Processing Record for this file:
(Make notes here unique for this file)

Loading from 2014-03-01 - 2014-04-01
Data taken from DMF, untarred, unzipped and renamed back to orignal file names

It was noted that BOTH TEI 42i's began to lose their internal Mass Flow Meters. This was not consequential as the inlet has much better Mass Flow Controllers. The effect was noted as periodic drop outs and shifts in the internal MFM signals. The same behavior was noted in TCAP. It appears related to ingestion of water, though this is by no means definite.

NO2 signal is problemmatic. The photolysis cell was only operating at ~10% efficiency for unknown reasons. Data is provided, but should be viewed circumspectly.

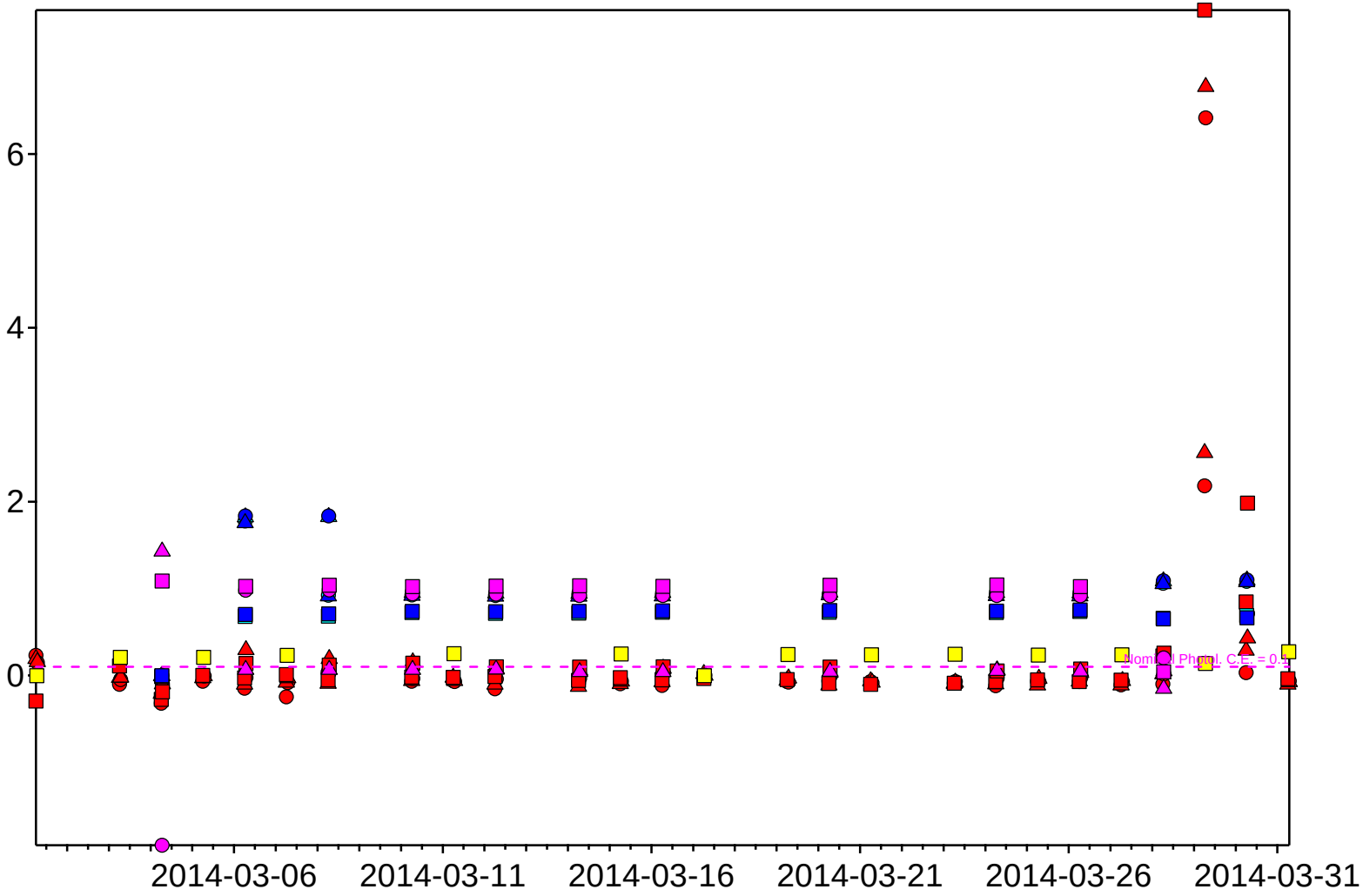
Data dropouts -

Power at T3 has been most irregular. The NOx box in particular is susceptible to interruptions. After resumption of power, it takes time for the signals to stabilize (the PMT cooler takes some time to reach equilibrium). A log of data dropouts is as follows. Consult the site log for details.

2014-03-01 00:00 - 2014-03-02 17:29 MFC for the NOy channel still in failure mode until replaced by Mentor. During this period NO is valid and NO2 is reported but very uncertain.
2014-03-03 23:02 - 2014-03-04 14:41 Pumps off due to site power failure
2014-03-04 18:51 - 2014-03-04 23:29 Pumps off due to site power failure
2014-03-06 11:00 - 2014-03-06 14:00 NO exceeds NOy. This is nonsensical.
2014-03-12 19:05 - 2014-03-13 13:36 Power off due to genset(?)
2014-03-16 17:57 - 2014-03-17 12:20 Power off due to genset(?)

○ - NO Channel ; △ - NO_x Channel; □ - NO_y Channel
Zero Air Equivalent Signal (ppbv)
S.A. #1 (calibrated sig/dilution conc: [SA#1] = 20.8 ppbv)
S.A. #2 (calibrated sig/dilution conc: [SA#2] = 82.86 ppbv)
GPT + SA #2 (NO: frac titr., NO_x: Photol. C.E. (nom=0.1), NO_y: Mo C.E. (nom=1.03))
HNO_3 cal. (calibrated sig/perm conc: [HNO_3] = 68.9 ppbv)

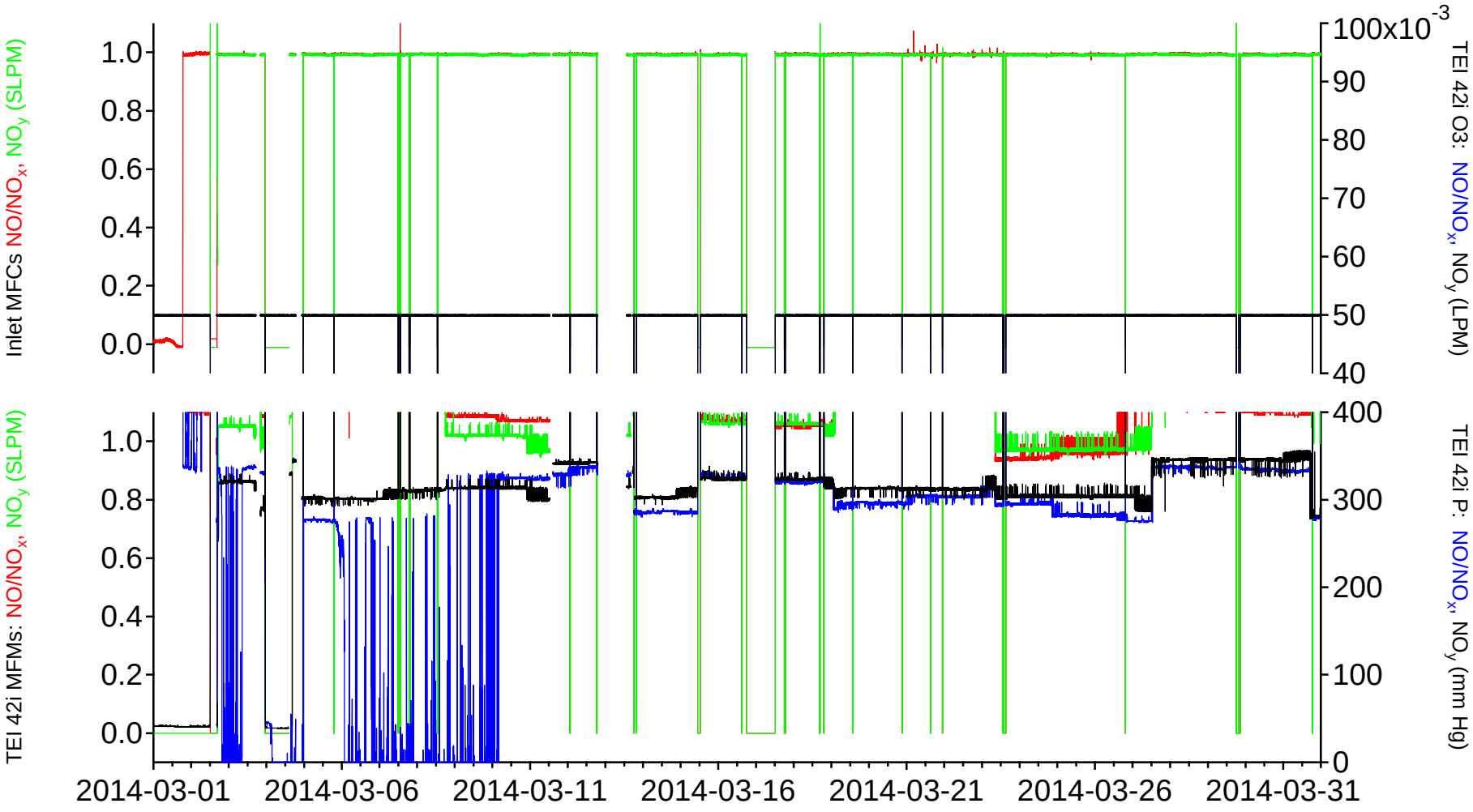
Ground NO_x Analyzer Calibration Data



Project/Platform/Site: maomaoscs1
ARM Climate Research Facility
Contact: S.R. Springston (631) 344-4477, srs@bnl.gov

(UTC)

Ground-Based NO_x Analyzer
Housekeeping 1
Flows & Pressures



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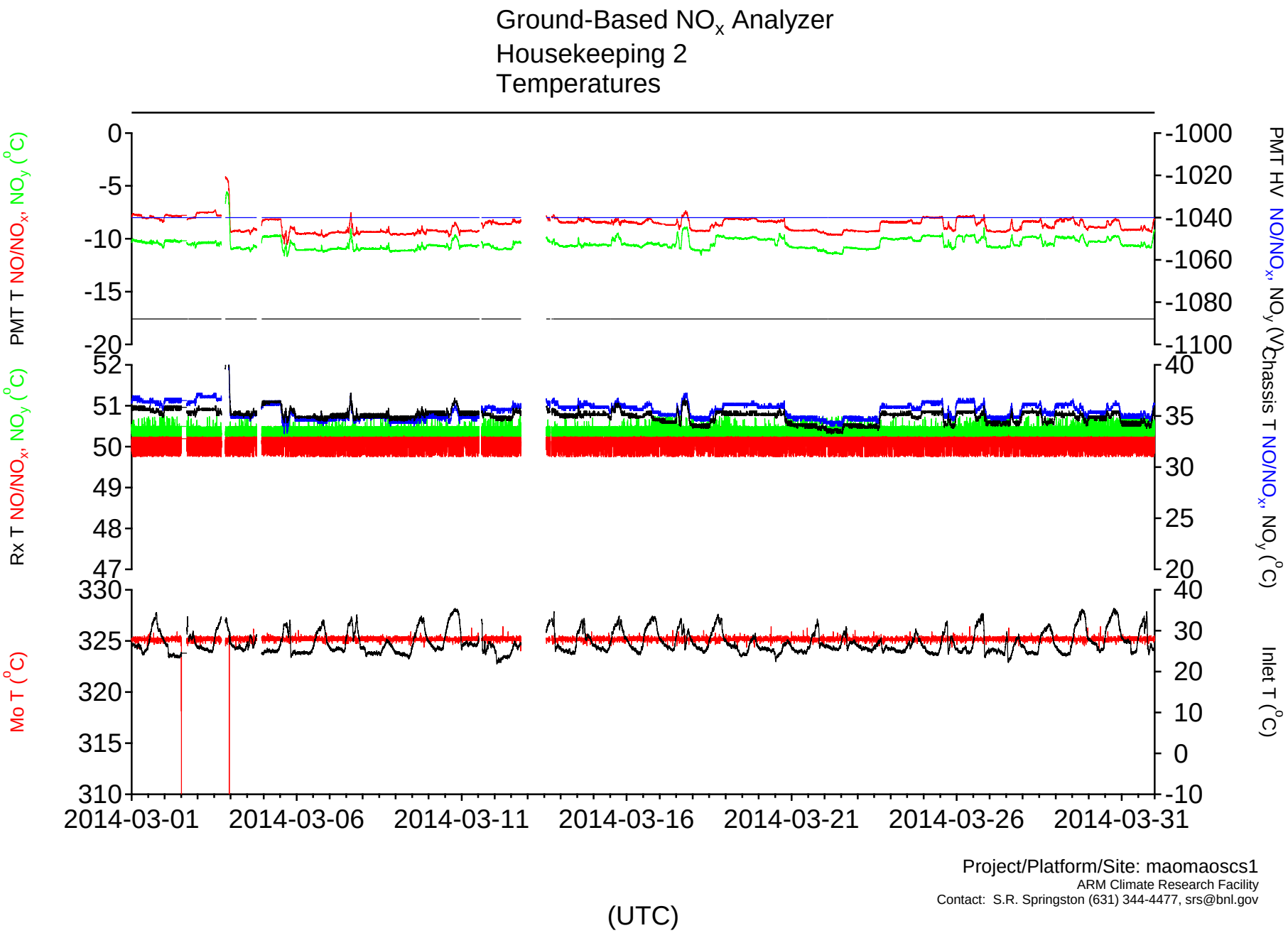
(UTC)


Ground-Based NOx Analyzer
Housekeeping 2
Temperatures
PMT T NO/NOx, NOy (°C)
Rx T NO/NOx, NOy (°C)
Mo T (°C)
PMT HV NO/NOx, NOy (V)
Chassis T NO/NOx, NOy (°C)
Inlet T (°C)
0
-5
-10
-15
-20
52
51
50
49
48
47
330
325
320
315
310
-1000
-1020
-1040
-1060
-1080
-1100
40
35
30
25
20
40
30
20
10
0
-10
2014-03-01
2014-03-06
2014-03-11
2014-03-16
2014-03-21
2014-03-26
2014-03-31
(UTC)
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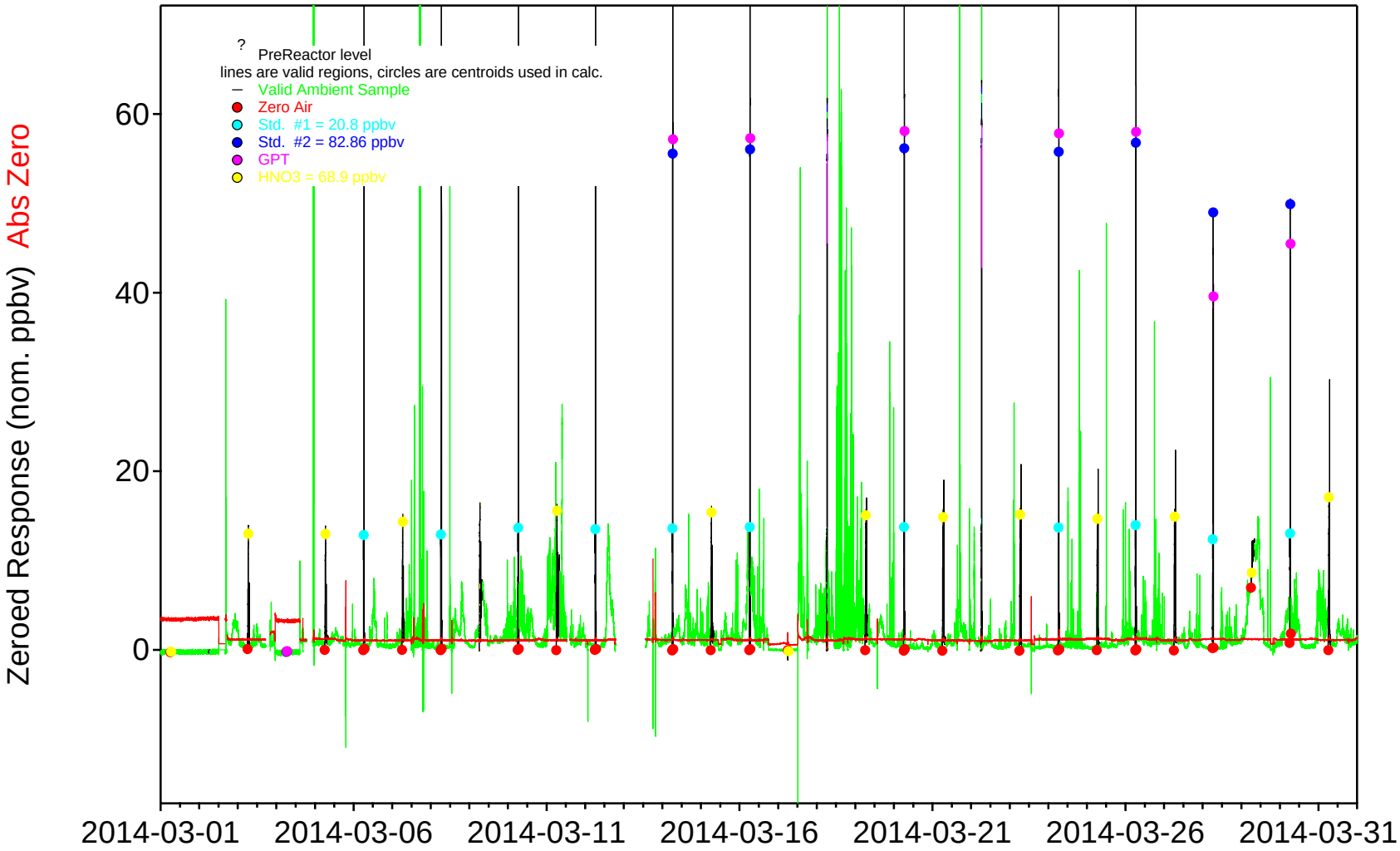
Ground NO_x Analyzer
Parsed NOy Channel Data



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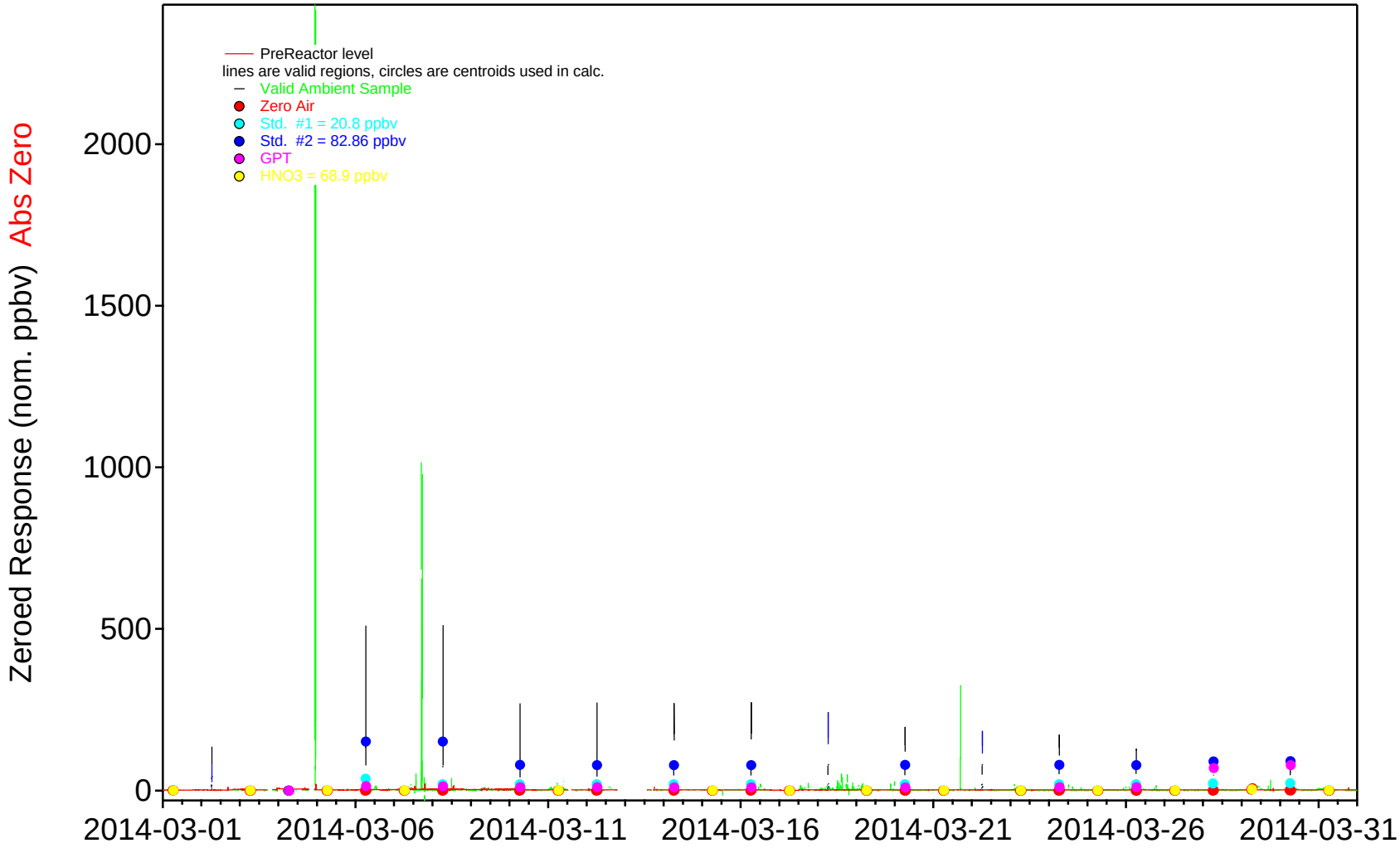
Parsed NOx Channel Data



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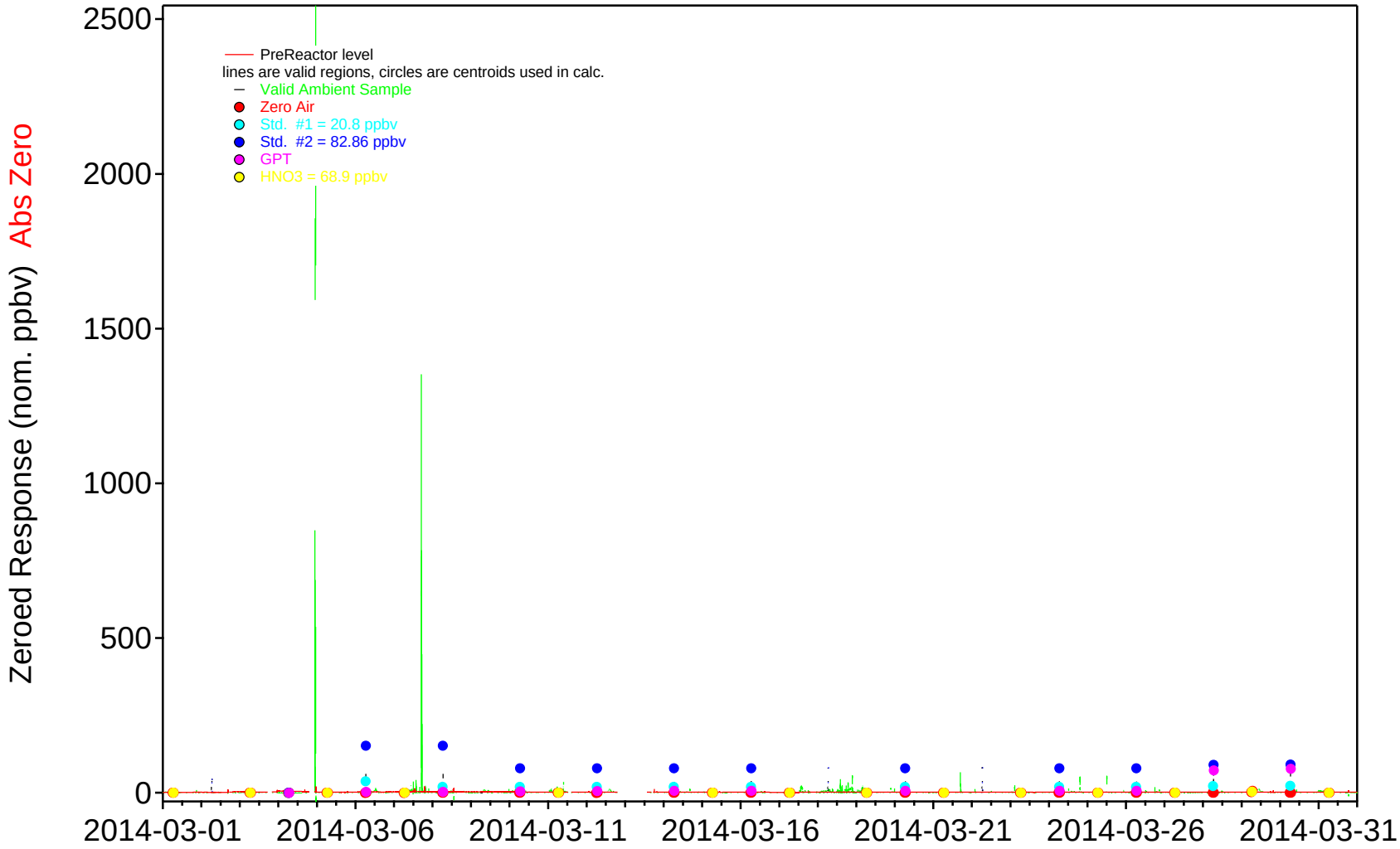
Ground NO_x Analyzer
Parsed NO Channel Data



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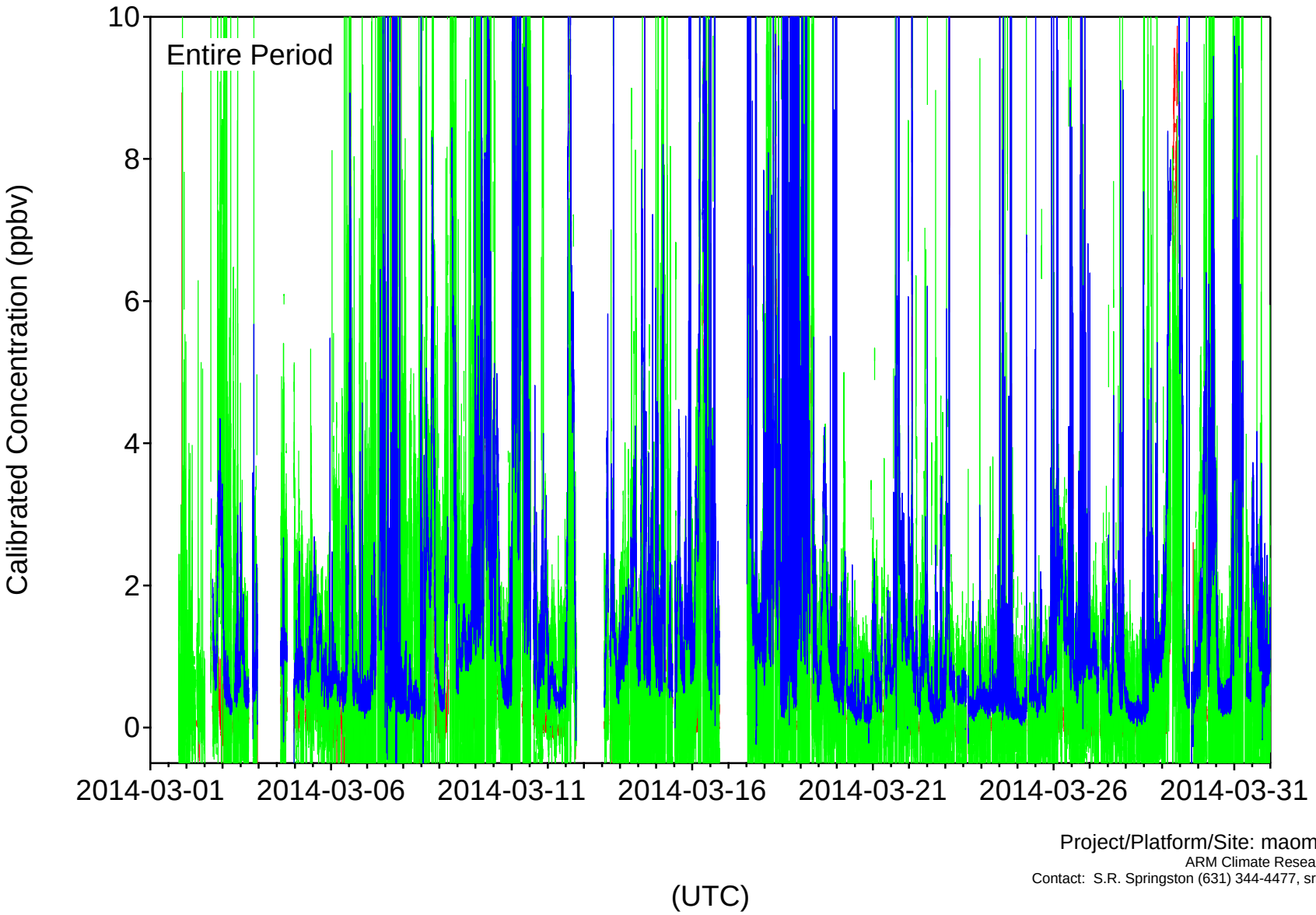
Calibration Factors Used:
NO: 1 ([calibrated]/[inst. reported])
NO_2: 1 ([calibrated]/[inst. reported]), C.E. = 0.1
NO_y: 1.1 ([calibrated]/[inst. reported]), C.E. = 1.03



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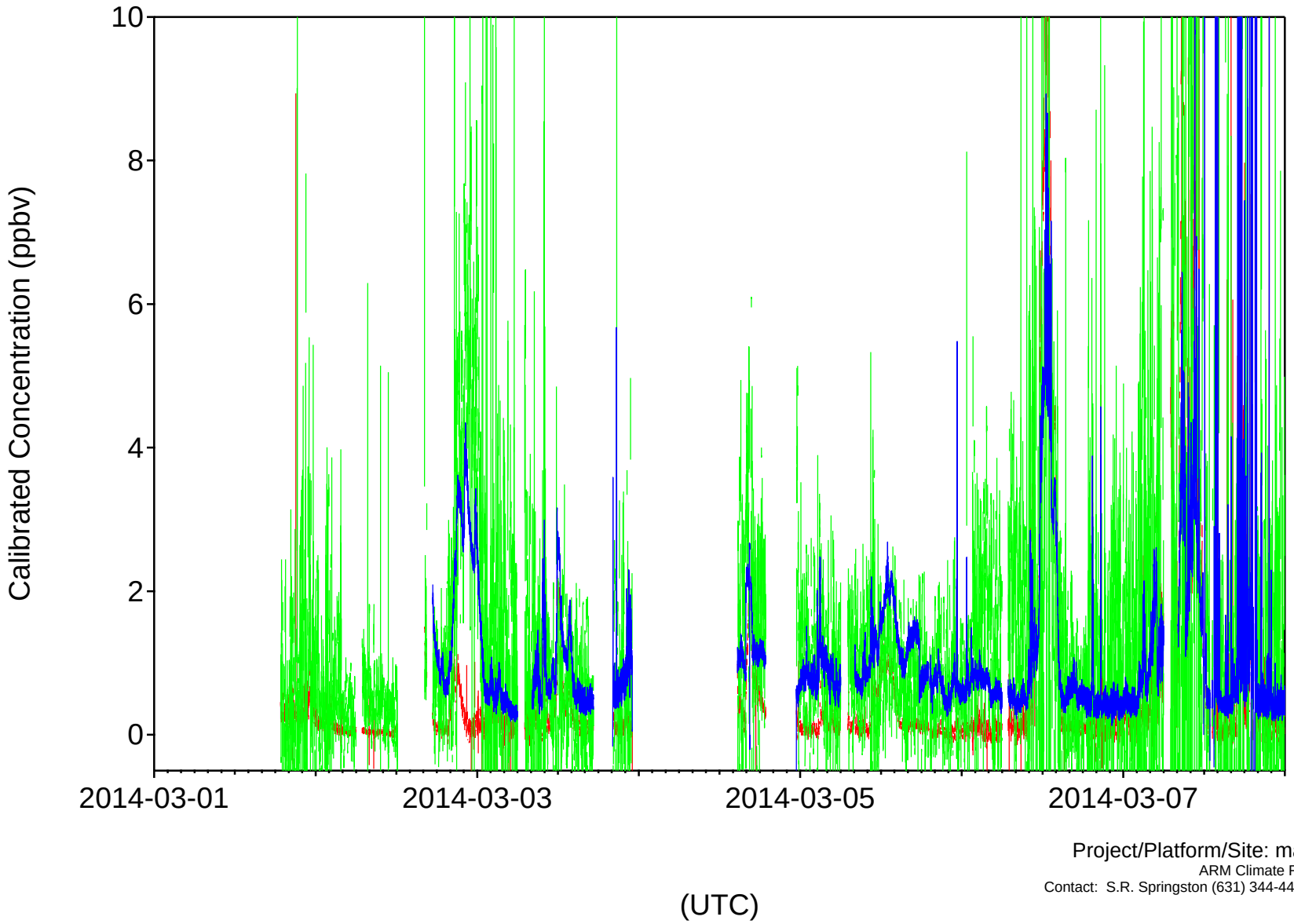

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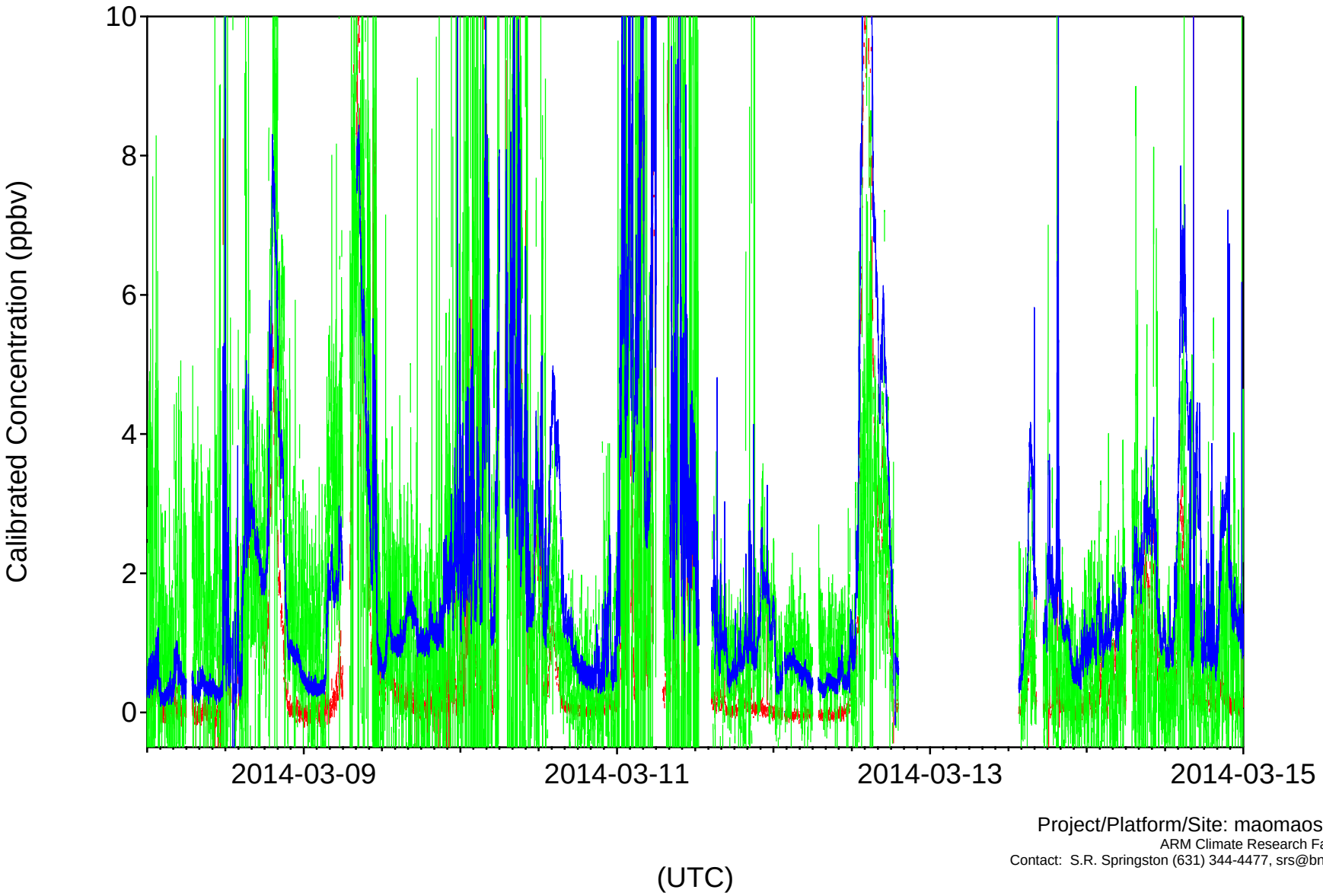

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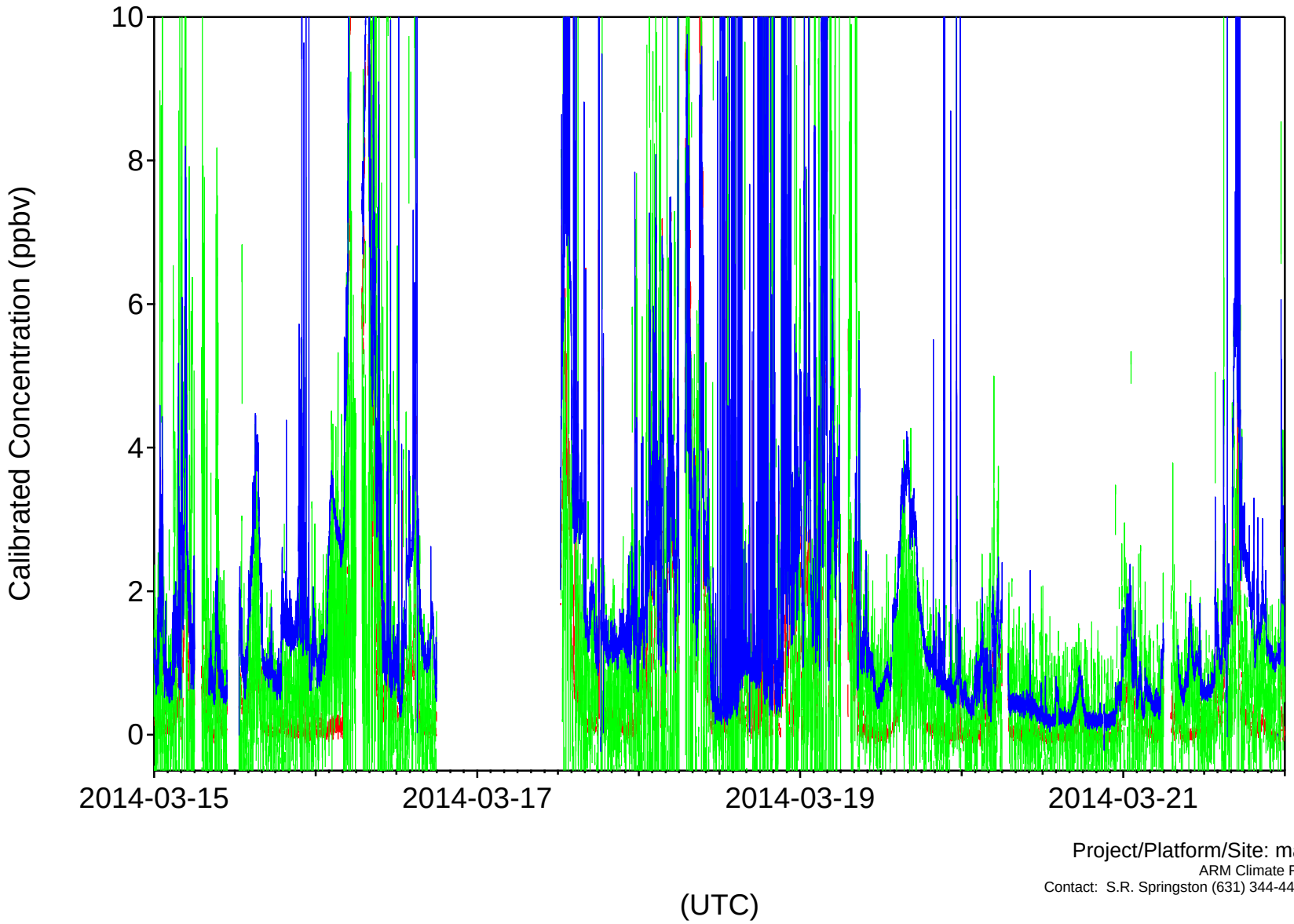
NO_y: 1.1 ([calibrated]/[inst. reported]), C.E. = 1.03



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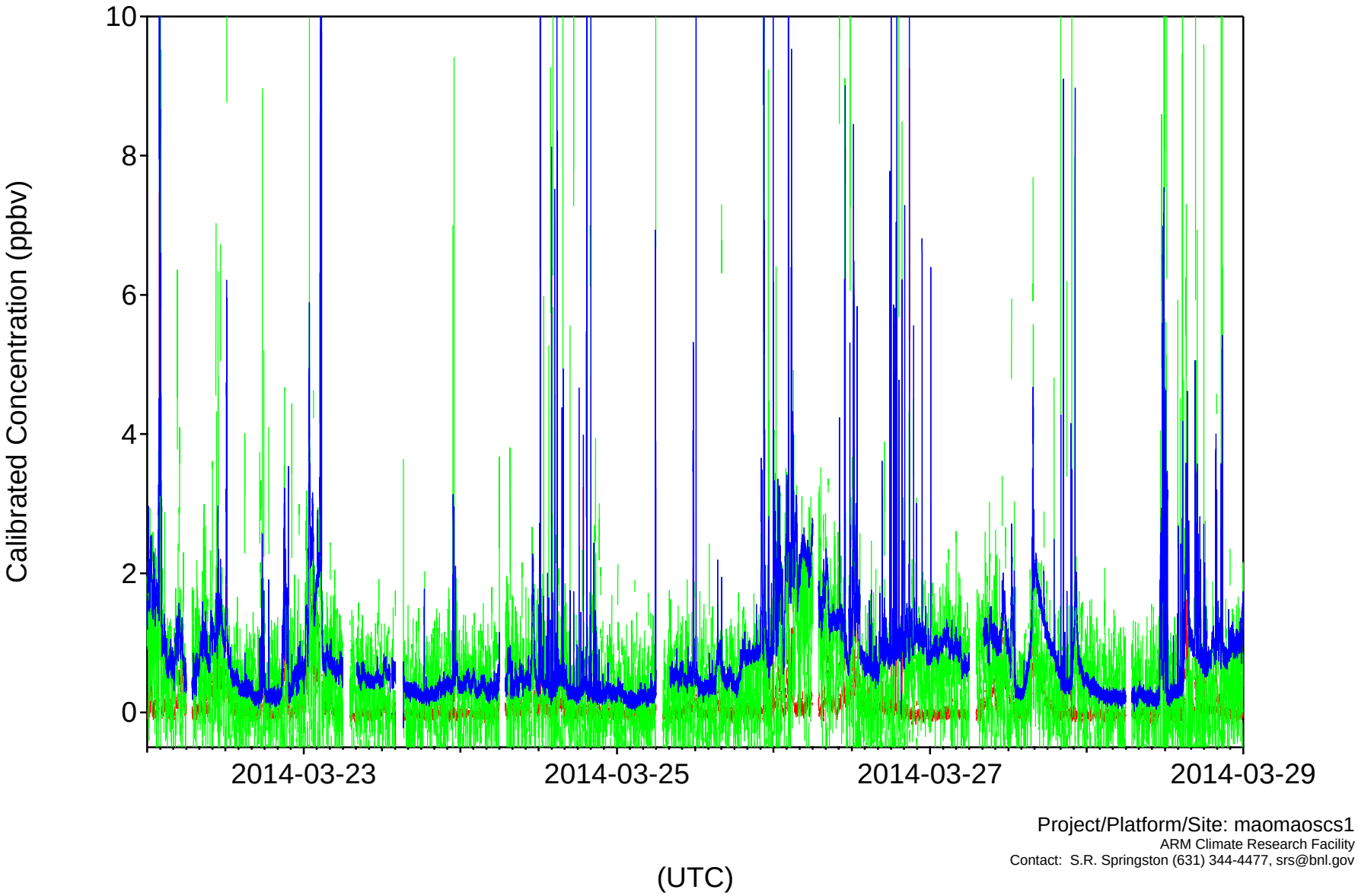

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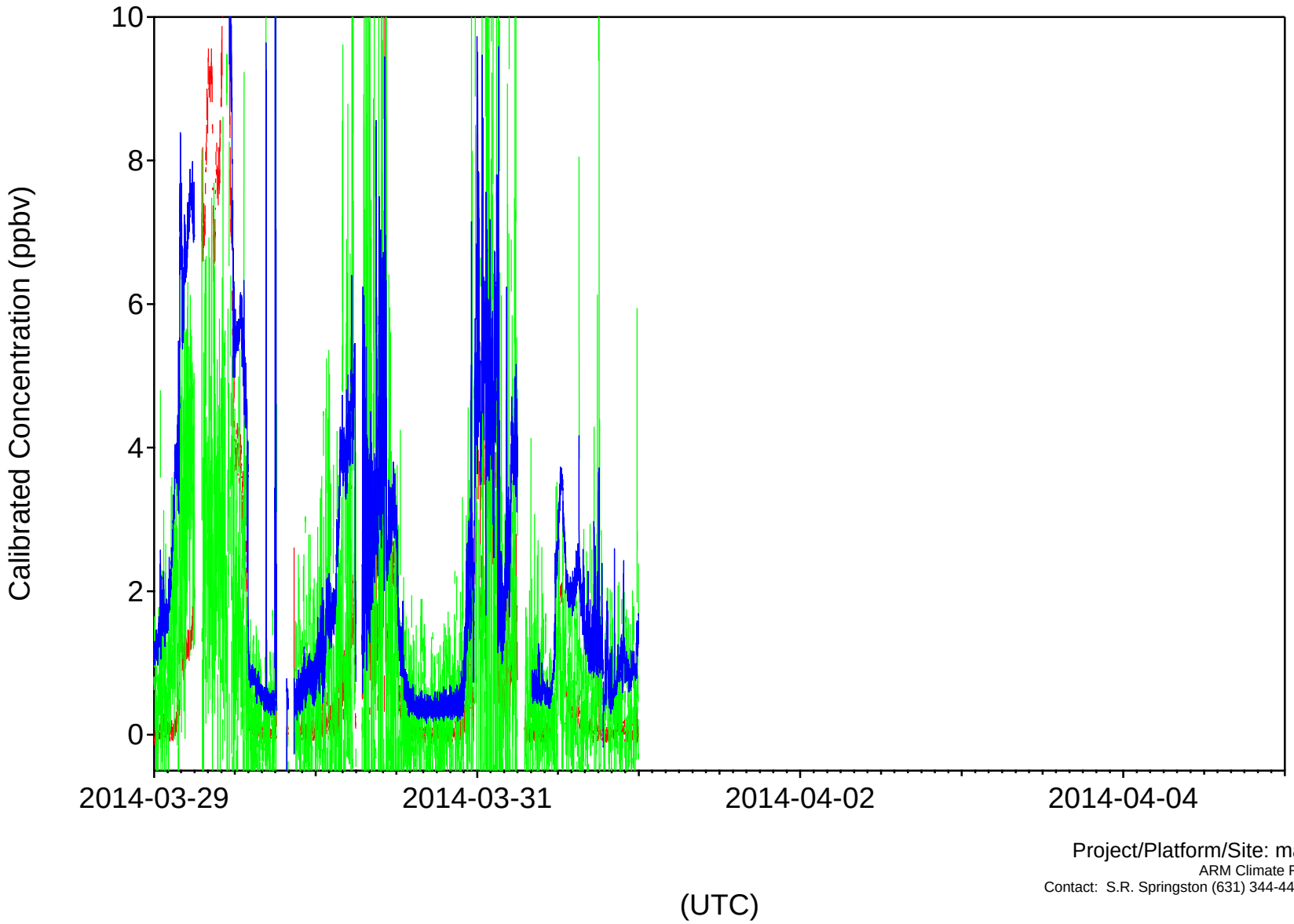

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