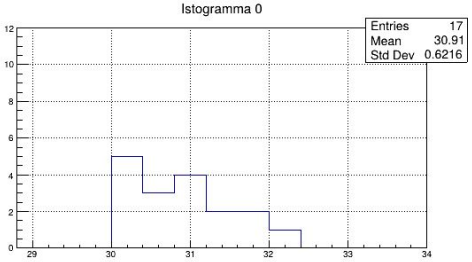
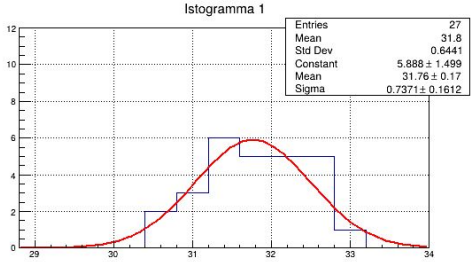
Data Analysis
Rate dependance with latitude

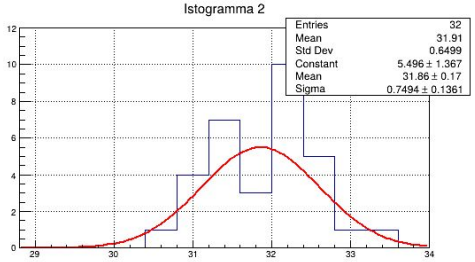
Data recorded with the detector stationary

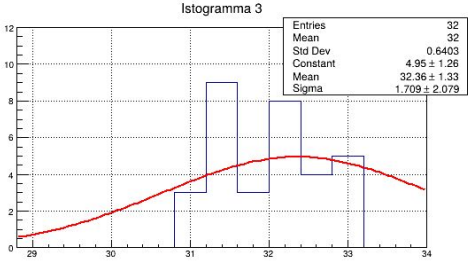
fixed.csv file-data

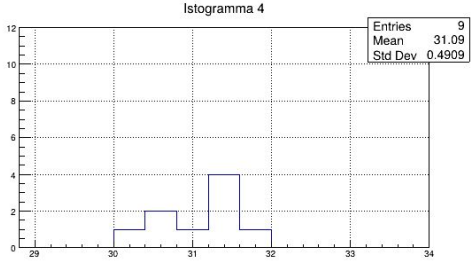
Our group's points

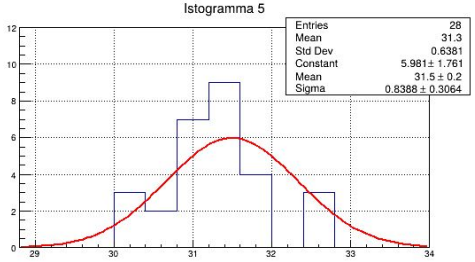


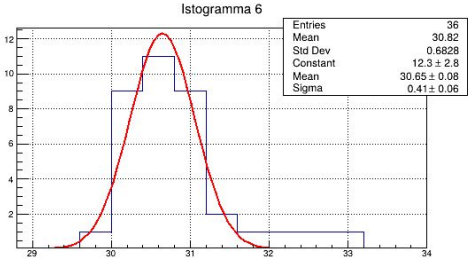




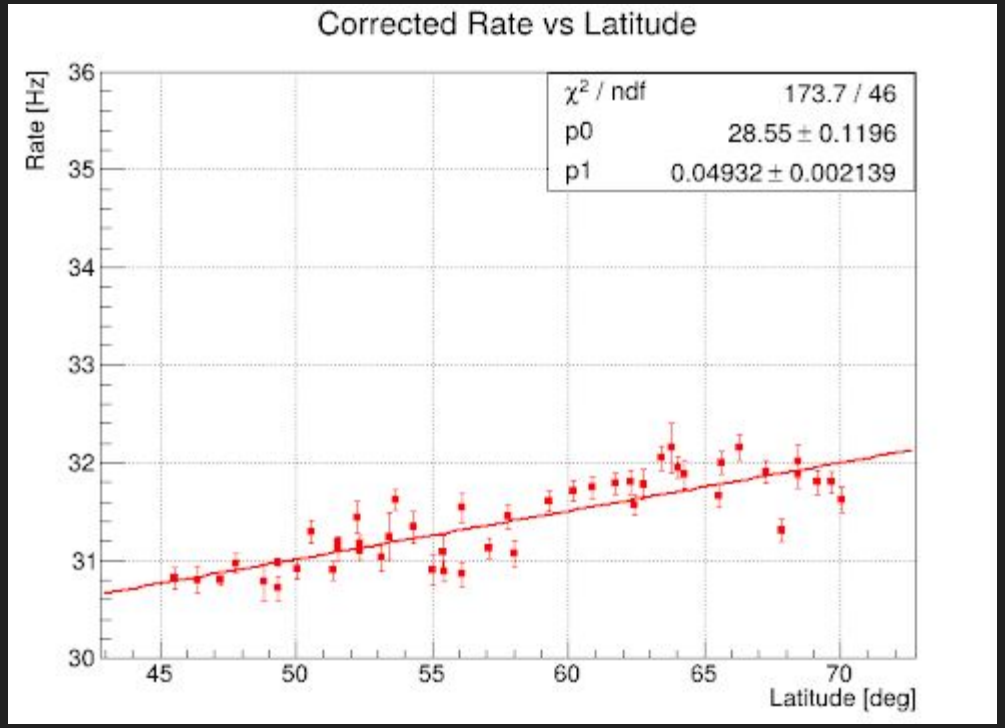




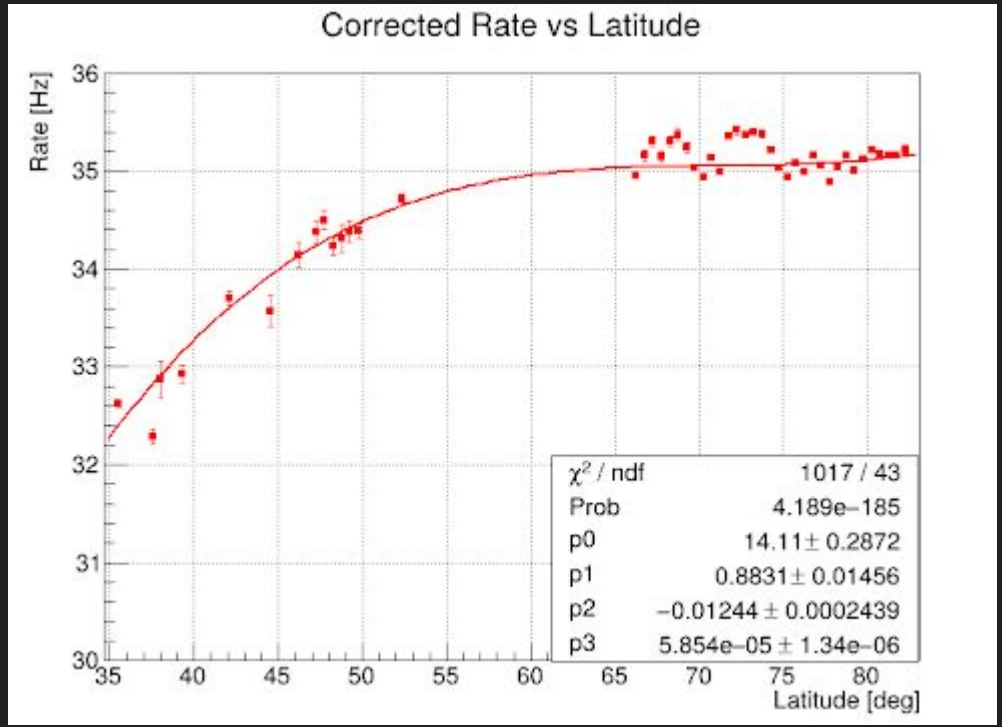




Stationary points only 2025 - rate corrected for pressure vs latitude

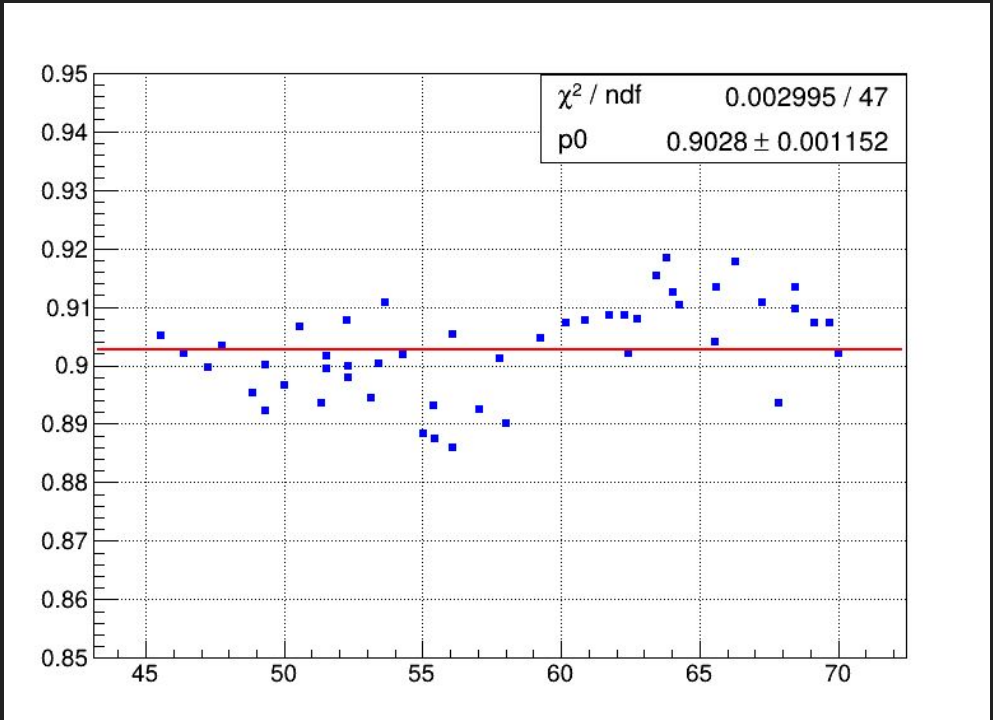


Fit third-degree polynomial with data from 2018 only



Rate_{best-fit}(x)=14.11+0.8831*x^2+5.85E-5*x^3

Rate_{2025}/pol3_{best-fit_2018}(x). We obtain the normalization factor k = 1/p0 =1.1

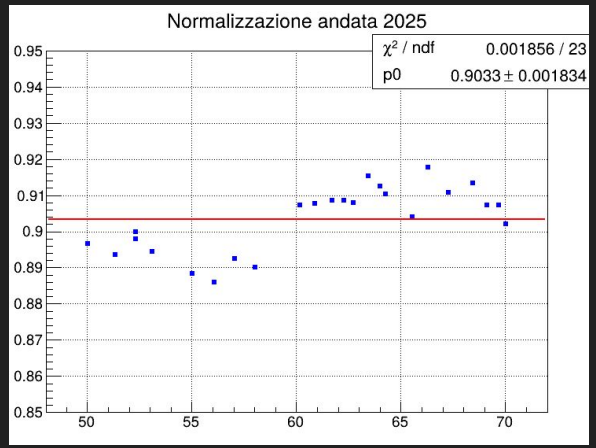


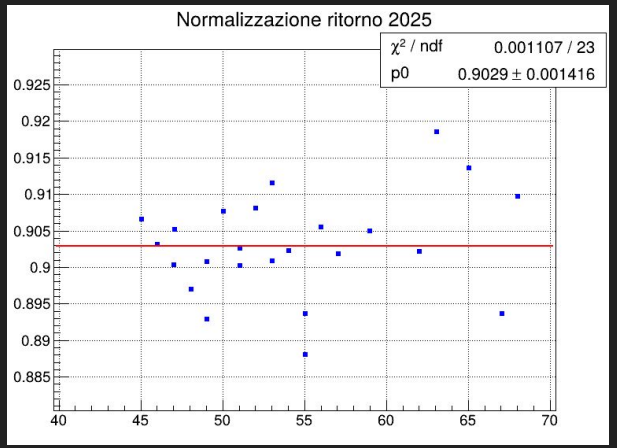
Similmente si è fatto per i dati del 2022, ottenendo

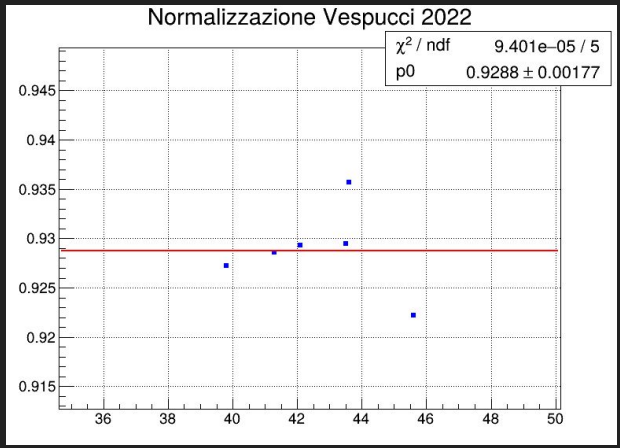
Normalization outbound 2025 / inbound 2025 / Vespucci 2022

k andata = k ritorno = 1.107

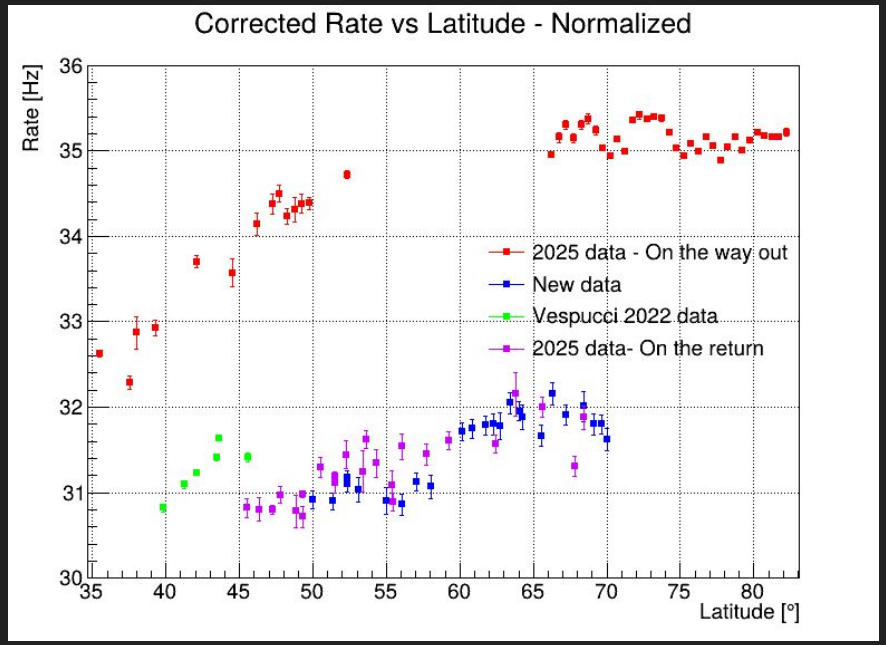
k vespucci = 1.077

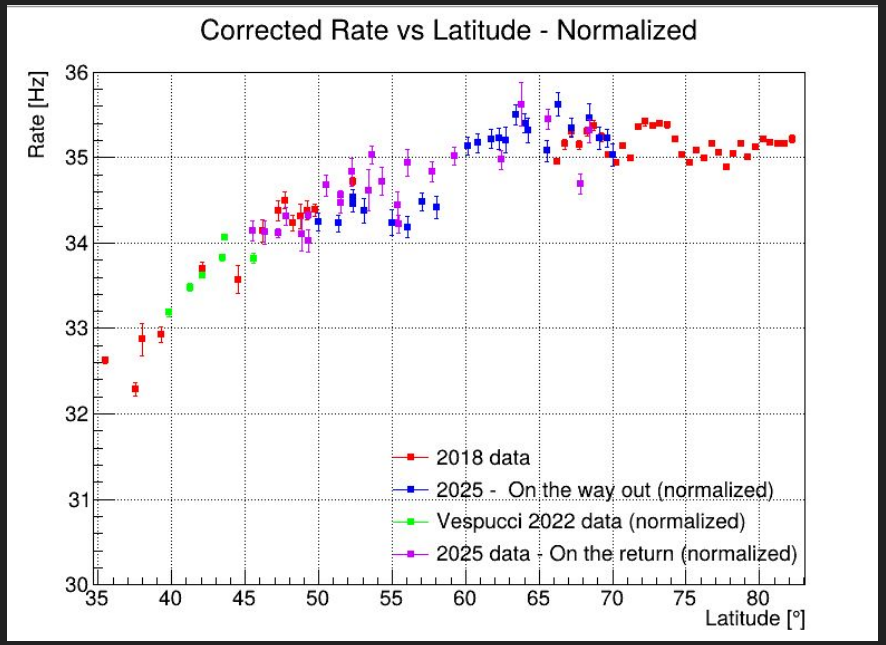




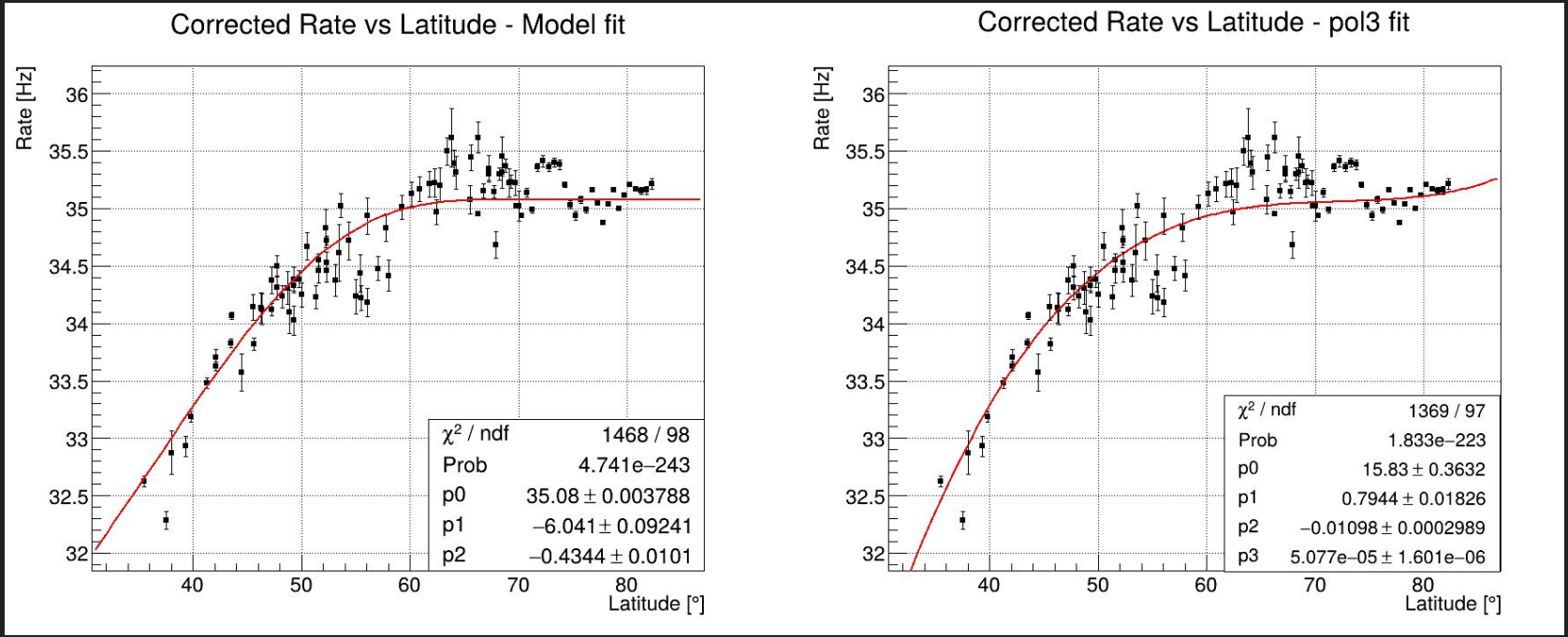


Using these normalization constants:

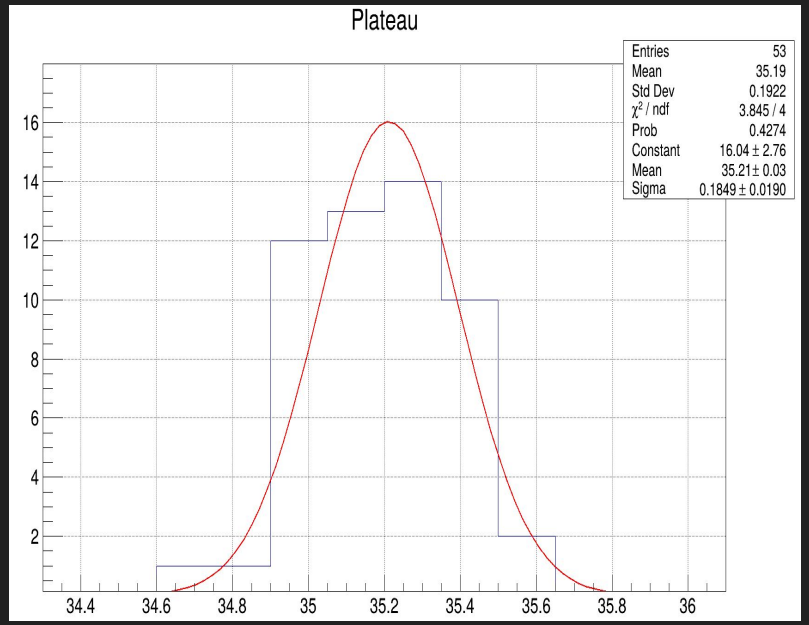


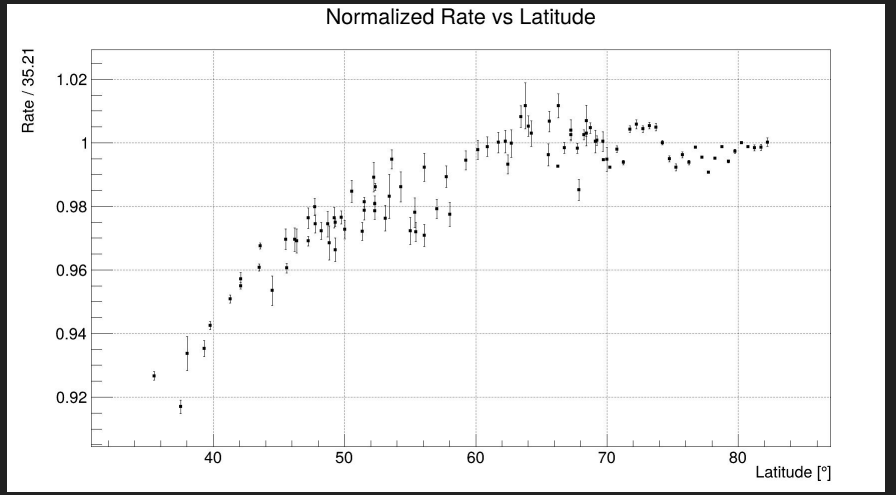


Fit with rigidity cutoff model vs with third-degree polynomial



Normalization of the plateau to 1



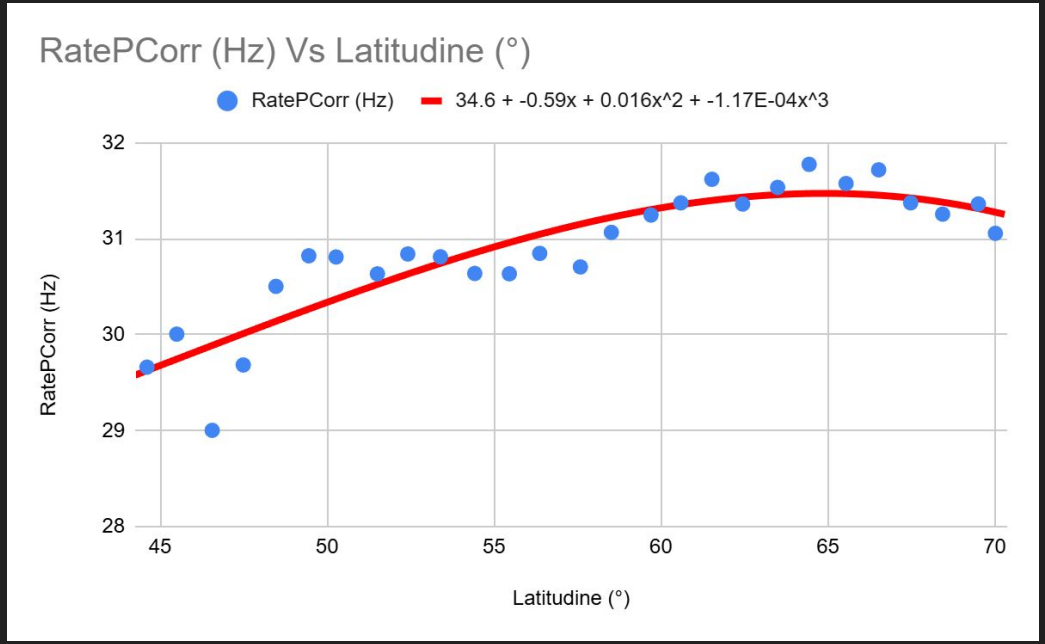


Gaussian mean plateau= 35.21
→ all other data ar divide by this value

Whole dataset

moving.csv file-data

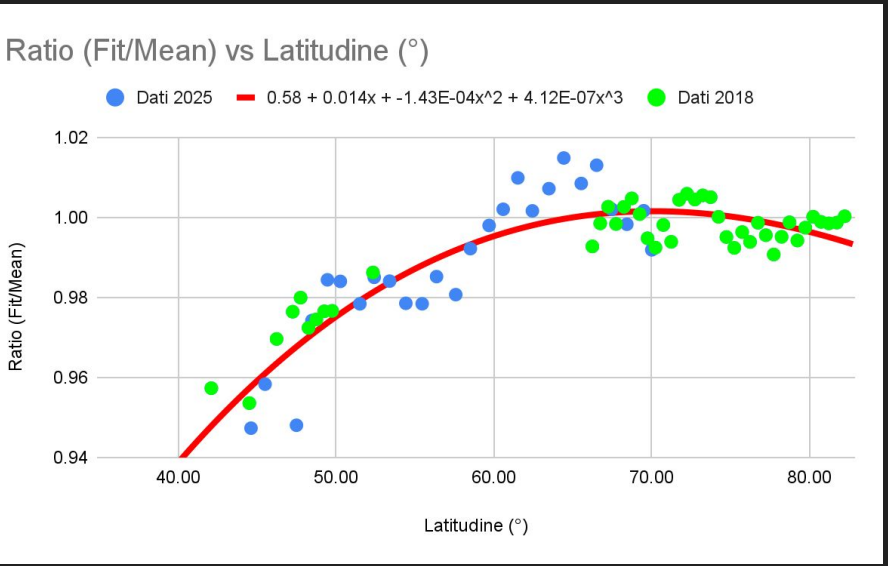
Rate corrected with respect to pressure

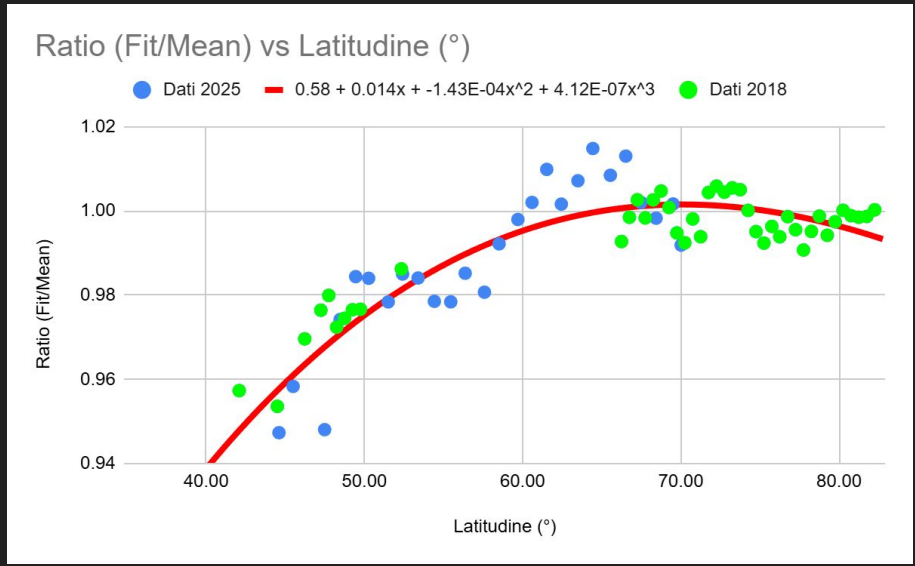


Normalized rate (moving + data from 2018)

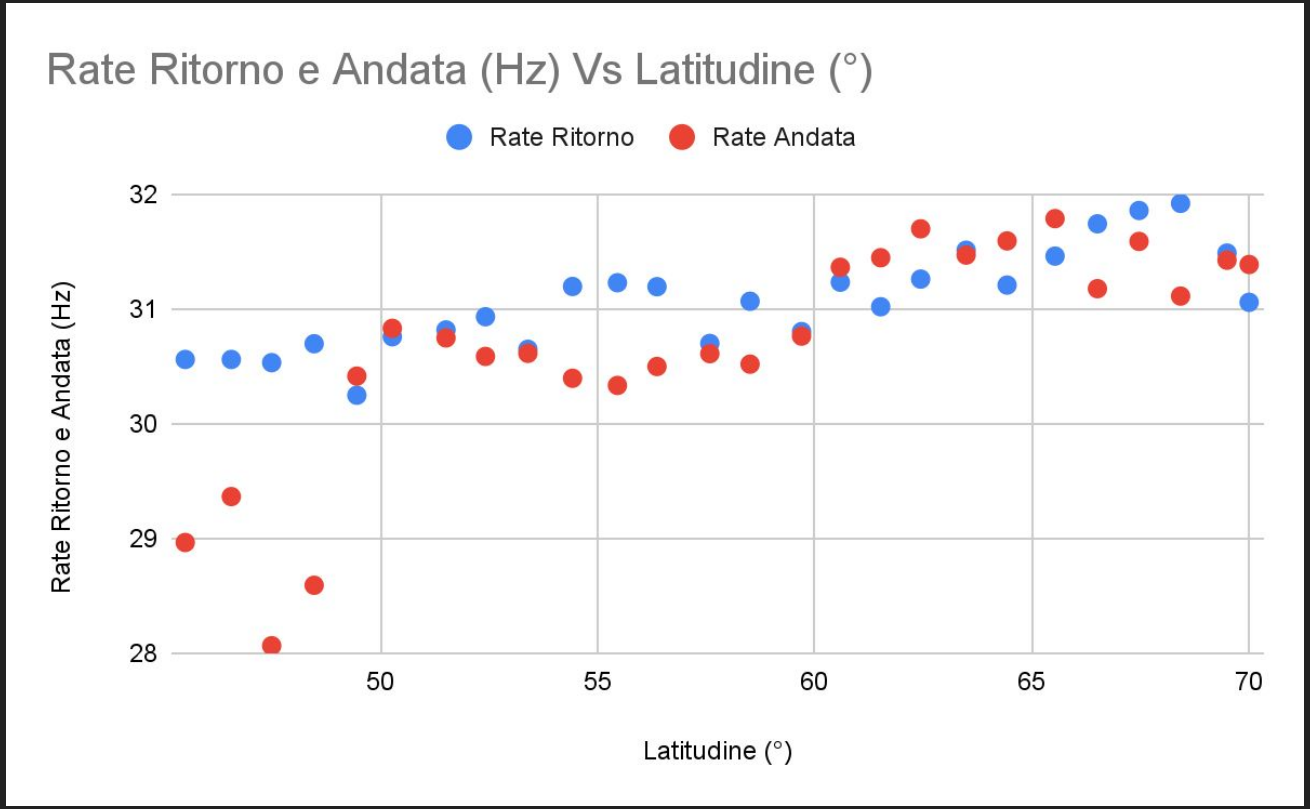
Mean rate=35.20633328

k=1.124418





outbound and inbound rate (moving only)



Normalized rates, outbound and inbound (moving only)

k andata=1.132015066
k ritorno=1.117537785

Mean andata=35.57935802
Mean ritorno=35.13233143