71	24

STANDARD DEVIATION 2.66

NOTES:


NEPH
0.005V
YOKOGAWA

Properly Annotated 24x31

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 122

METHOD: 11

PARAMETER NAME: NEPH
PARAMETER CODE: 11203
UNITS: BSCAT

MONTH: December
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

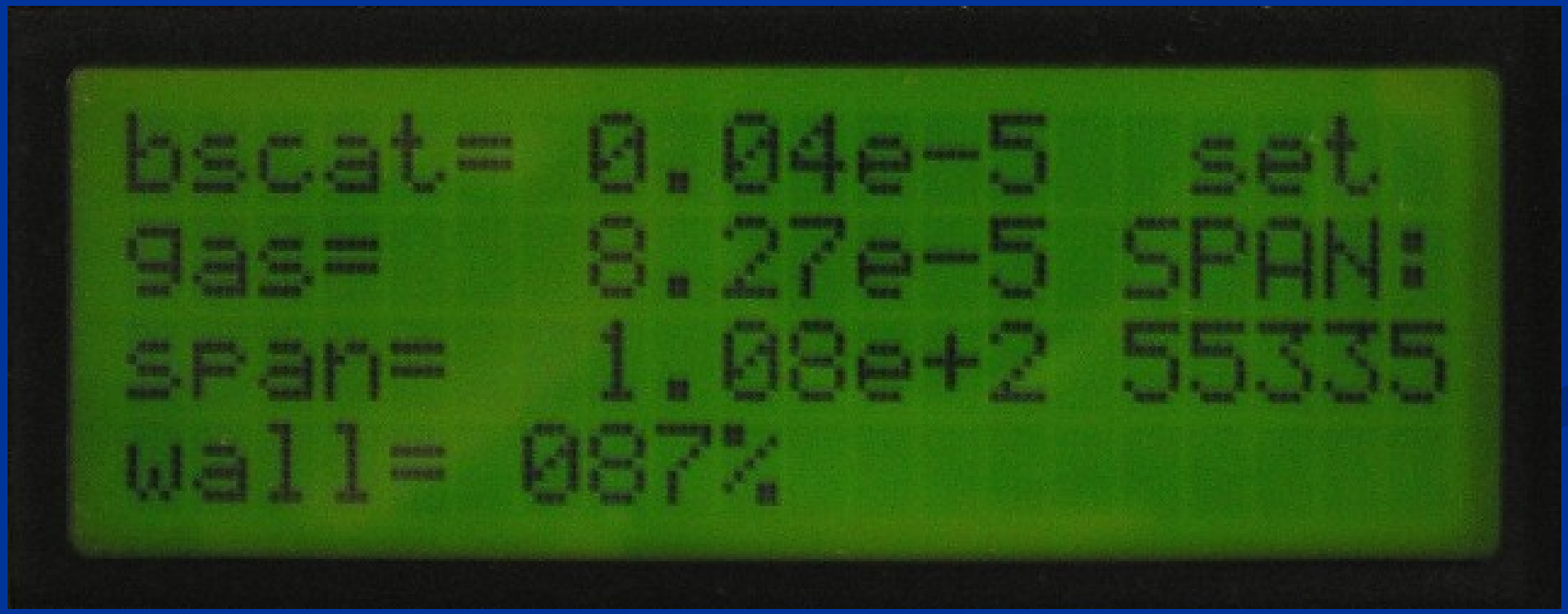
Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	WE	93	112	112	112	115	131	106	140	70	82	61	45	33	42	51	58	50	52	71	79	74	62	48	53	0.77	1.40	24
02	TH	56	43	34	45	50	53	50	68	57	52	49	46	47	62	63	74	93	76	73	95	80	115	83	93	0.65	1.15	24
03	FR	94	97	105	97	65	68	67	90	90	55	39	40	37	37	44	51	45	68	77	103	86	106	89	86	0.72	1.06	24
04	SA	107	68	83	54	84	74	88	86	64	77	115	95	64	64	86	58	94	155	170	100	122	115	147	87	0.94	1.70	24
05	SU	70	49	38	34	36	47	47	35	50	39	31	38	35	30	29	41	40	48	48	81	109	103	114	72	0.53	1.14	24
06	MO	106	80	79	54	51	51	58	35	44	60	51	62	59	66	59	79	71	79	84	116	132	120	123	185	0.79	1.85	24
07	TU	134	78	52	44	27	39	57	102	100	64	60	42	41	48	65	75	98	129	127	110	115	161	126	132	0.84	1.61	24
08	WE	109	67	32	32	52	44	68	36	69	91	51	28	25	104	84	40	47	58	54	57	43	43	48	67	0.56	1.09	24
09	TH	51	52	52	31	98	124	114	175	155	80	87	79	90	104	84	92	126	159	117	135	120	136	103	100	1.03	1.75	24
10	FR	123	127	106	100	71	111	101	102	111	101	74	81	89	90	100	91	109	86	132	176	158	99	75	32	1.02	1.76	24
11	SA	36	44	31	27	25	19	14	21	14	3	4	5	7	7	10	19	68	43	37	35	48	42	32	31	0.26	0.68	24
12	SU	11	16	9	22	11	16	26	25	29	28	11	10	11	10	9	15	45	40	43	39	40	11	22	42	0.23	0.45	24
13	MO	38	11	15	25	46	31	33	38	59	50	44	33	31	31	37	43	56	86	96	105	118	87	88	78	0.53	1.18	24
14	TU	74	74	59	47	52	47	50	64	94	84	52	37	34	43	45D	___D	~~X~~	~~3~~	~~3~~	~~3~~	~~2~~	~~3~~	~~3~~	~~2~~	0.02	0.94	23
15	WE	~~2~~	~~2~~	~~2~~	~~3~~	~~2~~	~~3~~	~~2~~	~~3~~	~~2~~	~~2~~	~~2~~	~~1~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~3~~	~~2~~	~~2~~	~~2~~	~~2~~	~~1~~	~~1~~	0.02	0.03	24
16	TH	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~3~~	~~2~~	~~2~~	~~3~~	~~1~~	~~2~~	~~1~~	~~3~~	~~2~~	~~1~~	~~2~~	~~2~~	~~3~~	~~3~~	~~2~~	~~1~~	~~2~~	0.02	0.03	24
17	FR	~~1~~	~~3~~	~~2~~	~~1~~	~~2~~	~~3~~	~~1~~	~~2~~	~~3~~	~~2~~	~~3~~	~~2~~	~~3~~	~~2~~	~~3~~	~~3~~	~~3~~	~~3~~	~~3~~	~~3~~	~~4~~	~~4~~	~~2~~	~~3~~	0.02	0.04	24
18	SA	~~2~~	~~3~~	~~2~~	~~3~~	~~2~~	~~3~~	~~1~~	~~3~~	~~2~~	~~2~~	~~2~~	~~1~~	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	~~3~~	~~4~~	~~2~~	~~2~~	~~2~~	~~1~~	~~1~~	0.03	0.04	24
19	SU	~~2~~	~~2~~	~~2~~	~~3~~	~~2~~	~~3~~	~~3~~	~~3~~	~~2~~	~~2~~	~~2~~	~~1~~	~~2~~	~~3~~	~~2~~	~~2~~	~~2~~	~~3~~	~~4~~	~~2~~	~~2~~	~~2~~	~~1~~	~~1~~	0.02	0.04	24
20	MO	~~1~~	~~3~~	~~2~~	~~1~~	~~2~~	~~3~~	~~1~~	~~2~~	~~3~~	~~2~~	~~3~~	~~2~~	~~3~~	~~2~~	~~3~~	~~2~~	~~2~~	~~3~~	~~3~~	~~3~~	~~4~~	~~4~~	~~2~~	~~3~~	0.02	0.04	24
21	TU	~~1~~	~~3~~	~~2~~	~~1~~	~~2~~	~~3~~	~~1~~	~~2~~	~~X~~D	81	81	82	116	99	155	164	240	234	243	258	216	188	230	225	0.78	2.58	24
22	WE	197	158	83	80	90	73	70	59	54	60	70	78	62	51	60	74	145	125	199	148	150	125	150	185	1.06	1.99	24
23	TH	187	167	233	167	108	103	118	145	120	109	91	64	61	60	63	75	63	70	102	172	115	112	91	90	1.12	2.33	24
24	FR	66	69	66	102	106	139	125	146	152	119	133	120	149	101	94	139	129	188	168	170	193	179	205	206	1.36	2.06	24
25	SA	159	171	161	200	189	130	106	109	131	92	74	85	71	74	56	75	72	85	75	62	73	70	77	76	1.03	2.00	24
26	SU	93	114	146	156	179	142	129	140	126	135	138	129	116	86	85	131	198	185	177	141	114	127	159	150	1.37	1.98	24
27	MO	266	130	144	174	157	142	83	89	66	85	102	107	92	67	58	66	55	60	83	118	130	184	155	163	1.16	2.66	24
28	TU	155	95	102	118	128	173	165	128	110	101	93	42	29	29	27	34	39	38	38	35	47	46	113	129	0.84	1.73	24
29	WE	143	95	88	77	83	97	129	101	85	70	66	81	85	75	79	59	86	102	98	96	161	115	94	124	0.95	1.61	24
30	TH	177	112	149	131	139	129	47	44	52	61	83	61	60	62	70	54	120	180	136	92	96	162	158	201	1.07	2.01	24
31	FR	171	132	141	129	131	131	100	76	66	95	78	59	59	66	54	48	106	78	83	72	71	83	102	109	0.93	1.71	24

STANDARD DEVIATION 2.66

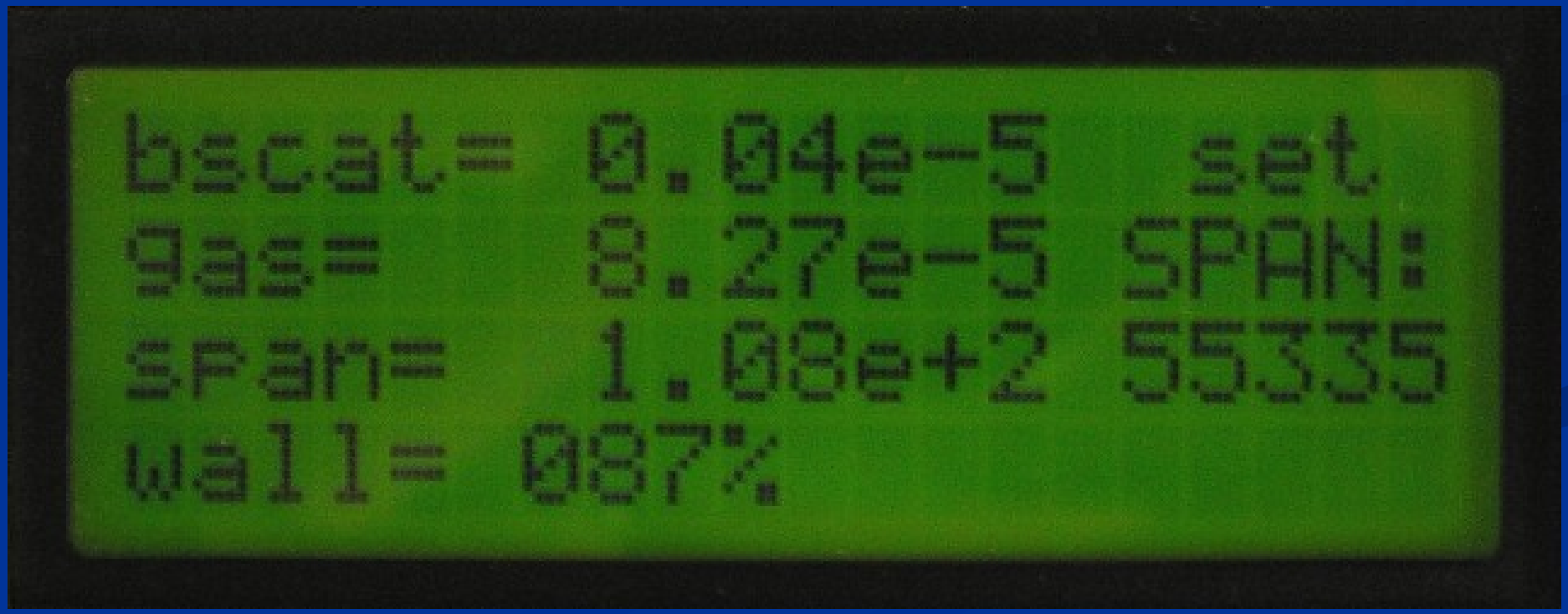
NOTES: Discovered zero filter connected on Day 21 Hour 08.

Is everything OK?



No.

When the wall reaches 80% the nephelometer needs cleaning. Data will be deleted above 100%.



What's wrong here?

Rsct: should always be set to 14180 for our application.

Would you submit this data?

(Neph vs. $NPM_{2.5}$)

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 0

PARAMETER NAME: NEPH
PARAMETER CODE: 11203
METHOD: 11 UNITS: BSCAT
MONTH: May
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	SA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	24
02	SU	0	0	0	0	0	-1	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	24
03	MO	0	0	0	0	0	0	0	0	0	0	0	1	3	12	11	12	9	5	3	1	1	1	1	4	0.03	0.12	24
04	TU	3	5	7	4	4	4	3	2	2	2	2	2	6	13	19	9	9	9	7	10	9	6	7	11	0.06	0.19	24

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 0

PARAMETER NAME: NPM25
PARAMETER CODE: 11203
METHOD: 11 UNITS: BSCAT
MONTH: May
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	SA	8	7	7	8	7	7	8	7	8	7	7	7	8	7	7	7	8	7	7	8	8	8	7	7	0.7	0.8	24
02	SU	8	8	8	7	7	7	7	7	7	7	7	7	8	8	8	8	8	10	8	7	8	7	7	7	0.8	1.0	24
03	MO	7	7	8	8	8	7	7	7	7	7	8	11	17	39	37	40	32	22	17	12	10	11	11	18	1.5	4.0	24
04	TU	16	20	26	20	18	18	15	14	14	14	13	12	23	42	58	32	31	31	27	34	33	23	27	38	2.5	5.8	24

Notes:

When the nephelometer hourly avg. is zero, the $NPM_{2.5}$ should be zero.

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 0

PARAMETER NAME: NEPH
PARAMETER CODE: 11203
METHOD: 11 UNITS: BSCAT

MONTH: May
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	SA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	24
02	SU	0	0	0	0	0	-1	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	24
03	MO	0	0	0	0	0	0	0	0	0	0	0	1	3	12	11	12	9	5	3	1	1	1	1	4	0.03	0.12	24
04	TU	3	5	7	4	4	4	3	2	2	2	2	2	6	13	19	9	9	9	7	10	9	6	7	11	0.06	0.19	24

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 0

PARAMETER NAME: NPM25
PARAMETER CODE: 11203
METHOD: 11 UNITS: BSCAT

MONTH: May
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	SA	8	7	7	8	7	7	8	7	8	7	7	7	8	7	7	7	8	7	7	8	8	8	7	7	0.7	0.8	24
02	SU	8	8	8	7	7	7	7	7	7	7	7	7	8	8	8	8	8	10	8	7	8	7	7	7	0.8	1.0	24
03	MO	7	7	8	8	8	7	7	7	7	7	8	11	17	39	37	40	32	22	17	12	10	11	11	18	1.5	4.0	24
04	TU	16	20	26	20	18	18	15	14	14	14	13	12	23	42	58	32	31	31	27	34	33	23	27	38	2.5	5.8	24

Notes:

Now you can submit your data.

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 0

PARAMETER NAME: NEPH
PARAMETER CODE: 11203
METHOD: 11
UNITS: BSCAT

MONTH: May
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	SA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	24
02	SU	0	0	0	0	0	-1	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	24
03	MO	0	0	0	0	0	0	0	0	0	0	0	1	3	12	11	12	9	5	3	1	1	1	1	4	0.03	0.12	24
04	TU	3	5	7	4	4	4	3	2	2	2	2	2	6	13	19	9	9	9	7	10	9	6	7	11	0.06	0.19	24

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 0

PARAMETER NAME: NPM25
PARAMETER CODE: 11203
METHOD: 11
UNITS: BSCAT

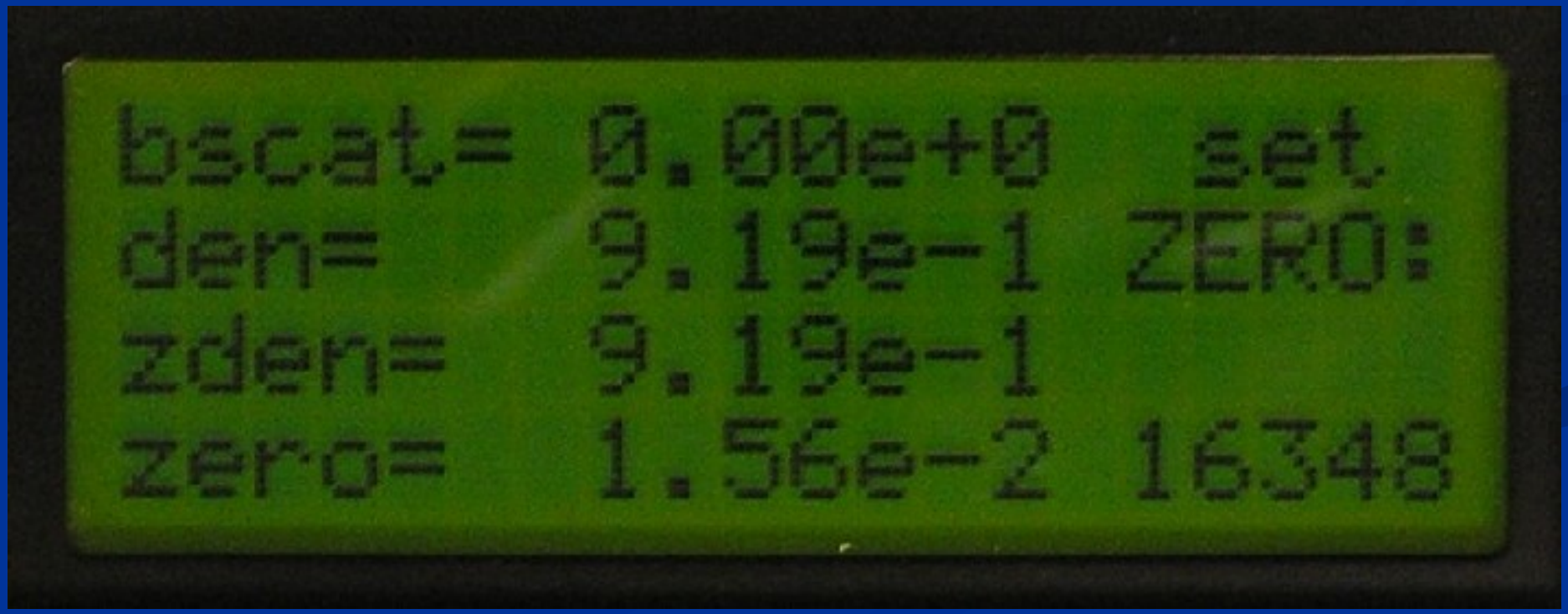
MONTH: May
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	SA	8	7	7	8	7	7	8	7	8	7	7	7	8	7	7	7	8	7	7	8	8	8	7	7	0.7	0.8	24
02	SU	8	8	8	7	7	7	7	7	7	7	7	7	8	8	8	8	8	10	8	7	8	7	7	7	0.8	1.0	24
03	MO	7	7	8	8	8	7	7	7	7	7	8	11	17	39	37	40	32	22	17	12	10	11	11	18	1.5	4.0	24
04	TU	16	20	26	20	18	18	15	14	14	14	13	12	23	42	58	32	31	31	27	34	33	23	27	38	2.5	5.8	24

Notes: Should be zero due to zero nephelometer values.

Don’t strive for an exact zero.



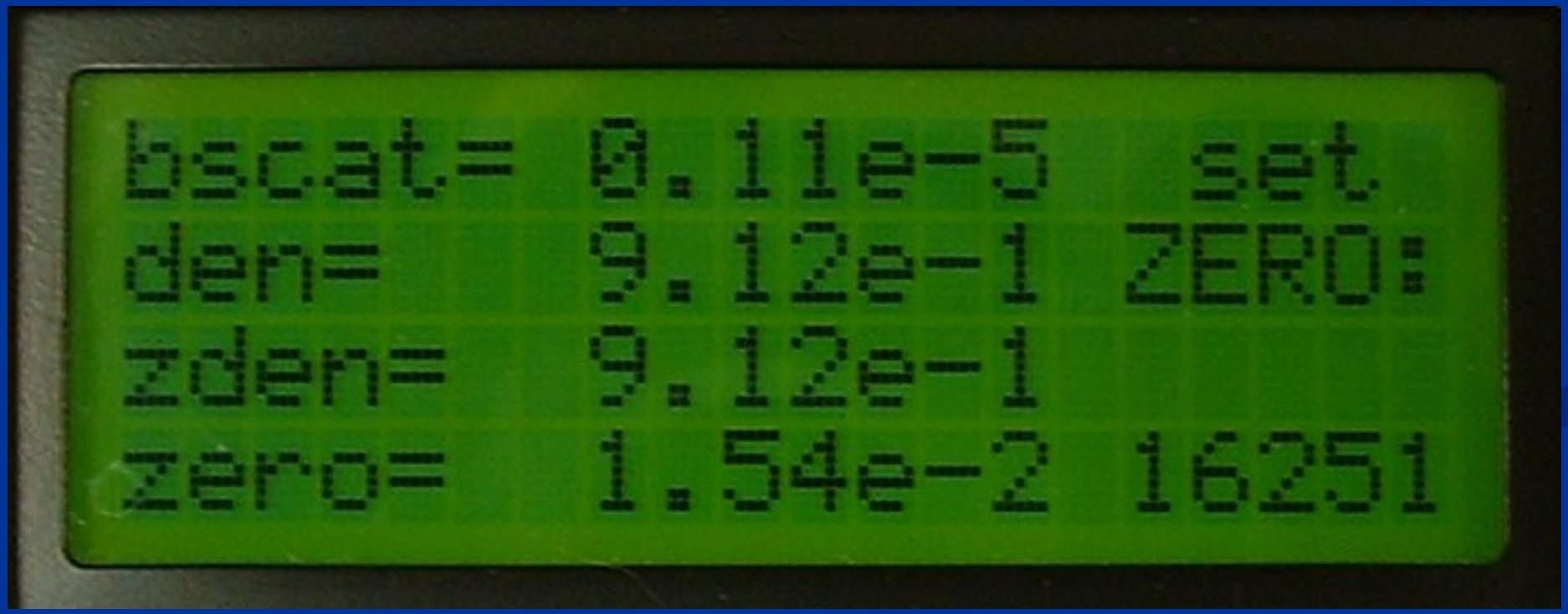
A tightly adjusted zero (bscat = 0.00e+0) may cause negative hourly averages to be stored in the telemetry system.

SITE NAME: NEPHSITE : 23-002-0022 PARAMETER NAME: NEPH MONTH: May
ADDRESS: 925 S AIR DIRTVILLE PARAMETER CODE: 11203 YEAR: 2006
LAT/LONG: 034 05' 41" / 118 22' 04" METHOD: 11 UNITS: BSCAT DECIMAL POSITIONER: 2
ELEVATION: 0 PROJECT: 05

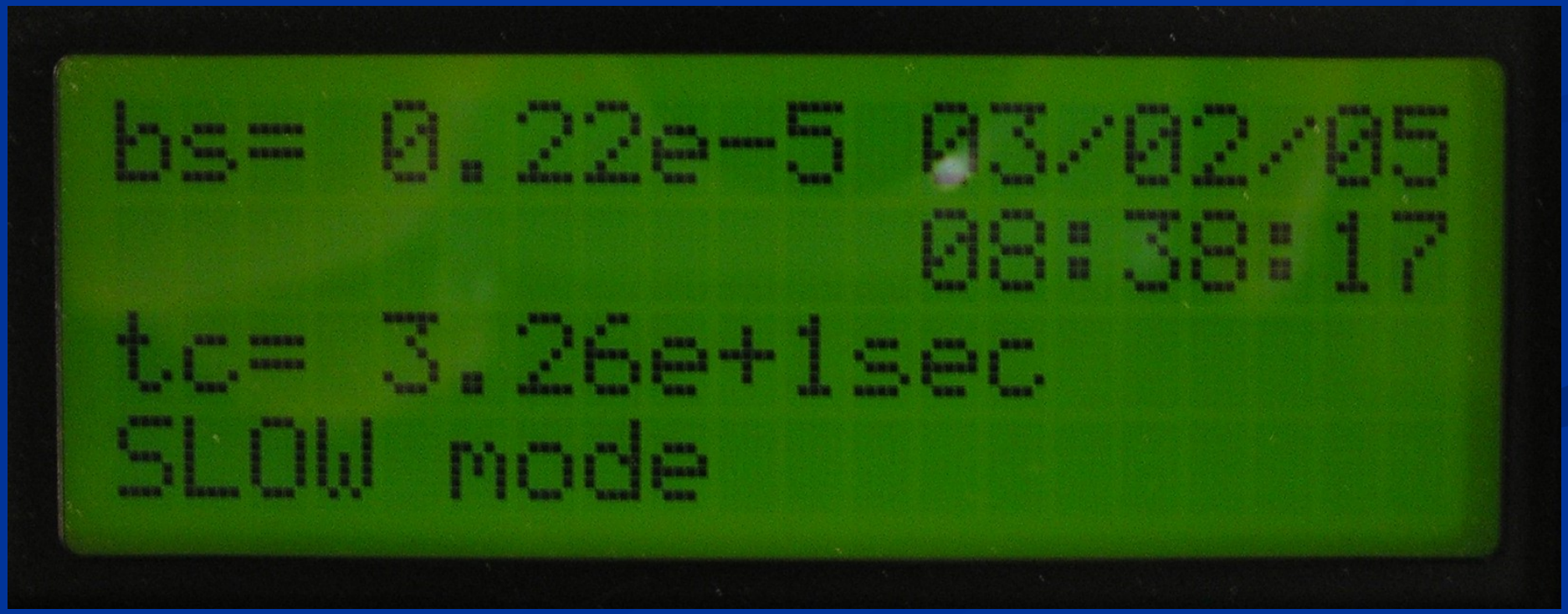
Hourly Averages
Beginning Hour (PST)

DA RDS	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	
01	SA	-2	-1	-2	-1	0	0	1	2	4	11	8	1	-2	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	24
02	SU	0	0	0	0	0	-1	0	-1	0	0	0	0	-1	1	2	1	2	3	1	0	0	0	0	0	0.00	0.00	24
03	MO	0	-2	0	0	0	0	0	0	0	0	0	1	3	12	11	12	9	5	3	1	1	1	1	4	0.03	0.12	24
04	TU	3	5	7	4	4	4	3	2	2	2	2	2	6	13	19	9	9	9	7	10	9	6	7	11	0.06	0.19	24

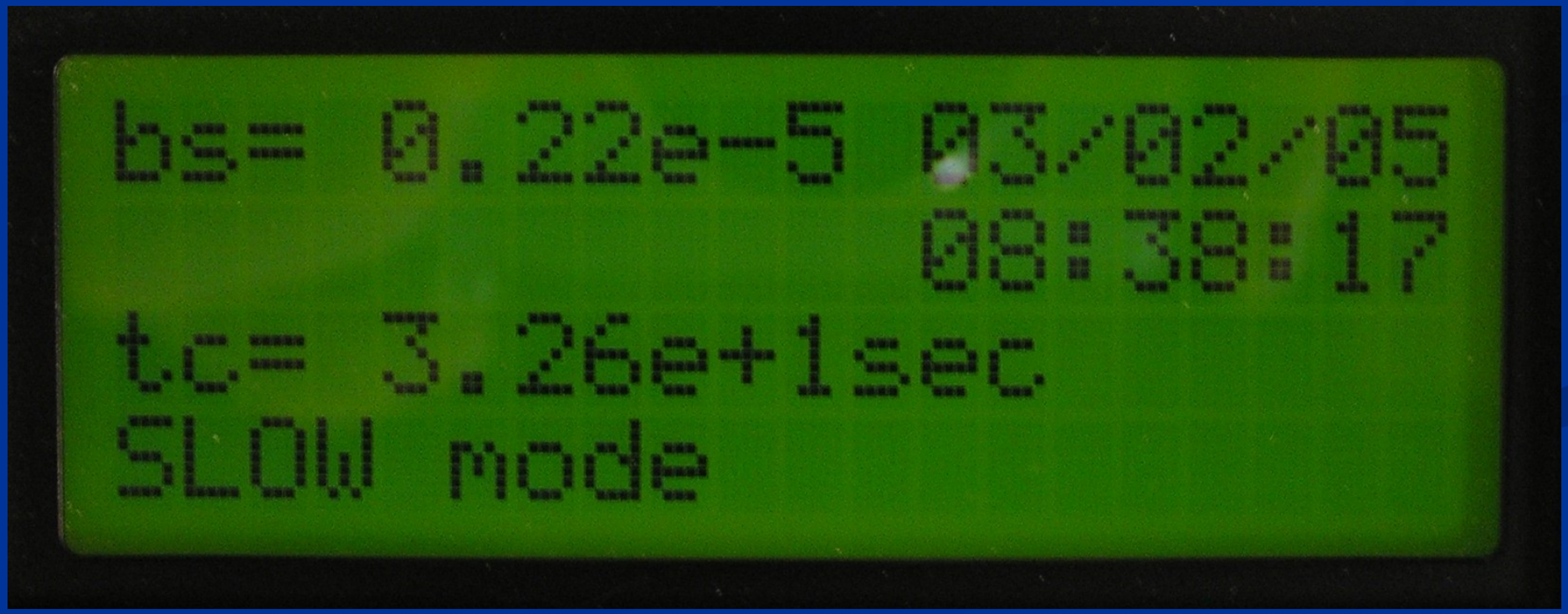
Adjust your zero (bscat) between +0.05e-5 and +0.15e-5



Are you leaving it like this?



Absolutely! It's fine.



Complete the Zero / Span Log Sheet

Some stations don't telemeter the flags.

DCN offline at __Who Cares?__PST
Screen 3 bscat _____

Screen 4 bscat_____
gas _____
span _____
wall _____%
set SPAN _____
DCN online at __QA Cares!___PST

No QCs this month?

SITE NAME: NEPHSITE : 23-002-0022
ADDRESS: 925 S AIR DIRTVILLE
LAT/LONG: 034 05' 41" / 118 22' 04"
ELEVATION: 122

PARAMETER NAME: NEPH
PARAMETER CODE: 11203
METHOD: 11
UNITS: BSCAT

MONTH: December
YEAR: 2006
DECIMAL POSITIONER: 2
PROJECT: 05

Hourly Averages
Beginning Hour (PST)

DA	C	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG	MAX	RDS
01	SA	19	18	16	30	10	11	7	12	28	14	12	10	6	7	16	20	33	61	83	42	74	75	44	85	0.31	0.85	24
02	SU	171	98	128	142	53	69	98	89	42	22	11	9	9	11	8	9	13	26	86	88	56	39	32	39	0.56	1.71	24
03	MO	39	17	23	11	10	11	18	17	21	15	9	8	9	8	8	10	21	16	22	28	21	14	26	22	0.17	0.39	24
04	TU	43	34	37	44	23	18	20	21	15	11	12	13	10	9	11	22	13	16	24	40	24	24	31	30	0.23	0.44	24
05	WE	36	69	85	78	35	59	35	22	13	13	6	6	7	7	7	19	27	39	45	80	292	322	288	373	0.82	3.73	24
06	TH	269	252	261	236	230	156	102	59	59	74	36	31	34	36	31	28	18	17	17	24	16	19	17	13	0.85	2.69	24
07	FR	11	11	7	5	7	9	9	13	14	13	10	5	10	8	10	13	11	11	11	6	13	11	10	29	0.11	0.29	24
08	SA	24	11	8	5	3	3	3	2	7	17	6	8	9	5	8	7	23	36	48	47	61	47	21	11	0.18	0.61	24
09	SU	18	33	29	21	9	4	6	13	27	25	9	8	13	18	18	19	23	27	37	41	25	32	29	28	0.21	0.41	24
10	MO	23	11	7	6	6	8	13	20	14	10	5	7	6	5	4	4	5	6	13	11	11	11	14	20	0.10	0.23	24
11	TU	21	8	8	7	41	67	113	109	171	52	24	19	16	22	30	32	29	46	50	61	48	53	47	47	0.46	1.71	23
12	WE	39	28	23	21	20	17	15	14	16	22	23	23	25	24	28	24	28	20	14	41	102	106	78	157	0.38	1.57	24
13	TH	175	81	70	90	66	64	70	74	80	46	30	20	11	9	6	25	15	65	83	64	84	78	147	242	0.71	2.42	24
14	FR	258	92	83	91	113	123	118	27	42	13	15	10	8	8	6	7	8	8	7	12	8	6	6	6	0.45	2.58	24
15	SA	6	5	6	6	6	6	6	7	10	8	7	10	7	9	9	12	9	14	14	10	14	10	10	12	0.09	0.14	24
16	SU	7	6	4	3	3	3	5	6	8	42	116	108	57	46	111	110	191	250	198	199	224	205	171	138	0.92	2.50	24
17	MO	82	147	93	75	83	87	84	46	17	10	6	7	10	5	4	3	3	2	2	3	3	3	3	4	0.33	1.47	24
18	TU	2	2	3	2	2	2	2	1	2	8	4	4	4	3	3	6	6	10	10	9	8	7	6	7	0.05	0.10	23
19	WE	8	7	6	6	5	6	6	12	19	8	5	5	5	6	8	9	10	14	12	30	20	30	40	42	0.13	0.42	24
20	TH	90	90	112	63	42	55	30	12	14	7	10	10	8	8	9	9	7	7	7	8	8	11	12	13	0.27	1.12	24
21	FR	13	12	22	55	72	15	21	7	32	16	11	6	4	3	4	12	22	34	44	33	87	56	84	157	0.34	1.57	24
22	SA	84	76	94	94	83	137	43	57	40	43	39	20	17	11	10	23	21	52	63	59	57	52	58	105	0.56	1.37	24
23	SU	63	65	60	82	49	55	28	38	32	38	24	37	39	35	24	25	49	119	195	117	171	176	186	127	0.76	1.95	24
24	MO	142	121	78	65	63	59	128	141	87	92	24	28	17	8	28	41	36	60	46	76	121	158	207	276	0.88	2.76	24
25	TU	246	339	222	268	108	111	92	188	231	121	77	49	49	12	17	22	26	34	15	12	22	22	18	20	0.97	3.39	24
26	WE	13	11	11	11	14	10	13	18	16	10	21	17	15	15	17	15	40	28	31	26	31	46	45	83	0.23	0.83	23
27	TH	77	109	74	71	35	25	41	35	23	17	7	4	3	3	4	12	34	25	24	26	23	27	32	23	0.31	1.09	24
28	FR	21	16	11	14	11	16	19	22	18	21	15	13	13	12	19	22	16	10	13	22	25	41	25	32	0.19	0.41	24
29	SA	12	5	4	4	3	1	3	2	5	6	9	7	12	13	12	19	23	21	21	18	24	56	43	27	0.15	0.56	24
30	SU	62	76	64	64	40	32	42	35	44	37	18	5	5	4	6	13	31	32	32	57	89	79	77	126	0.45	1.26	24
31	MO	116	132	60	47	36	31	25	20	23	25	14	15	22	24	20	17	19	43	168	82	106	50	68	134	0.54	1.68	24

NOTES: