

## polarRates, resampling and meteo data

Data source: outPOLA-0X.root

Cuts:

- Status=0
- Diff between rate/rx1/rx2/rateRow  $\leq 3$  Hz
- Rate > 10 Hz

Reading outPOLA-01.root

Total values = 1518872

..valid values = 1249724 ( 82.3 %)

..excluded values = 269148 ( 17.7 %)

Reading outPOLA-03.root

Total values = 2113238

..valid values = 1751765 ( 82.9 %)

..excluded values = 361473 ( 17.1 %)

Reading outPOLA-04.root

Total values = 1601741

..valid values = 1555299 ( 97.1 %)

..excluded values = 46442 ( 2.9 %)

Rebinning rates : 1 day and 15days

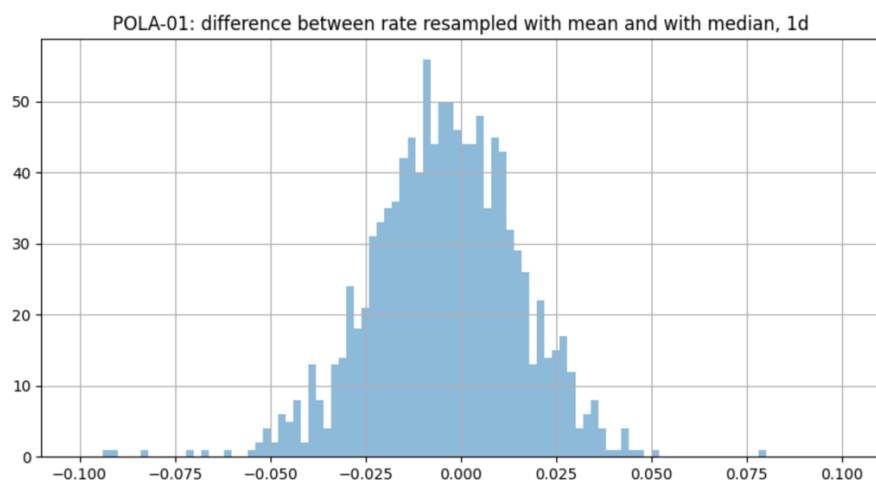
| Number of values | Root file | Resampling 1day<br>(excluding nan values) | Resampling 15days |
|------------------|-----------|---|-------------------|
| POLA-01          | 1249724   | 1719 (1134)                               | 115               |
| POLA-03          | 1751765   | 1719 (1556)                               | 115               |
| POLA-04          | 1555299   | 1719 (1590)                               | 115               |

Comparison between resampling with mean or with median:

Difference = rate\_resampled\_with\_mean - reate\_reasampled\_with\_median

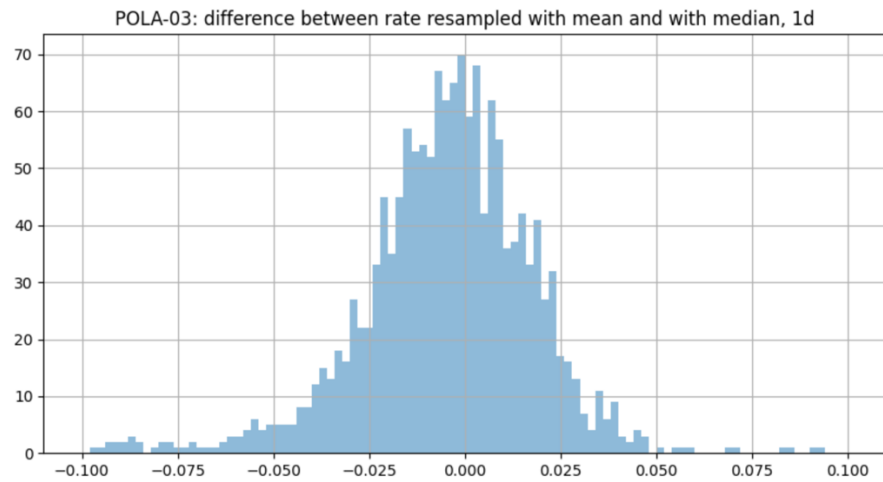
POLA-01

count 1134  
mean -0.003041  
std 0.055776  
min -0.712697  
25% -0.016151  
50% -0.003879  
75% 0.008777  
max 1.455413



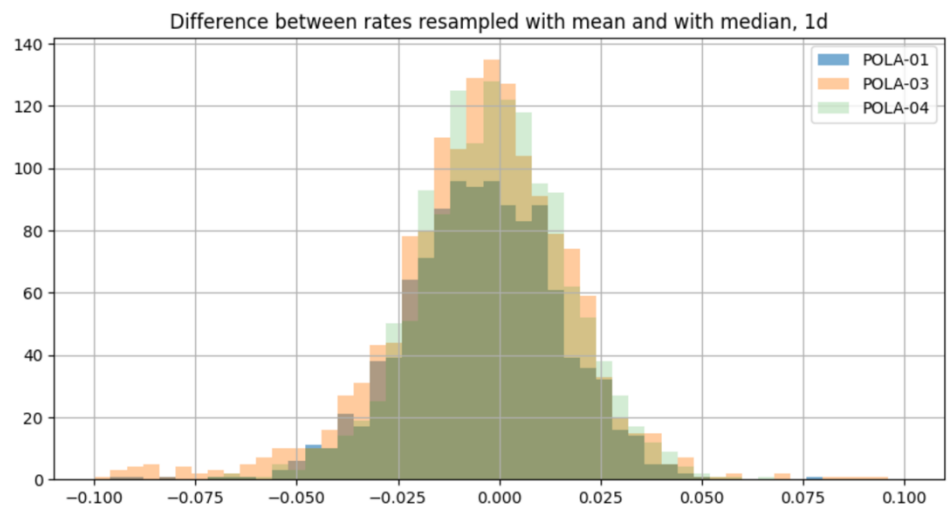
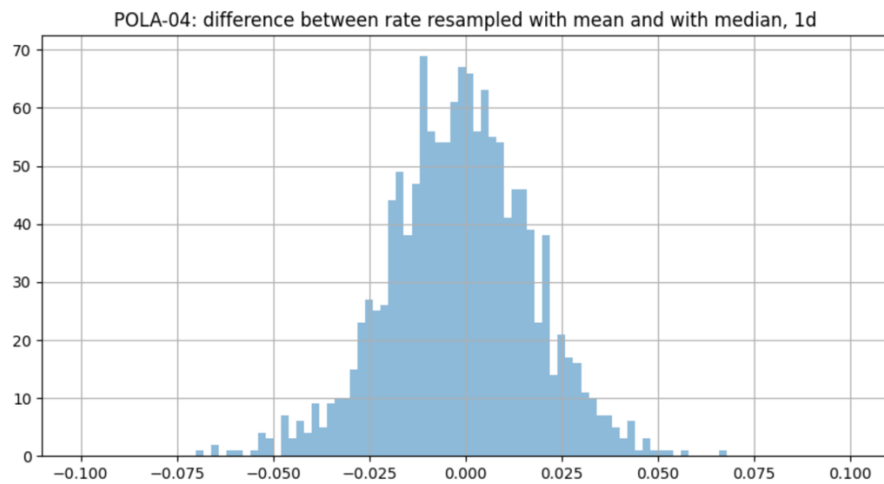
POLA-03

count 1556.  
mean -0.004217  
std 0.120776  
min -2.504180  
25% -0.017223  
50% -0.003398  
75% 0.009539  
max 3.188584

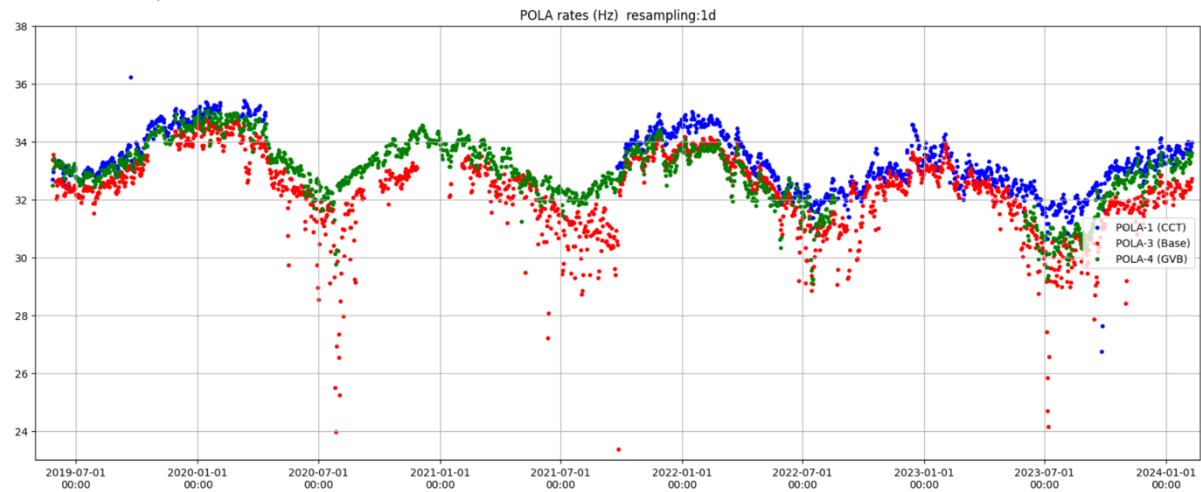


POLA-04:

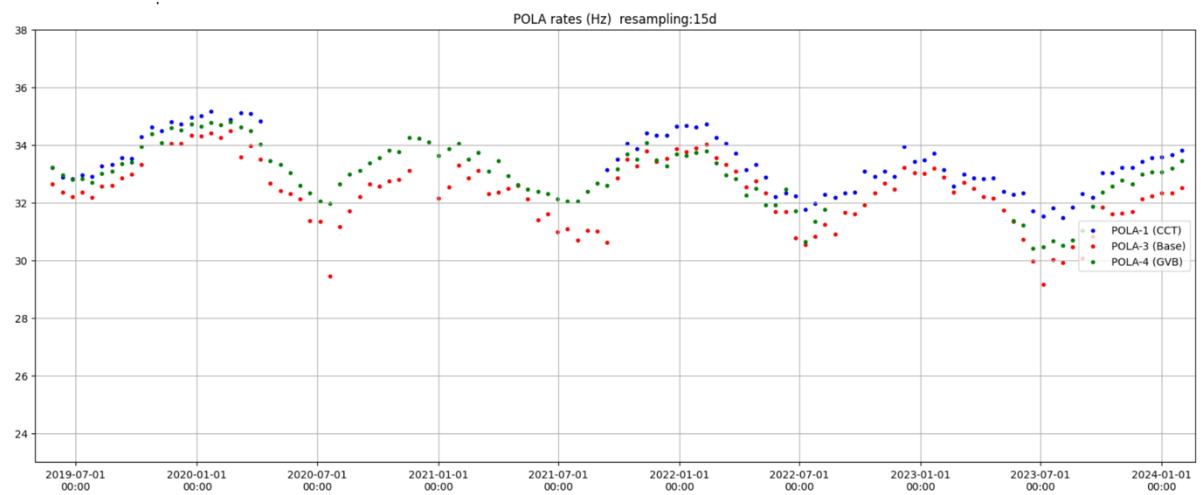
count 1390.  
mean -0.002158  
std 0.030568  
min -0.583370  
25% -0.013134  
50% -0.001155  
75% 0.010841  
max 0.280729



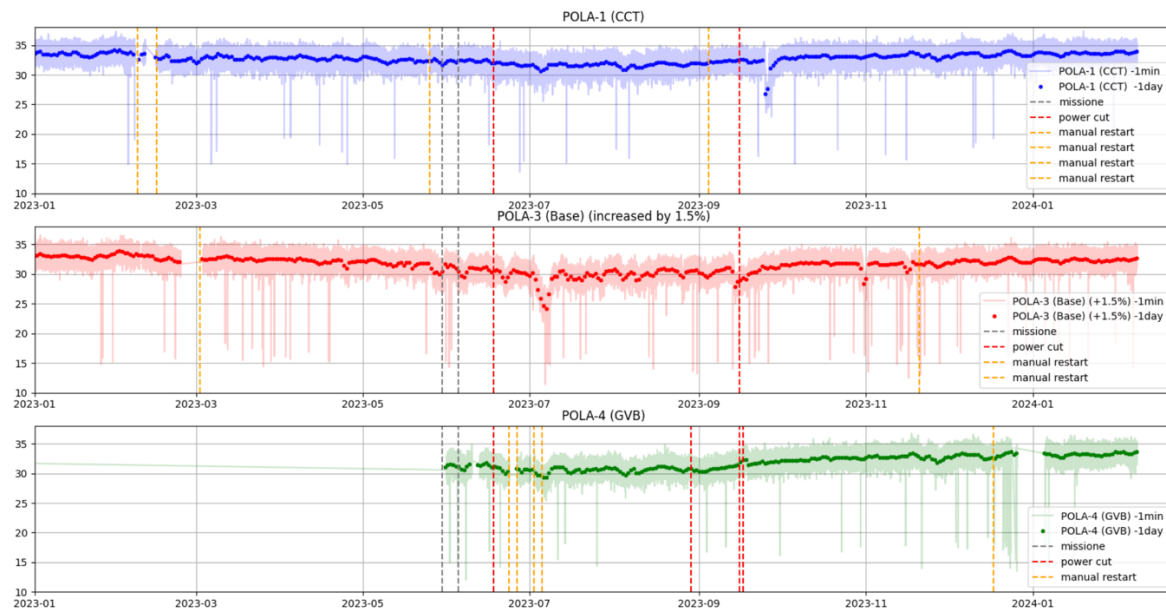
Rates resampled over 1day, full NYA period



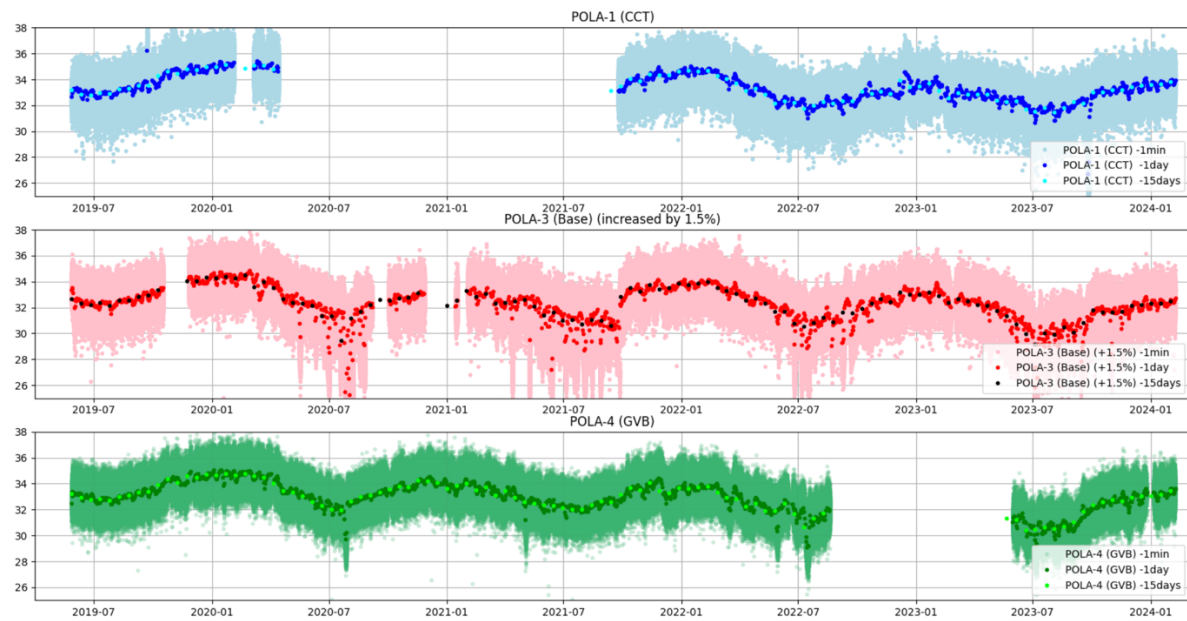
Rates resampled over 15days, full NYA period



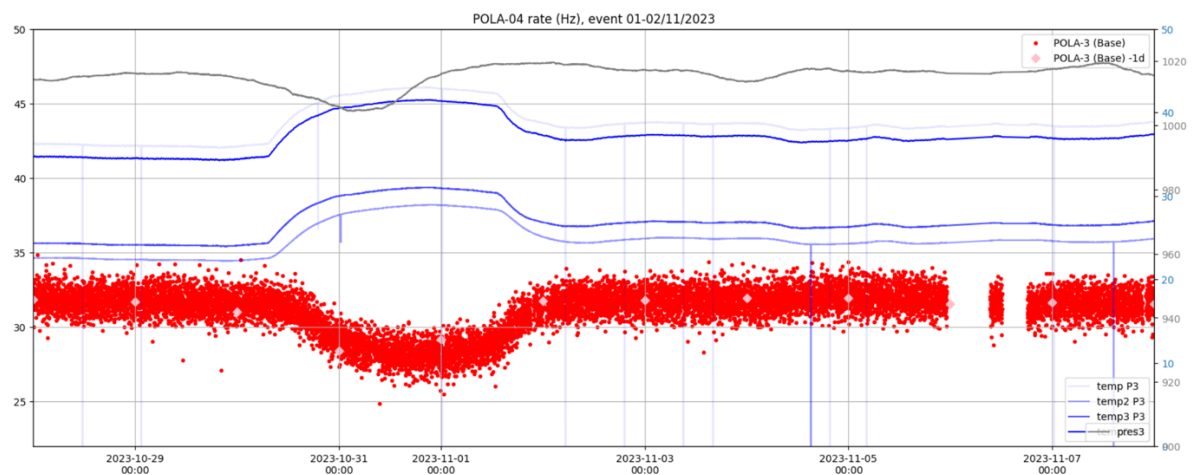
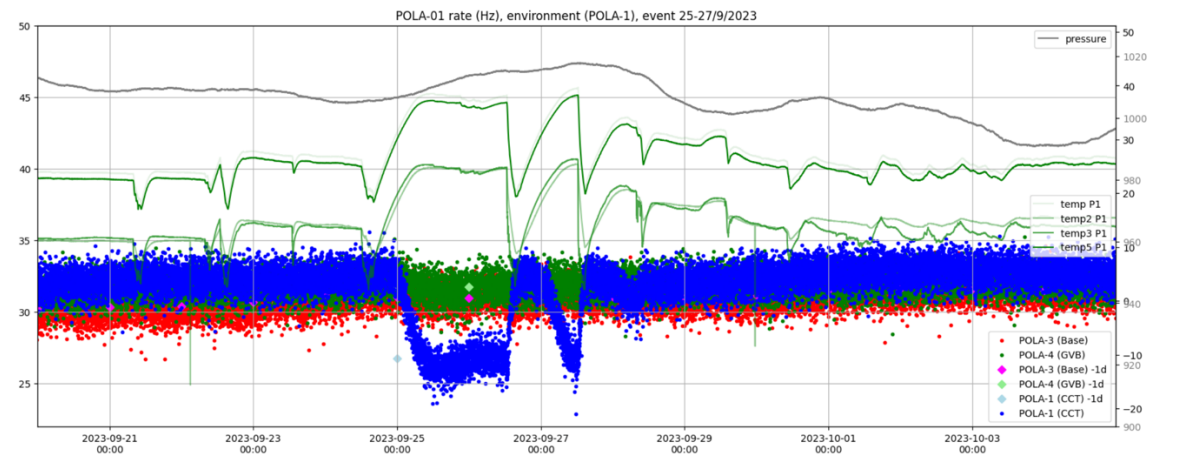
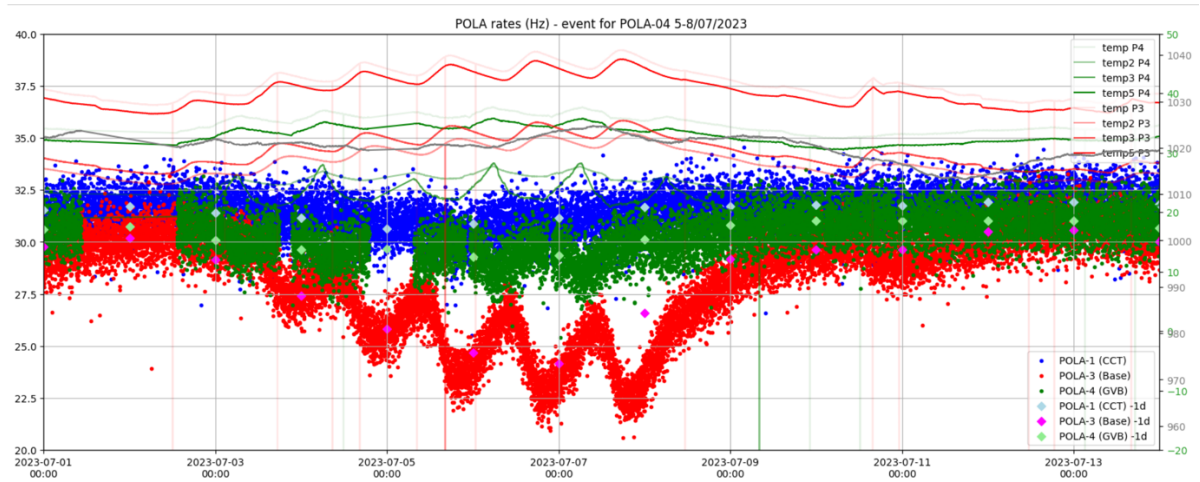
## Visual comparison between original rates (1min) and resampled (1day), 2023



## All rates (1min, 1day, 15days), full period



Zoom on rates and environment temperatures for some interesting events in 2023  
(temp, temp2,temp3, temp5 are internal, temp\_CCT external)



All rates and all environmental parameters for the event of July 2023  
Including CCT meteo data

