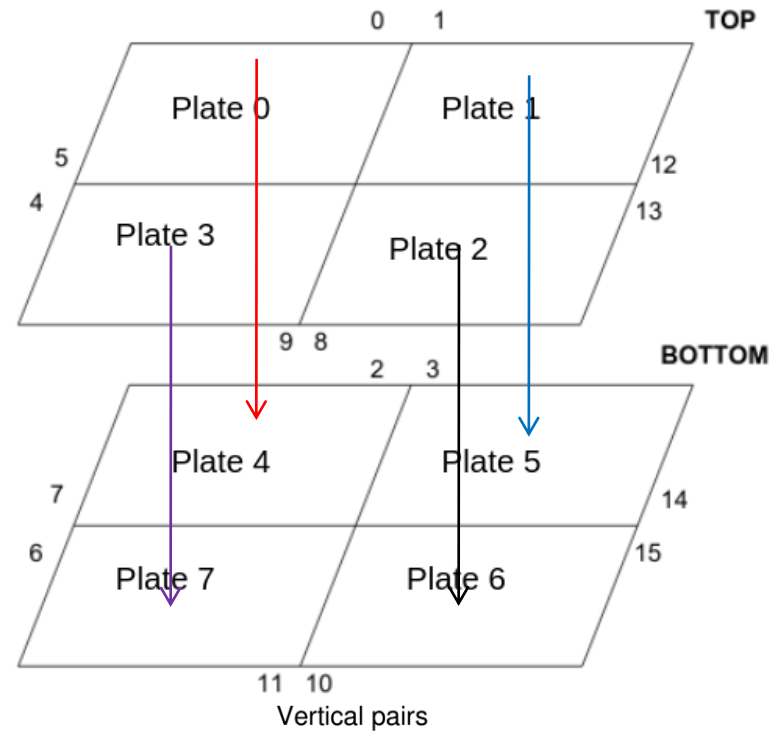
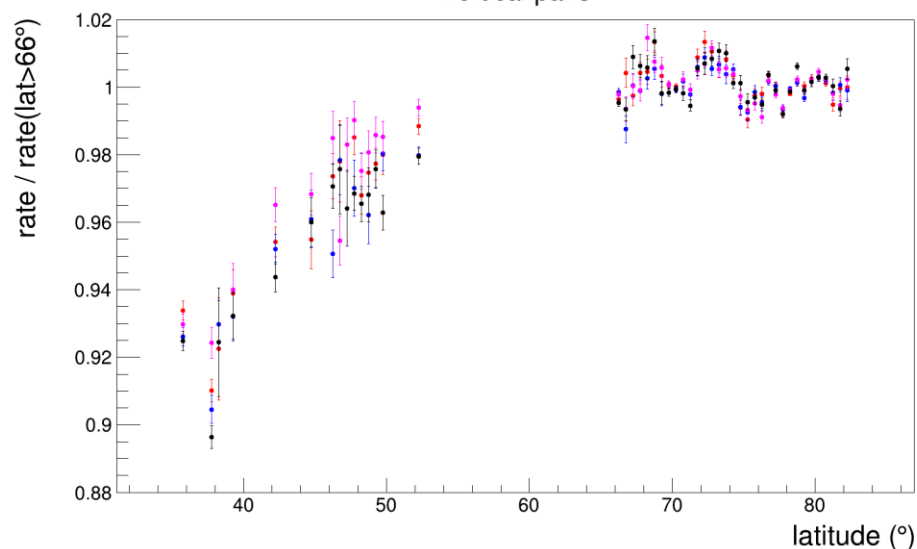
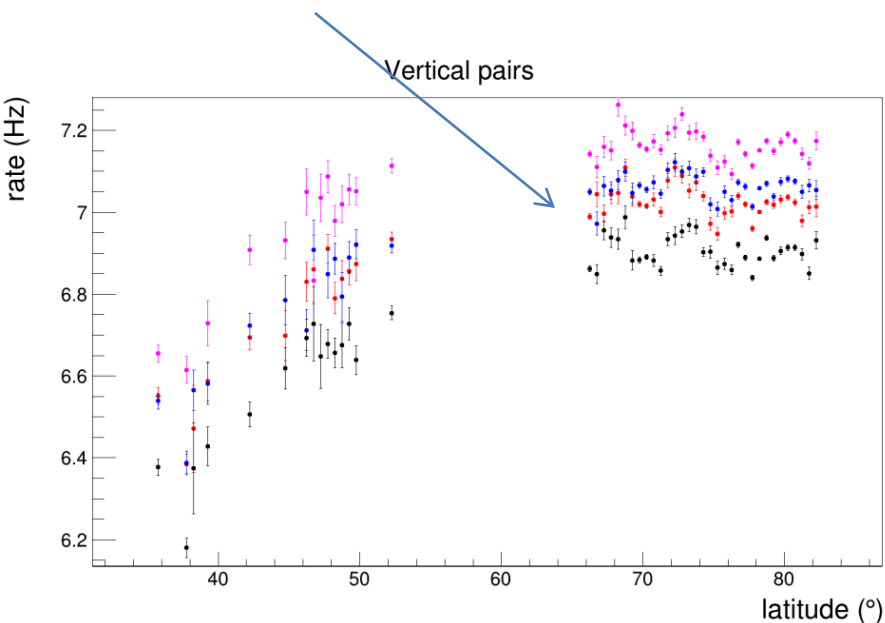


Update on polar paper 2

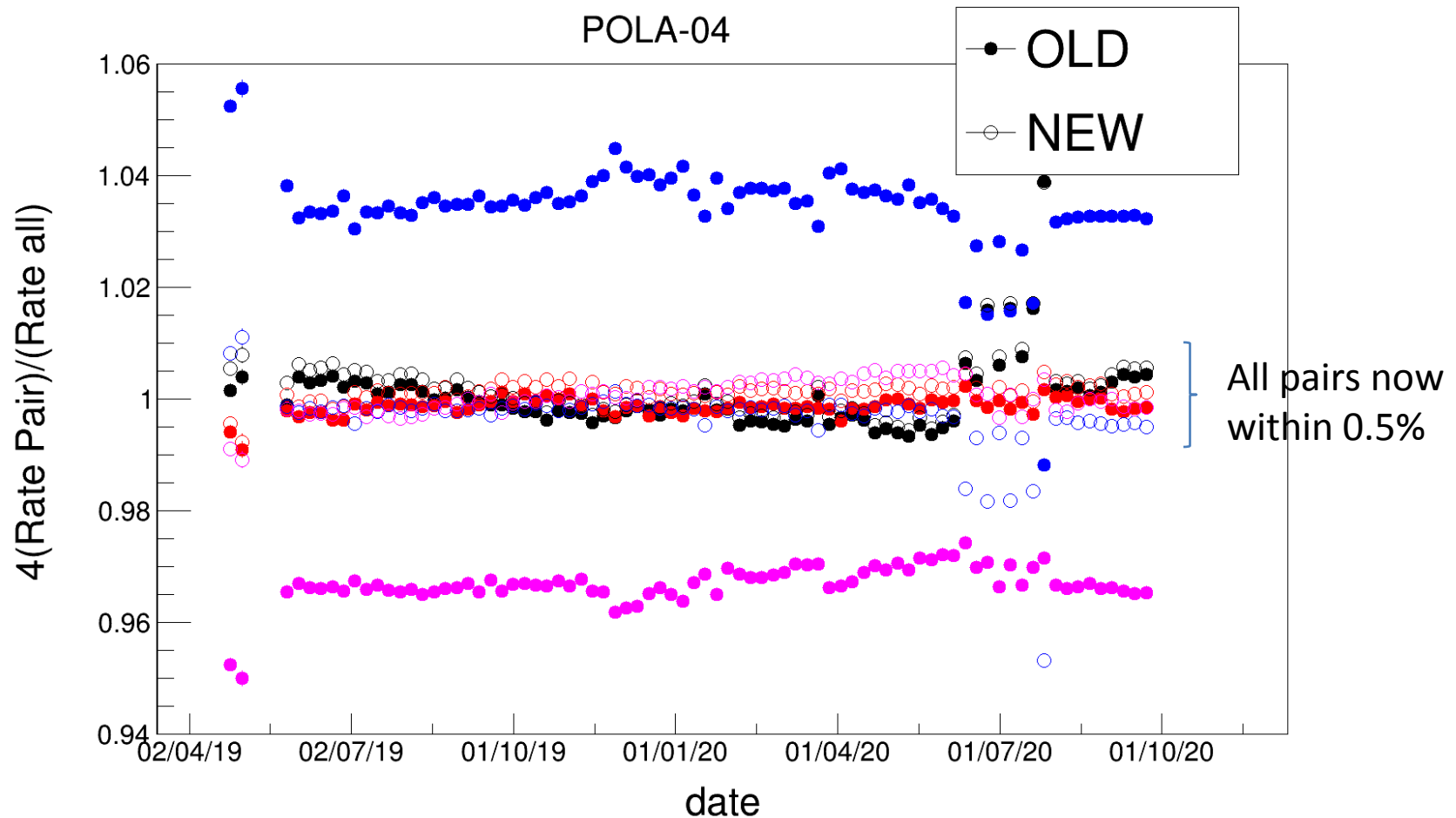
F. Noferini

Check for each vertiacal pair

This difference is now understood

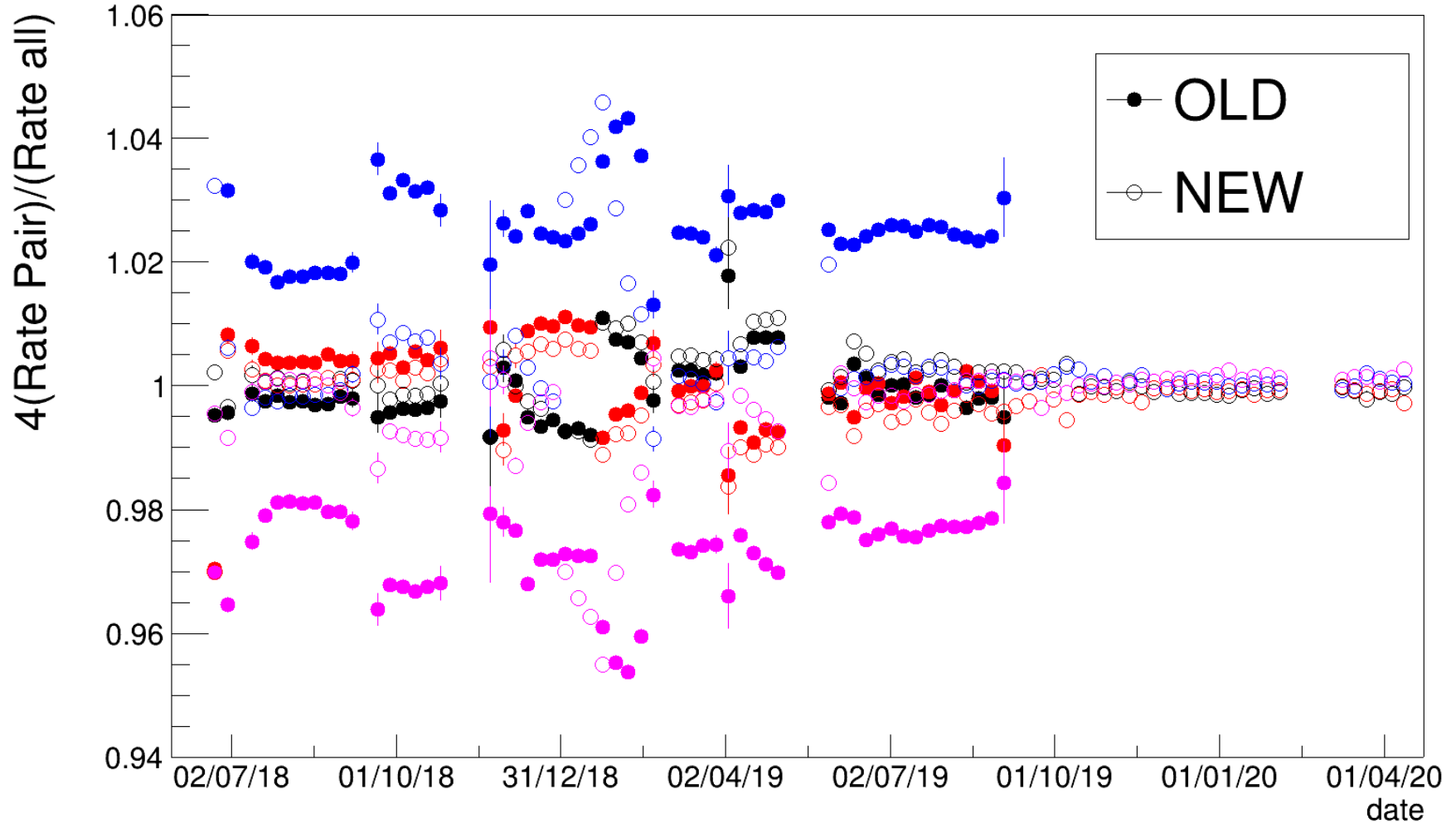


Improvement in new reco version

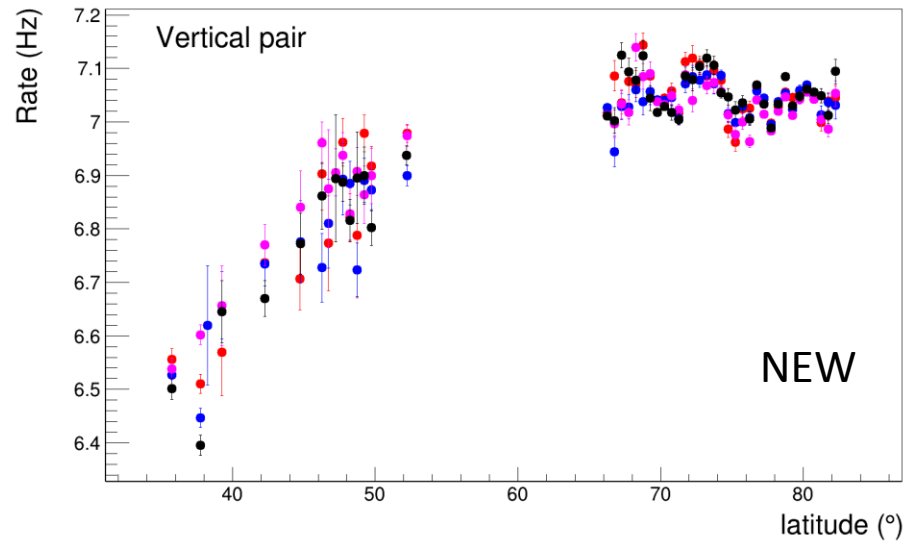
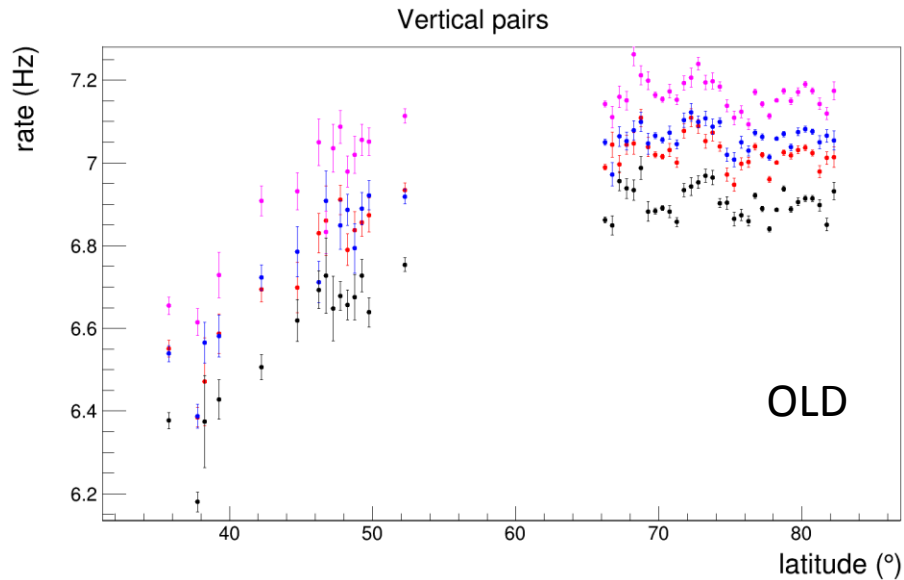


New reco for POLA-01

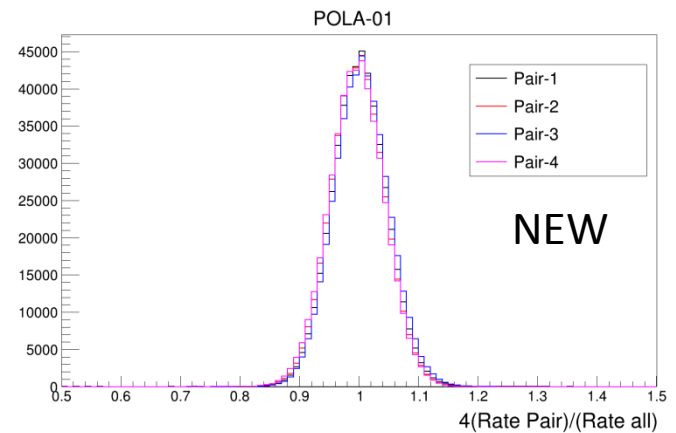
POLA-01



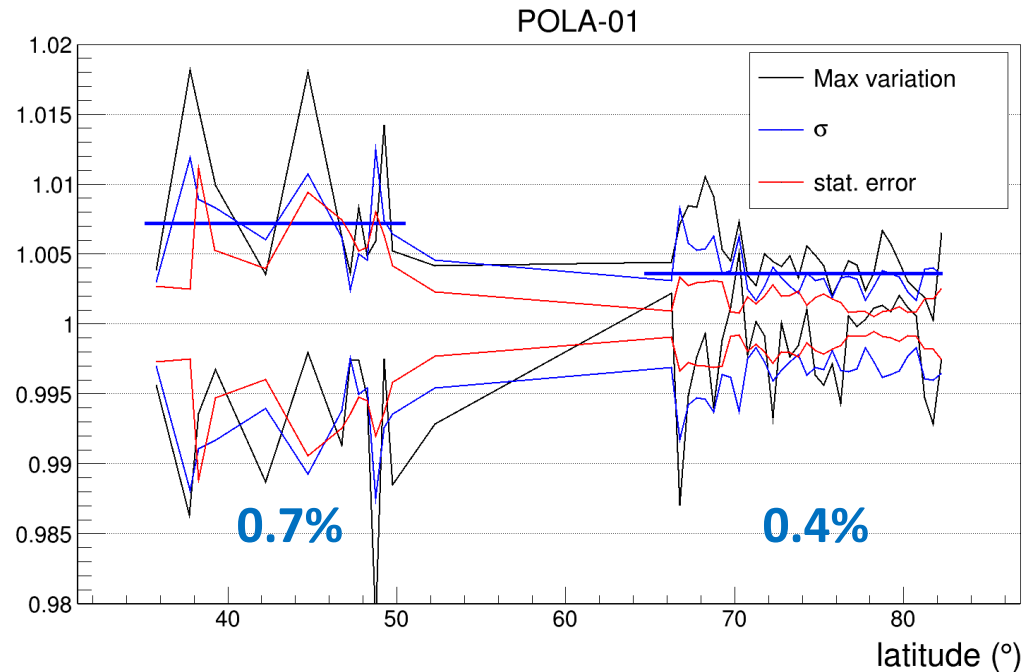
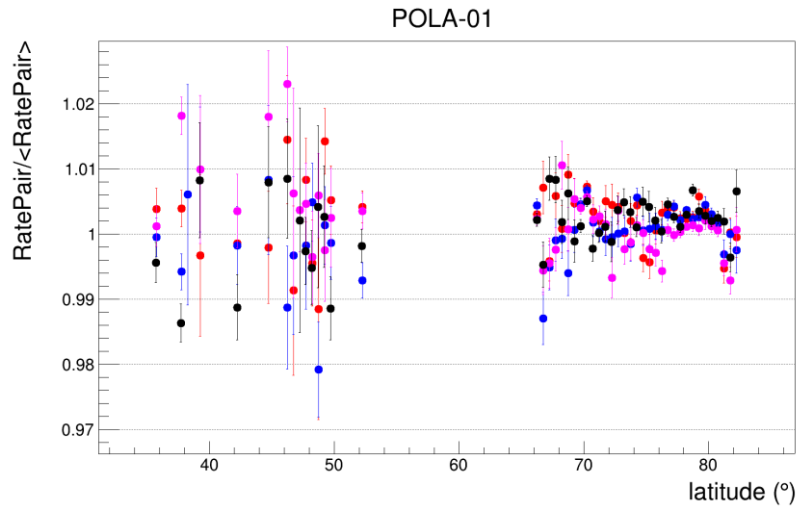
New reco for POLA-01



OLD → NEW
Consistent rates for different plates



Pair rates \rightarrow efficiency



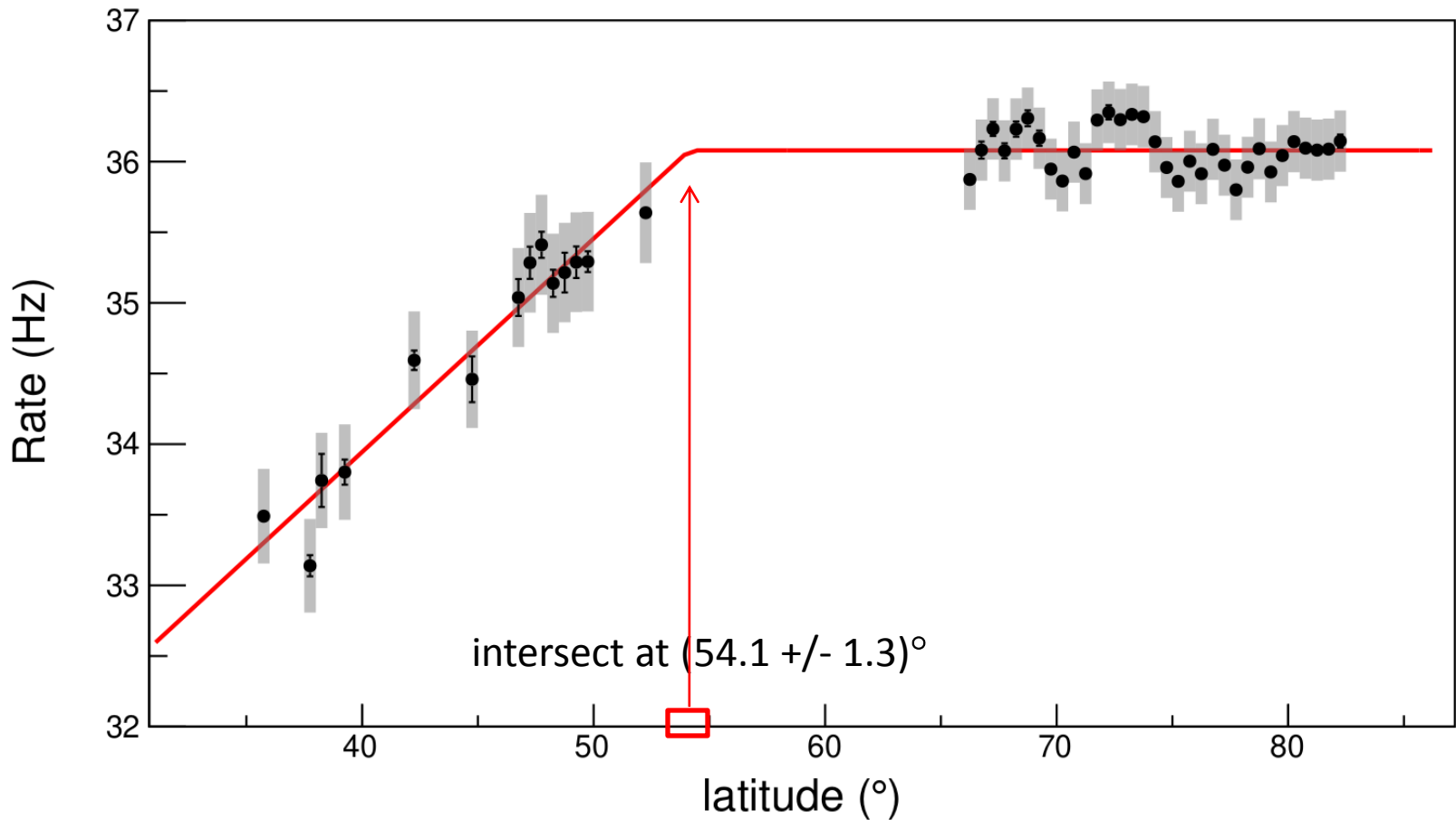
We compared the rates for different pairs to estimate uncertainties on efficiency fluctuations.

Syst. Errors: currently fitted in two regions. We may define syst errors point by point.

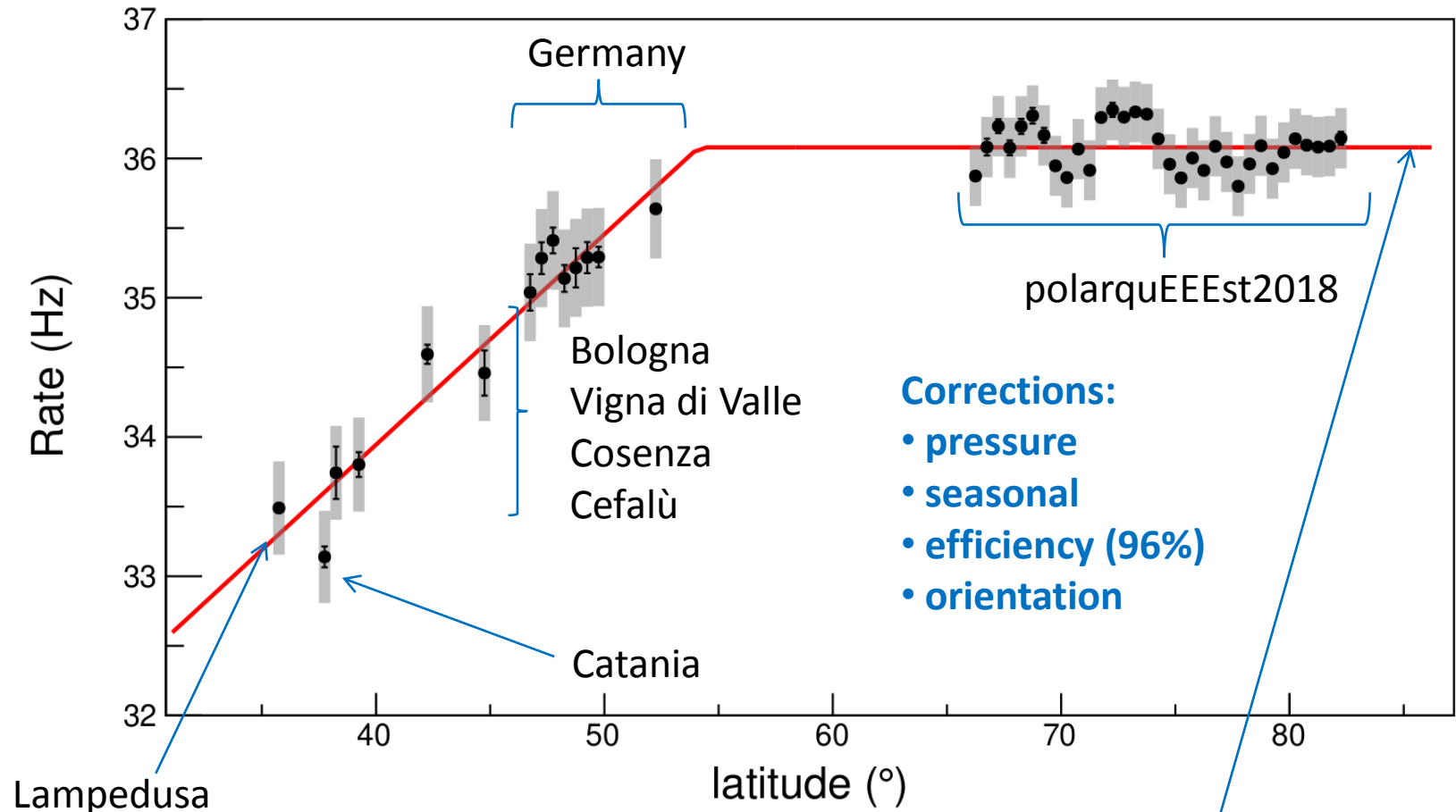
Systematics

Source	Details	magnitude
Efficiency	Rate from different pairs	0.4 – 0.7%
Dayly fluctuations	Latitude > 60°	0.5%
Pressure effect	Correction +/- 10%	0.5%
Seasona effect	Modulation +/- 10%, peak +/- 1 week	0.25%
Orientation	Correction +/- 10%	negligible
altitude	Different paramaterization vs pressure	0.2% at 500 m
TOT syst error		0.8% - 1.0%
Stat error		0.1 – 0.6%

Update on results



Update on results



Summary (I)

- The measurement was repeated after a new reconstruction pass → fully consistent with the previous one
 - Now much better control on rate for single plates → systematic uncertainties finalized
 - Results now fitted only with lines → intersect at $(54.1 \pm 1.3)^\circ$
- Let's move to the paper

Summary (II)

- Results
 - Rate vs lat
 - Rate vs geomagnetic lat
- Comparison with other data
 - Compton (muon)
 - ... (muon)
 - Neutron → different sensitivity to energies of primaries
- Comparison with models
 - Lamaitre (historical)
 - ...

Backup

Comparison of two methods

Rate1 = corrected for pressure neglecting altitude

Rate2 = corrected for altitude and then for pressure at the sea level

