

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

Loading from 2015-05-01 - 2015-06-01

Data taken from DMF, untarred, unzipped and renamed back to original file names

It was noted that BOTH TEI 42i's lost their internal Mass Flow Meters. This was not consequential as the inlet has much better Mass Flow Controllers.

Ambient data appear valid.

Diurnal cycles of all three species are readily apparent.

Multiple large (>100 ppbv) excursions noted. These correlate very well with CO excursions. They are very fast and so the NO₂ values (which depend on a difference measurement) are not valid. It is nearly impossible to discriminate these periods. It is concluded that these periods MAY be due to local generator emissions and the associated variability with instrument/pump restarts.

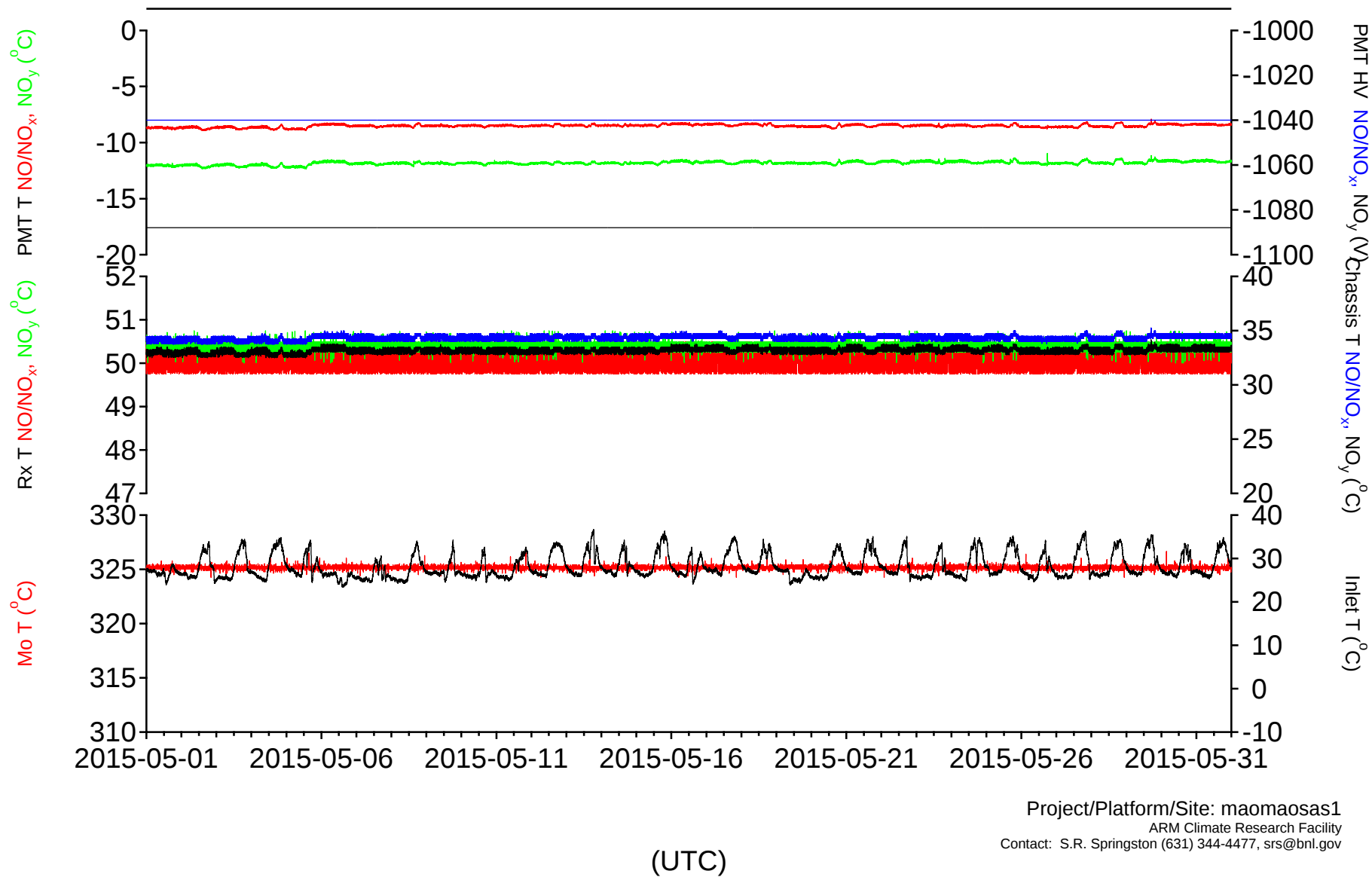
NO_x photolysis cell appears spot on with conversion efficiency.

Based on calibrations, the NO detector efficiency used in calculating concentrations was changed from 1.070 to 1.182. $1.070/((.891+.919)/2)$

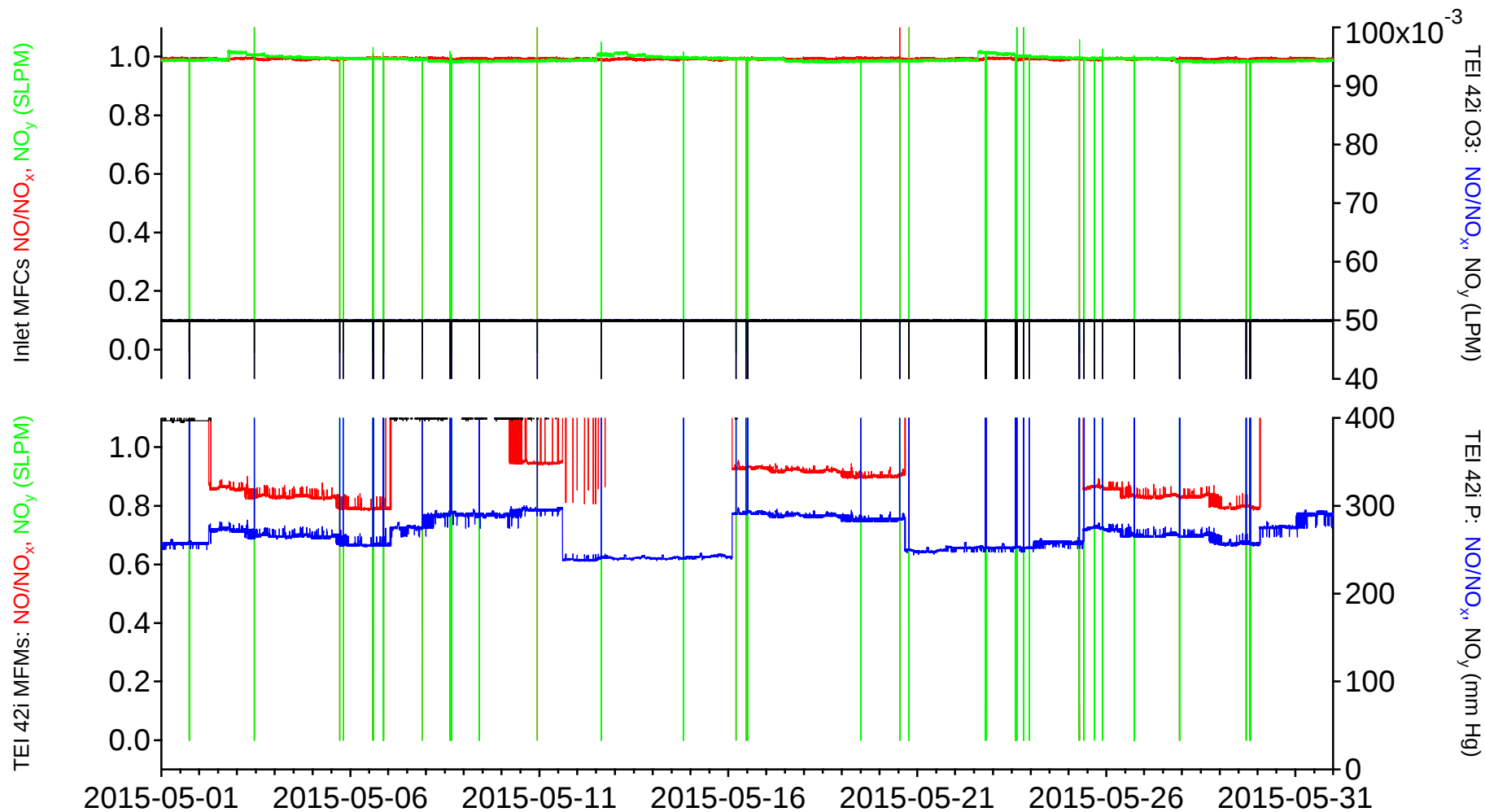
Based on calibrations, the NO_x detector efficiency used in calculating concentrations was changed from 1.087 to 1.182. $1.087/((.907+.933)/2)$

Based on calibrations, the NO_y detector efficiency used in calculating concentrations was changed from 1.506 to 2.34. $1.506/((.6392+.648)/2)$

Ground-Based NO_x Analyzer
Housekeeping 2
Temperatures



Ground-Based NO_x Analyzer
Housekeeping 1
Flows & Pressures

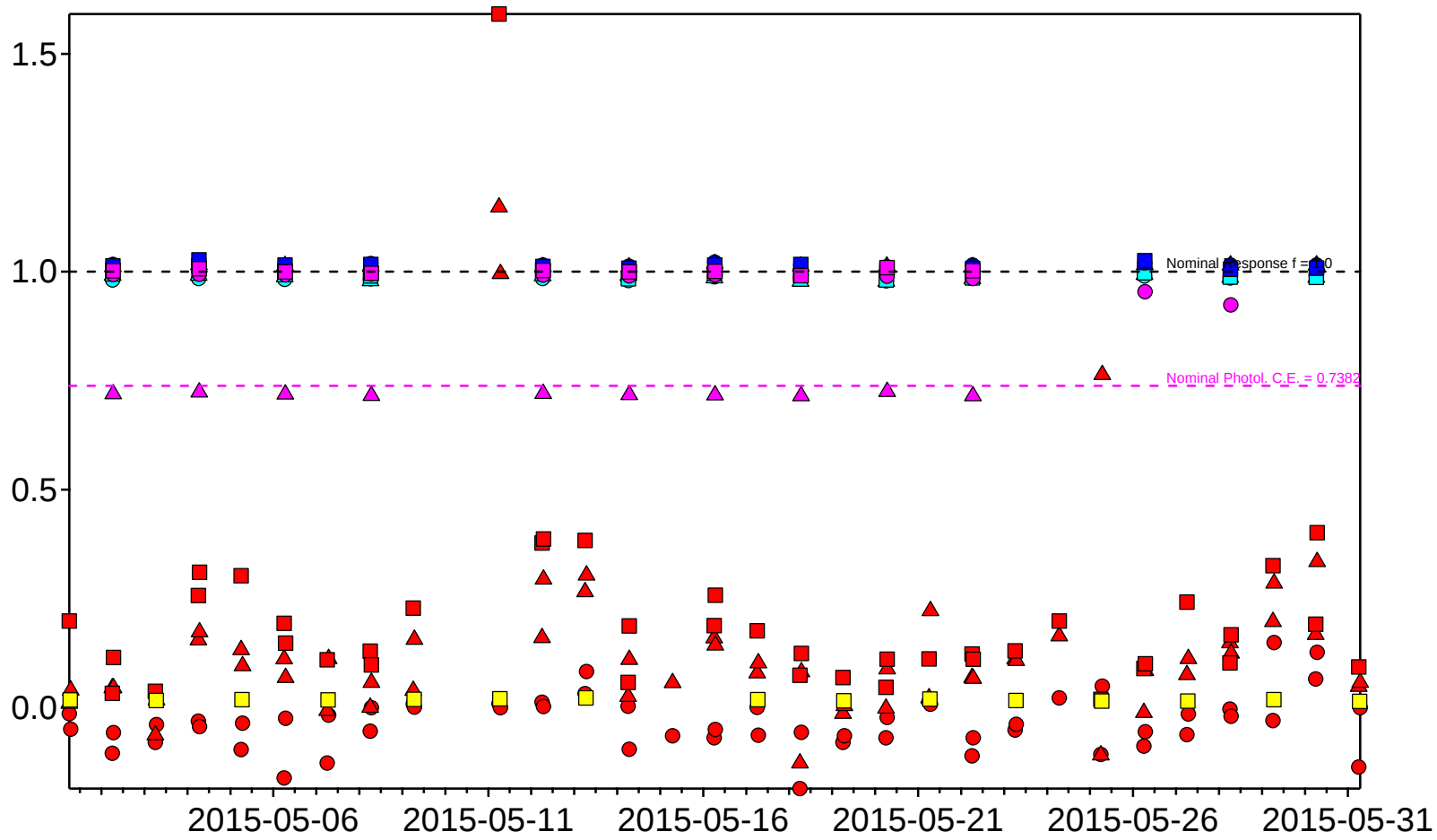


(UTC)

Project/Platform/Site: maomaosas1
ARM Climate Research Facility
Contact: S.R. Springston (631) 344-4477, srs@bnl.gov

○ - NO Channel ; △ - NO_x Channel; □ - NO_y Channel
 Zero Air Equivalent Signal (ppbv)
 S.A. #1 (calibrated sig/dilution conc: [SA#1] = 21.51 ppbv)
 S.A. #2 (calibrated sig/dilution conc: [SA#2] = 85.01 ppbv)
 GPT + SA #2 (NO: frac titr., NO_x: Photol. C.E. (nom=0.7382), NO_y: Mo C.E. (nom=1.0085))
 HNO₃ cal. (calibrated sig/perm conc: [HNO₃] = 73.9 ppbv)

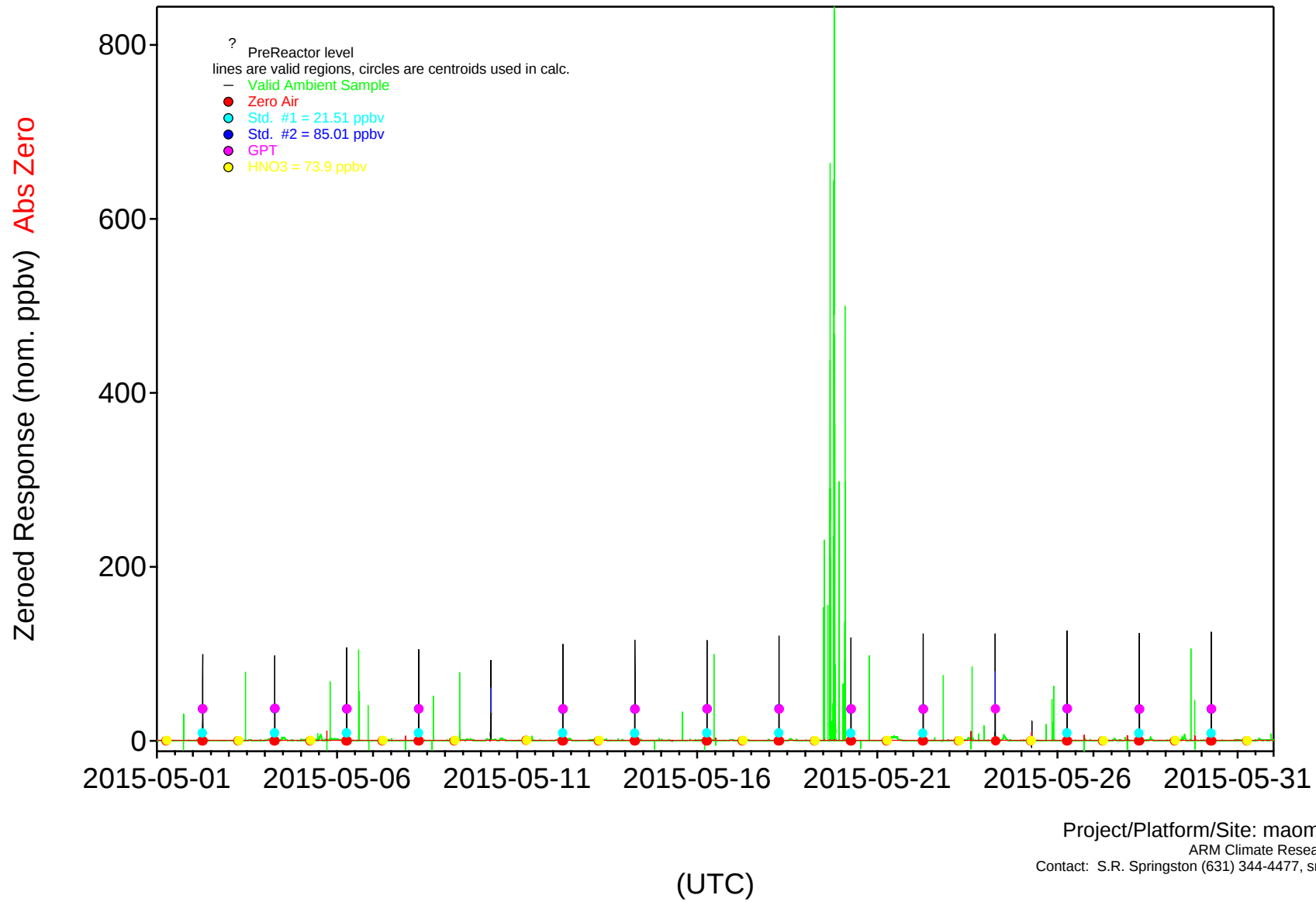
Ground NO_x Analyzer Calibration Data



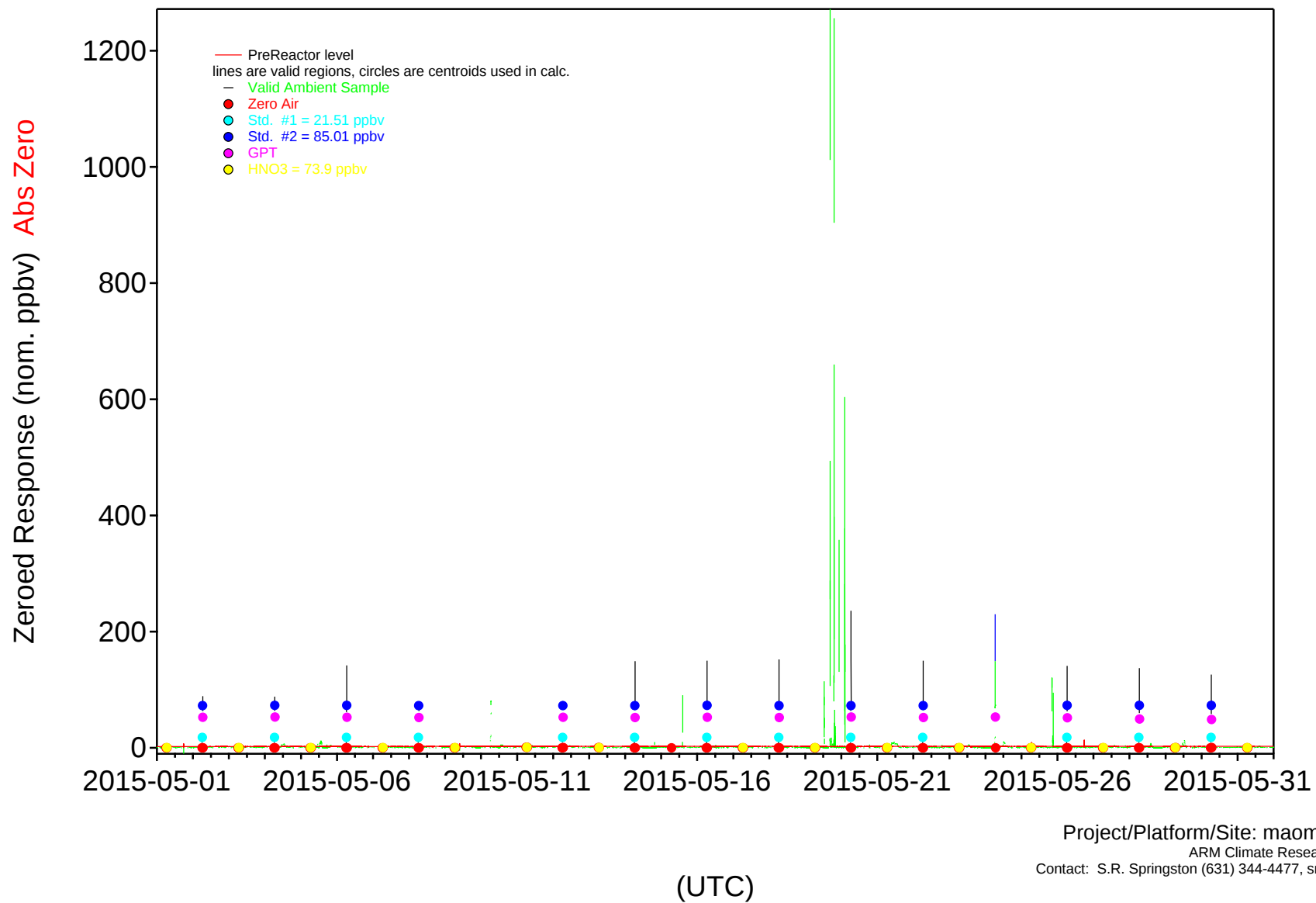
(UTC)

Project/Platform/Site: maomaosas1
 ARM Climate Research Facility
 Contact: S.R. Springston (631) 344-4477, srs@bnl.gov

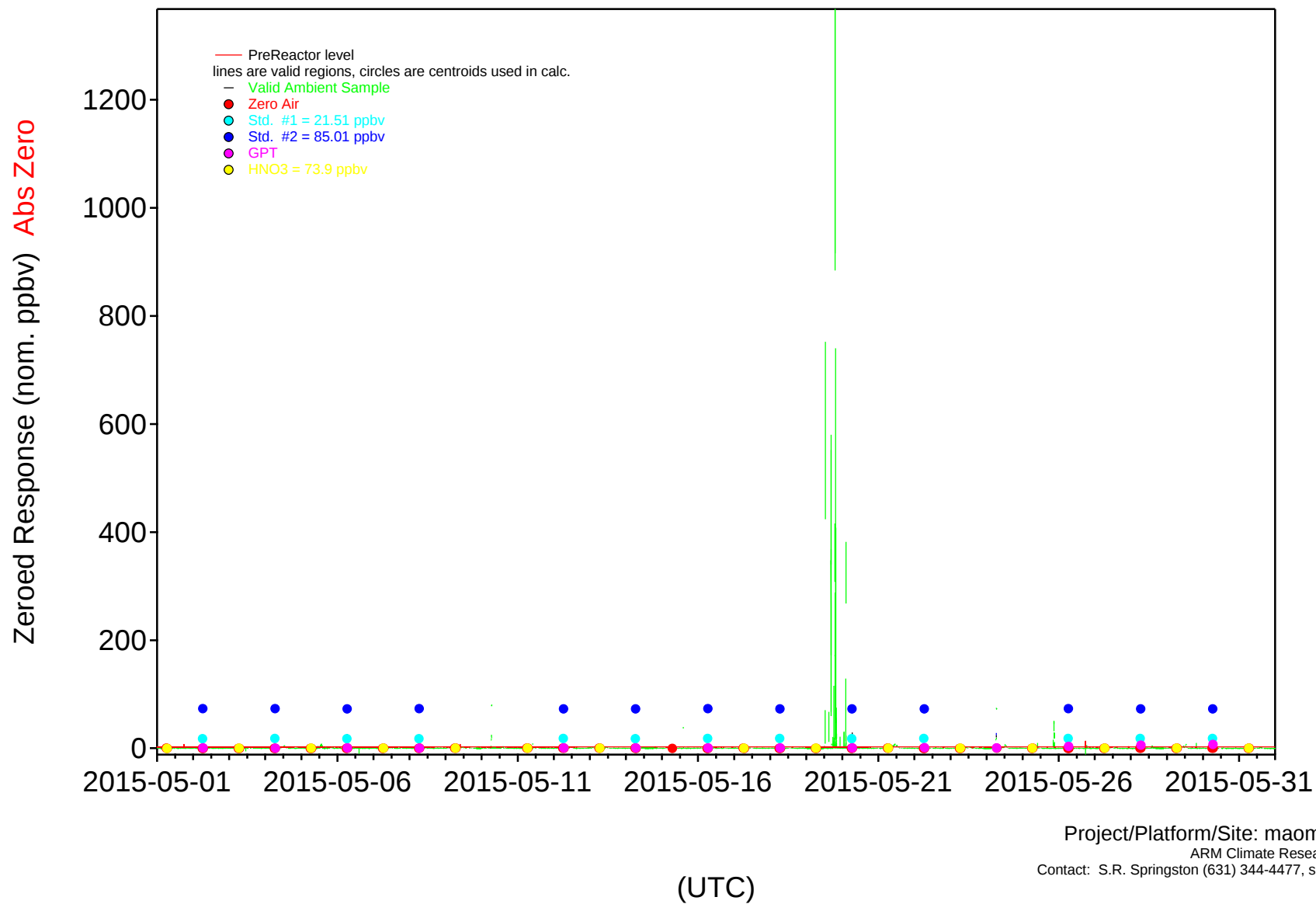
Ground NO_x Analyzer Parsed NOy Channel Data



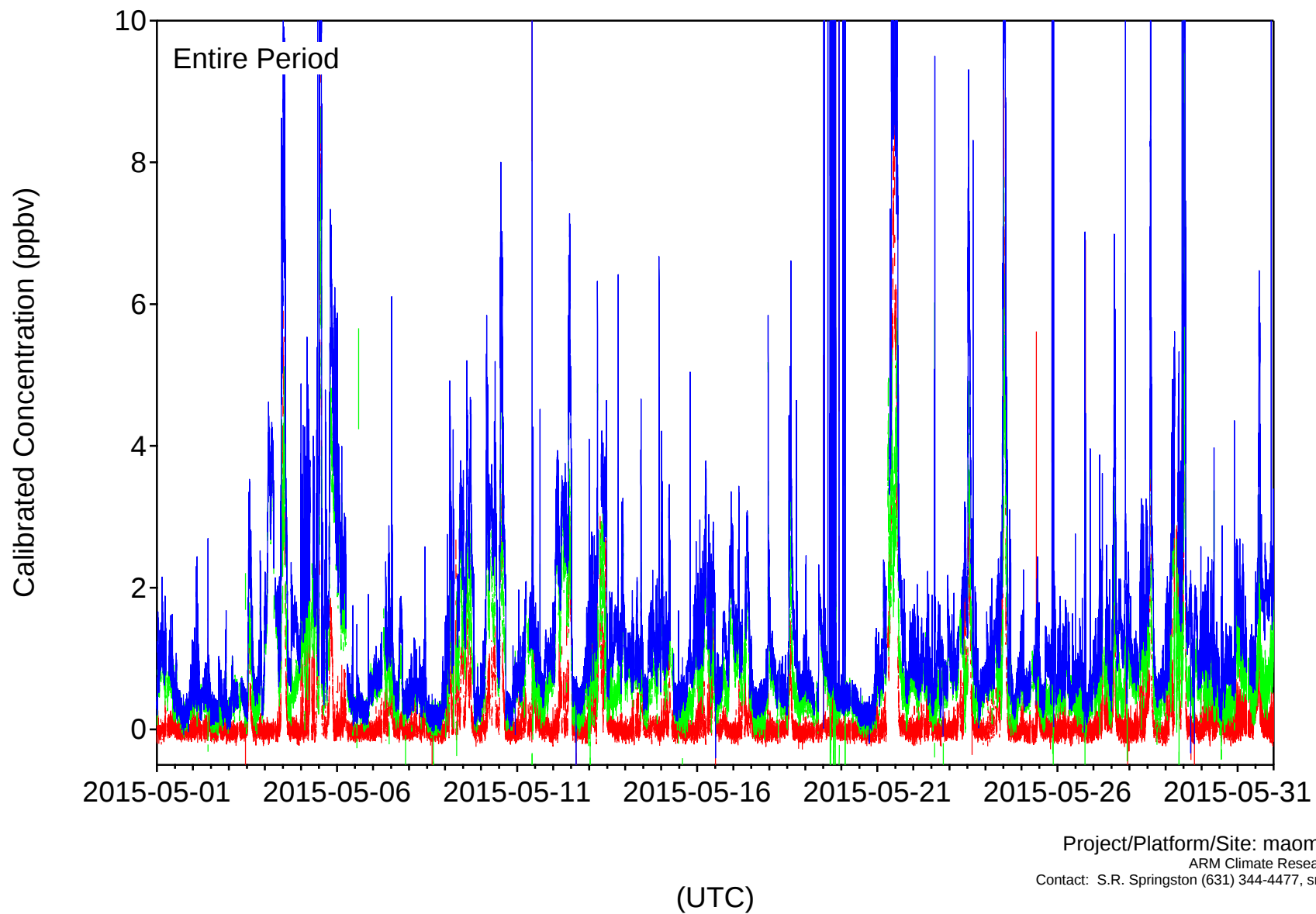
Ground NO_x Analyzer Parsed NOx Channel Data



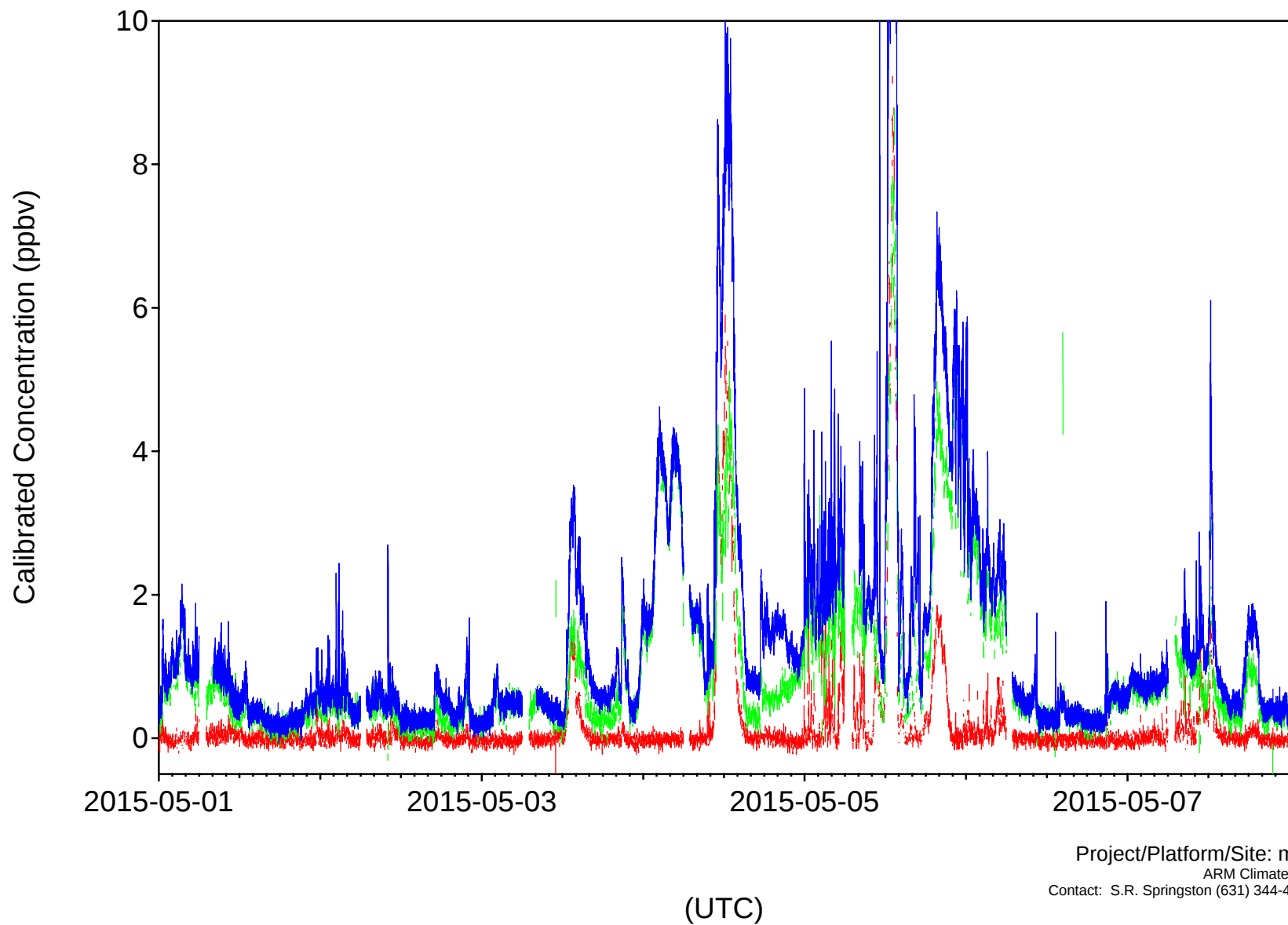
Ground NO_x Analyzer Parsed NO Channel Data



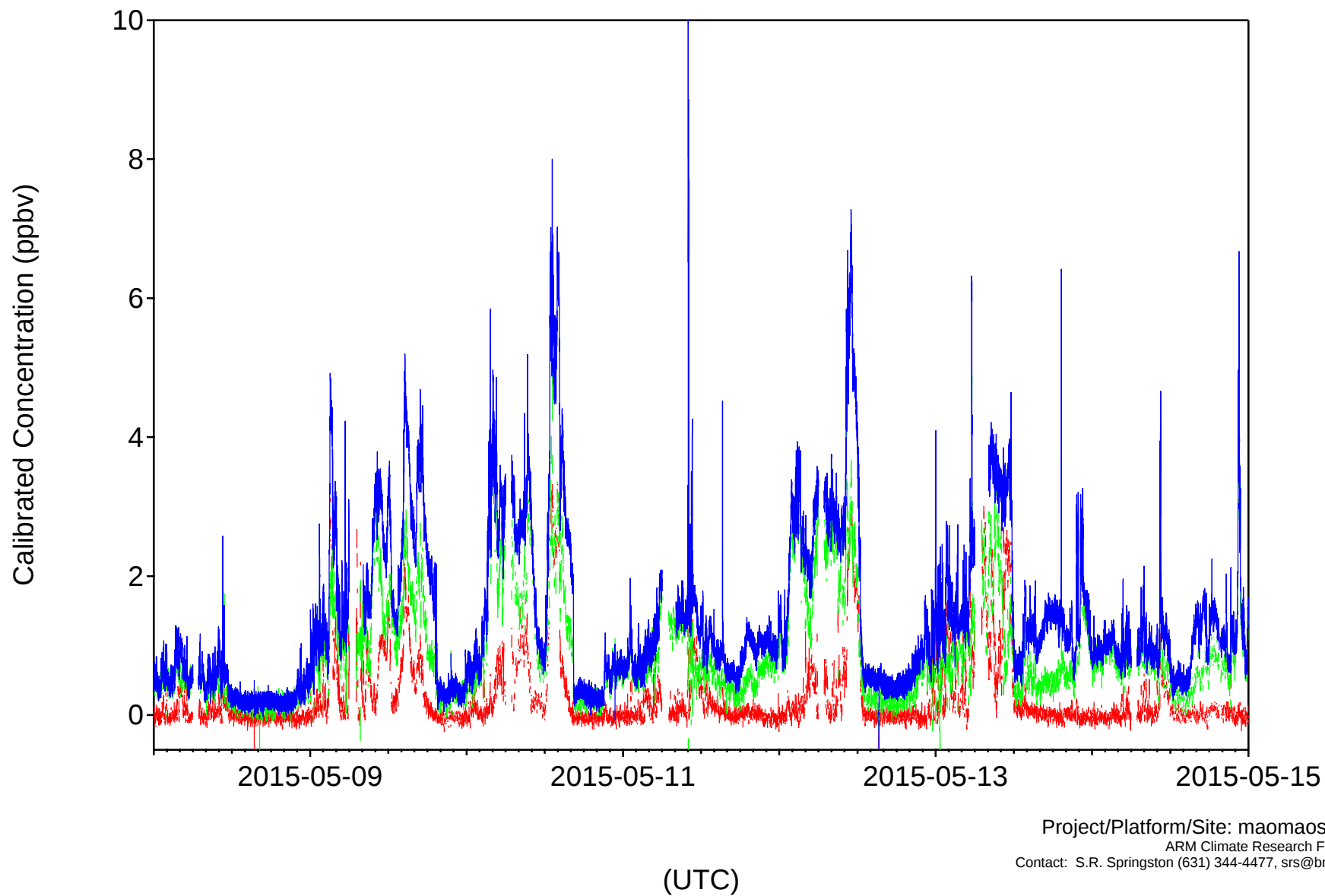
Calibration Factors Used:
NO: 1.182 ([calibrated]/[inst. reported])
NO₂: 1.182 ([calibrated]/[inst. reported]), C.E. = 0.7382
NO_y: 2.34 ([calibrated]/[inst. reported]), C.E. = 1.0085



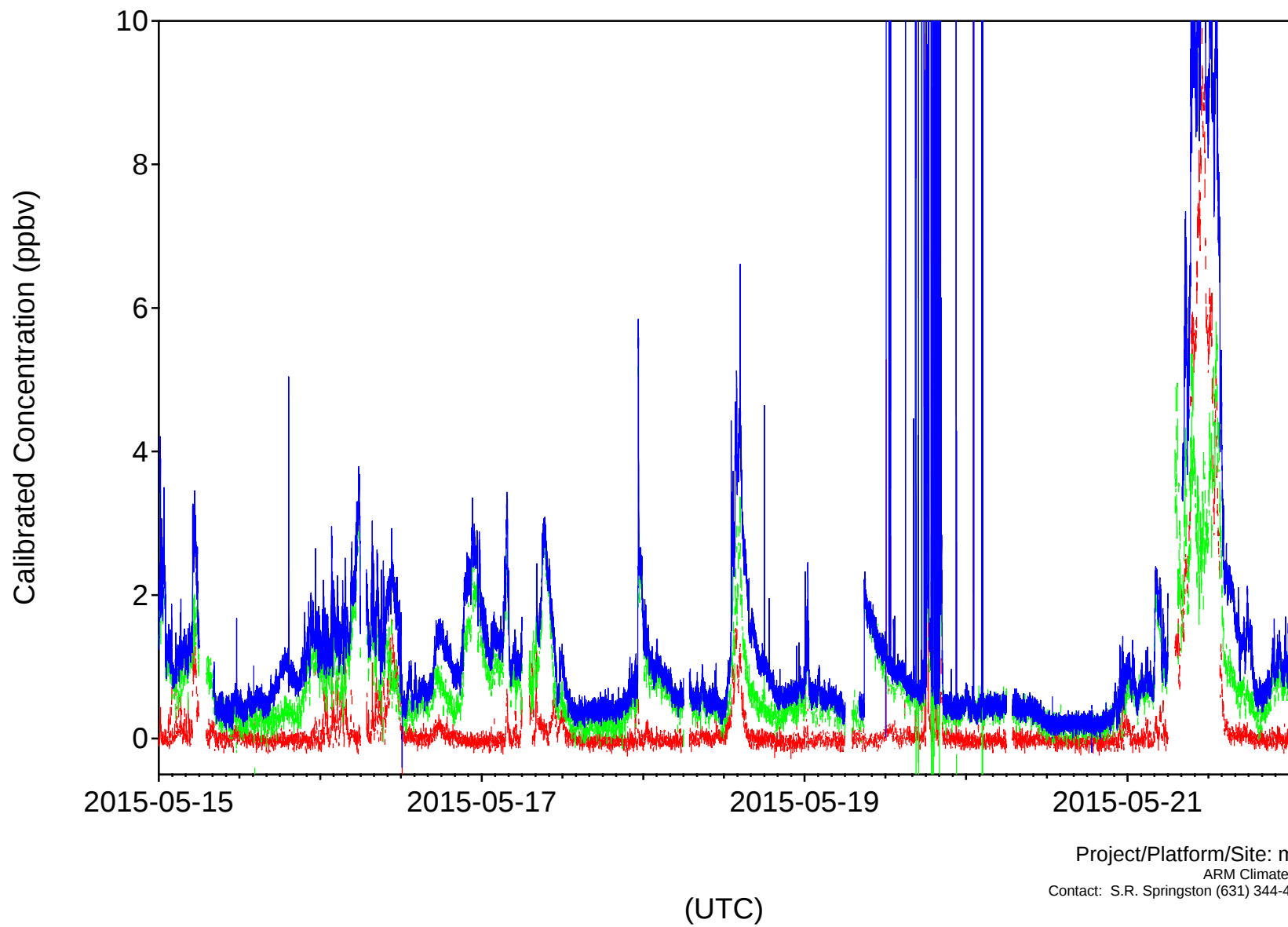
Calibration Factors Used:
NO: 1.182 ([calibrated]/[inst. reported])
NO₂: 1.182 ([calibrated]/[inst. reported]), C.E. = 0.7382
NO_y: 2.34 ([calibrated]/[inst. reported]), C.E. = 1.0085



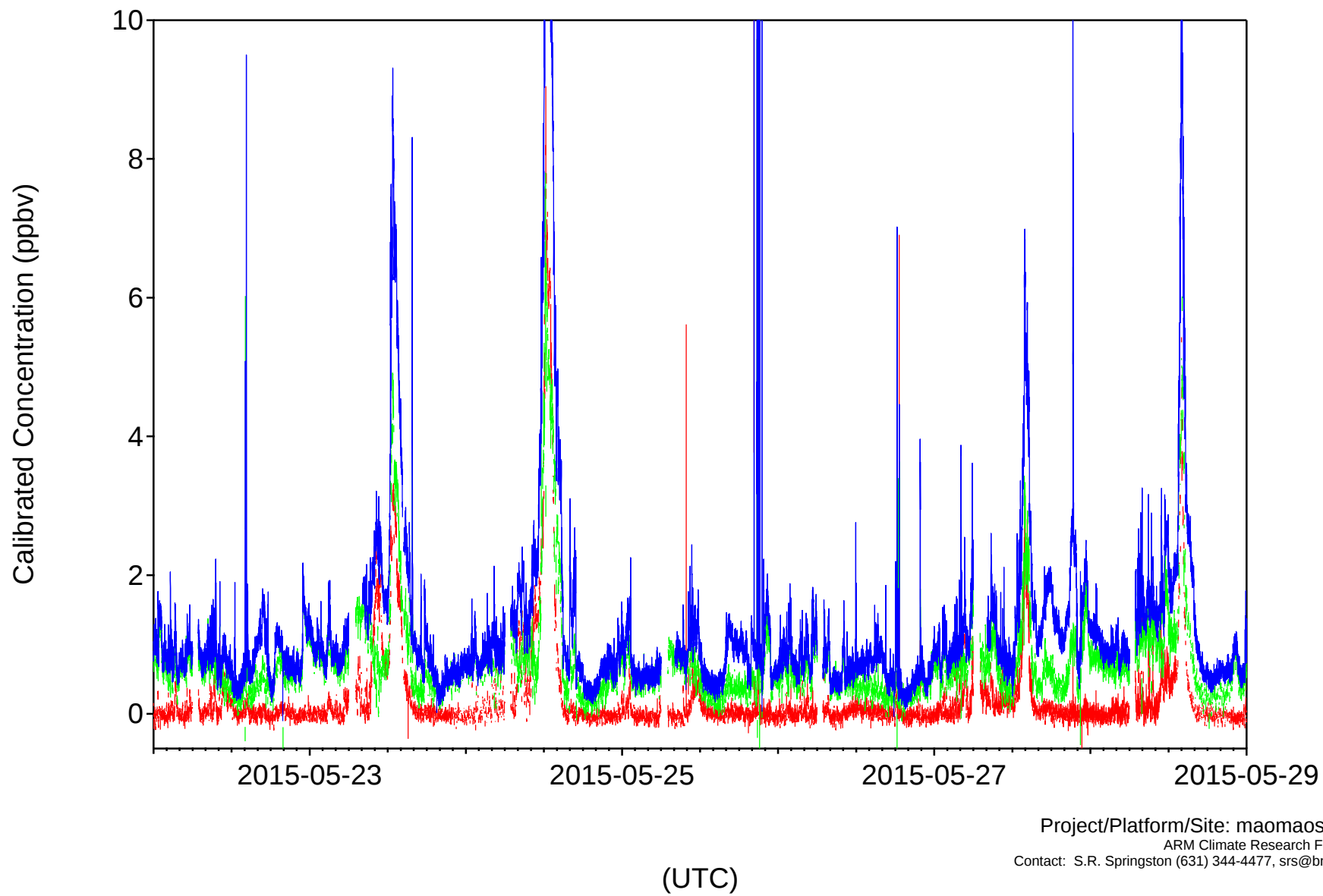
Calibration Factors Used:
NO: 1.182 ([calibrated]/[inst. reported])
NO₂: 1.182 ([calibrated]/[inst. reported]), C.E. = 0.7382
NO_y: 2.34 ([calibrated]/[inst. reported]), C.E. = 1.0085



Calibration Factors Used:
NO: 1.182 ([calibrated]/[inst. reported])
NO₂: 1.182 ([calibrated]/[inst. reported]), C.E. = 0.7382
NO_y: 2.34 ([calibrated]/[inst. reported]), C.E. = 1.0085



Calibration Factors Used:
NO: 1.182 ([calibrated]/[inst. reported])
NO₂: 1.182 ([calibrated]/[inst. reported]), C.E. = 0.7382
NO_y: 2.34 ([calibrated]/[inst. reported]), C.E. = 1.0085



Calibration Factors Used:
NO: 1.182 ([calibrated]/[inst. reported])
NO₂: 1.182 ([calibrated]/[inst. reported]), C.E. = 0.7382
NO_y: 2.34 ([calibrated]/[inst. reported]), C.E. = 1.0085

