

## Calibration

### 1. Calibration from the mast

Purge line flow= 12 lpm

Sample flow = 1.25 lpm (MFC readinf, dryCa l= 1.1 lpm)

NO flow = 3mp pm

PMT = -19 °C (dropped during calibration to -20°C)

RC = 28.4°C (dropped during calibration to 27.5°C)

Zero ~5400-5600 counts\*s-1

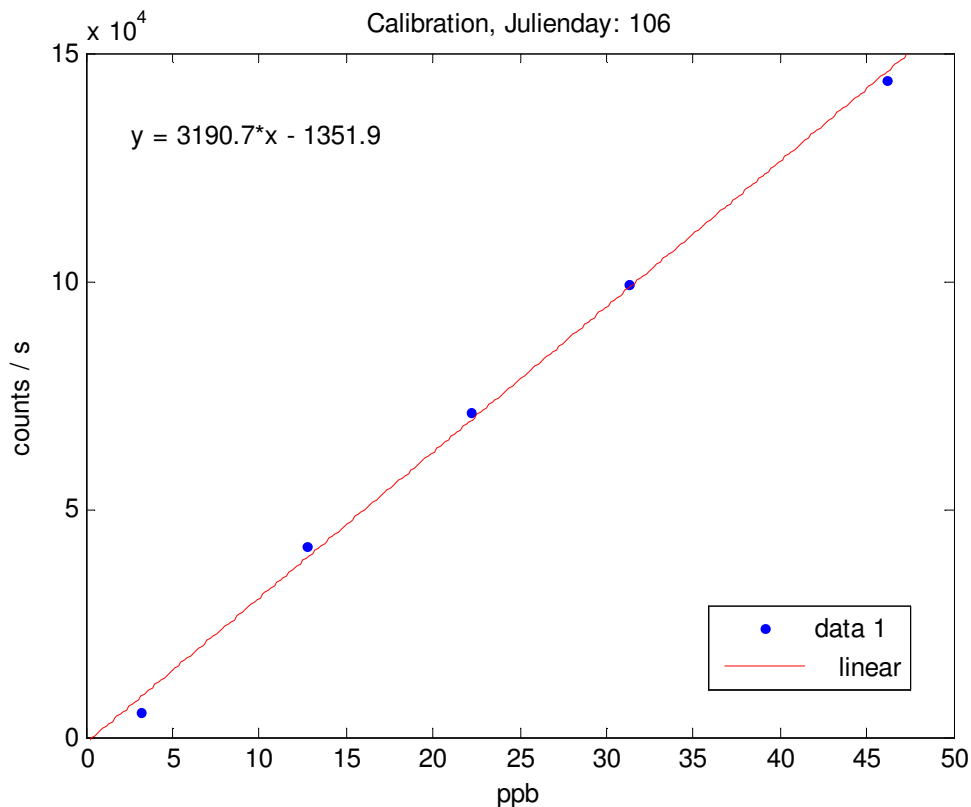
300 ~42500 counts\*s-1, 8-10 ppb

500 ~71000 counts\*s-1, 18-20 ppb

700 ~98000 counts\*s-1, 26-28 ppb

999 ~141000 counts\*s-1, 42-44 ppb

zero ~5200 counts\*s-1



calibration from mast

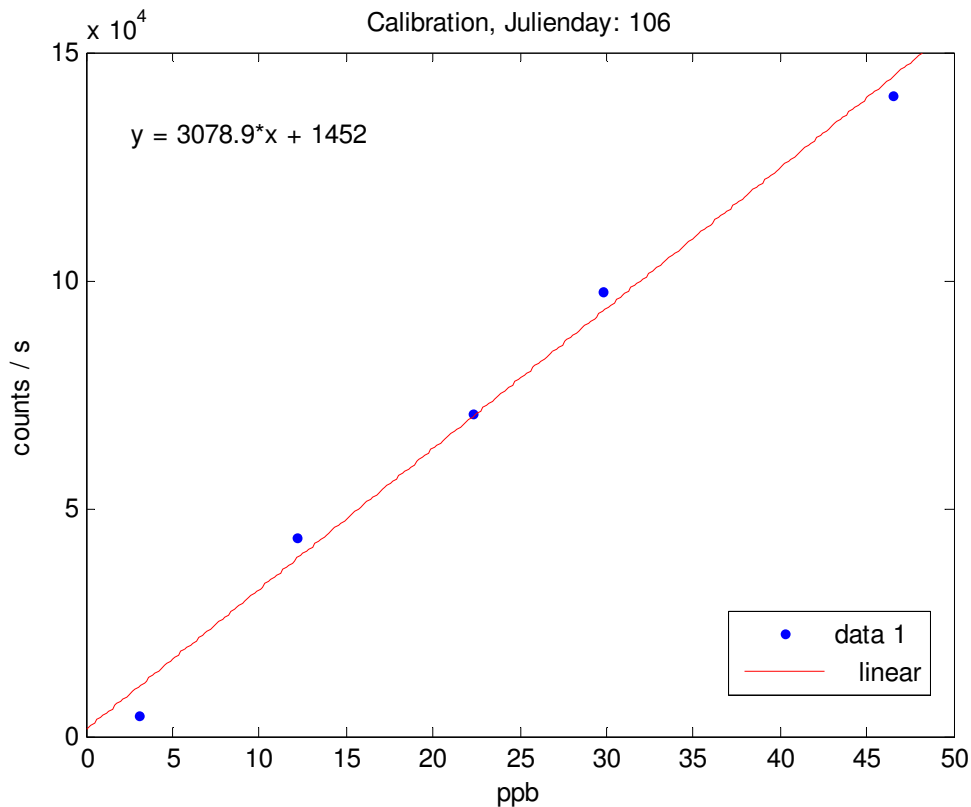
### 2. Calibration from box

Purge line flow= 12 lpm

Sample flow = 1.25 lpm

NO flow = 3mp pm

PMT = -20 °C  
 RC = 28.4°C



#### Calibration from box

Comparing the two calibrations the slope of the calibration from the mast is about 100 counts\*s<sup>-1</sup> higher, but the intercept negative. The calibrations are pretty close thus I would say we're not using any ozone in the purge line. If you think it is better to use another purge line (a second, cleaner one is already set up), please let me know.

Comparing the calibration to Ludovic's we can see that the slope is about his first two calibrations but the intercept is lower which might be due to the fact that Ludovic' adjusted to value at zero ozone in a way I don't know.

I will repeat a calibration from the box with a lower purge flow rate at about 4 L\*min<sup>-1</sup>. The tubing for mixing ozone with ambient air is only about two meters. So I think to get a better mixing and more stable values this would be good. The values of the calibration from the mast are a lot less in line then the ones from the mast (see figures).

#### Ludovic's calibrations

Dates	Sensitivity (cps/ppb)	Y-intercept(ppb)
28.02.2008	3126	4952
29.02.2008	3008	5374
05.03.2008	2993	3391
17.03.2008	2711	3687
23.03.2008	2882	4088