

Supplement of Atmos. Meas. Tech., 7, 3509–3527, 2014
<http://www.atmos-meas-tech.net/7/3509/2014/>
doi:10.5194/amt-7-3509-2014-supplement
© Author(s) 2014. CC Attribution 3.0 License.



Supplement of

A simple and versatile cloud-screening method for MAX-DOAS retrievals

C. Gielen et al.

Correspondence to: C. Gielen (clio.gielen@aeronomie.be)

Supplementary Material for “A simple and versatile cloud-screening method for MAX-DOAS retrievals”.

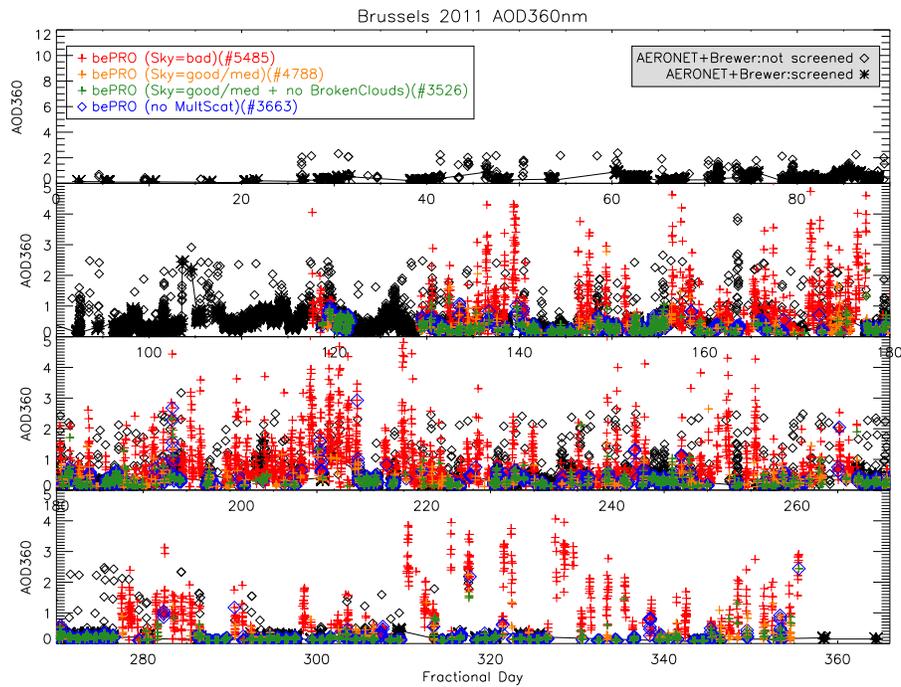


Figure 1: Results of our bePRO AOD retrievals (crosses) at Brussels compared to co-located Aeronet and/or Brewer AOD measurements (black diamonds/asterisks for non-screened/screened respectively) at 360 nm. The different colours used for the retrievals denote the different cloud-screening results. Data with a ‘bad’ sky flag are in red, data with a ‘good’ or ‘mediocre’ sky flag are in orange, data with a ‘good’ or ‘mediocre’ sky flag plus no broken-cloud flag are in green, and data with no multiple-scattering flag are in blue.

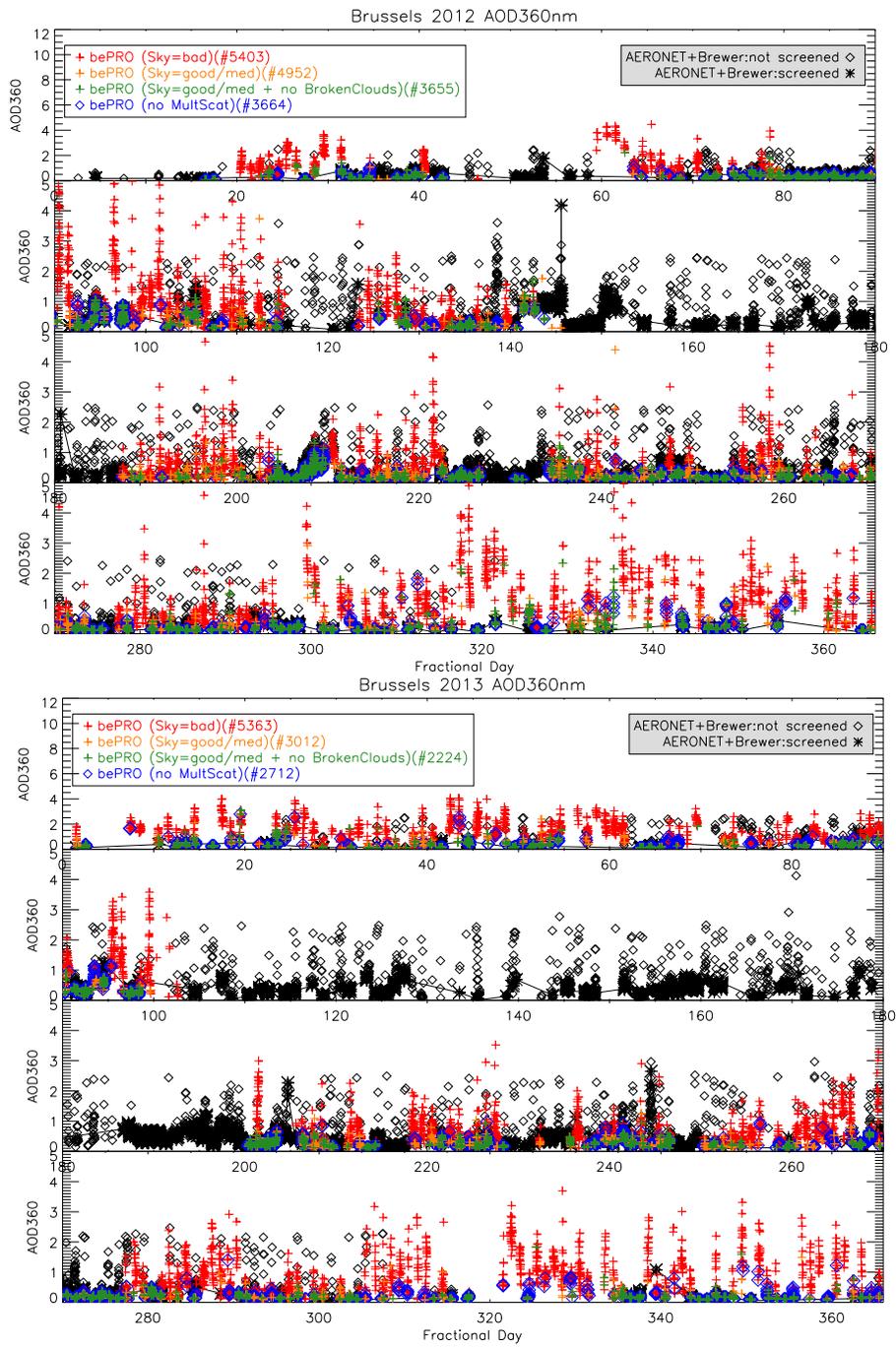


Figure 1: Continued.

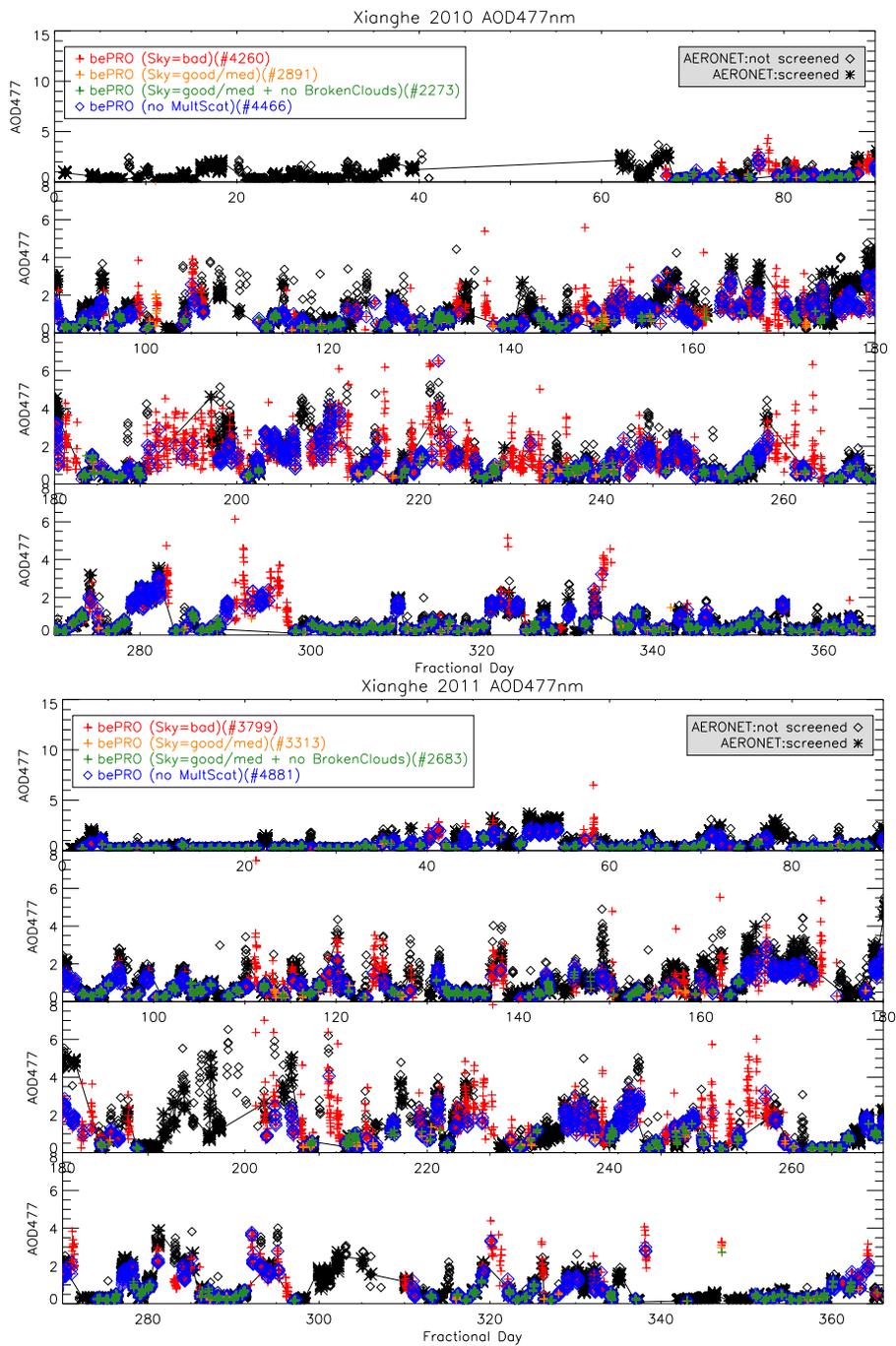


Figure 2: Continued below.

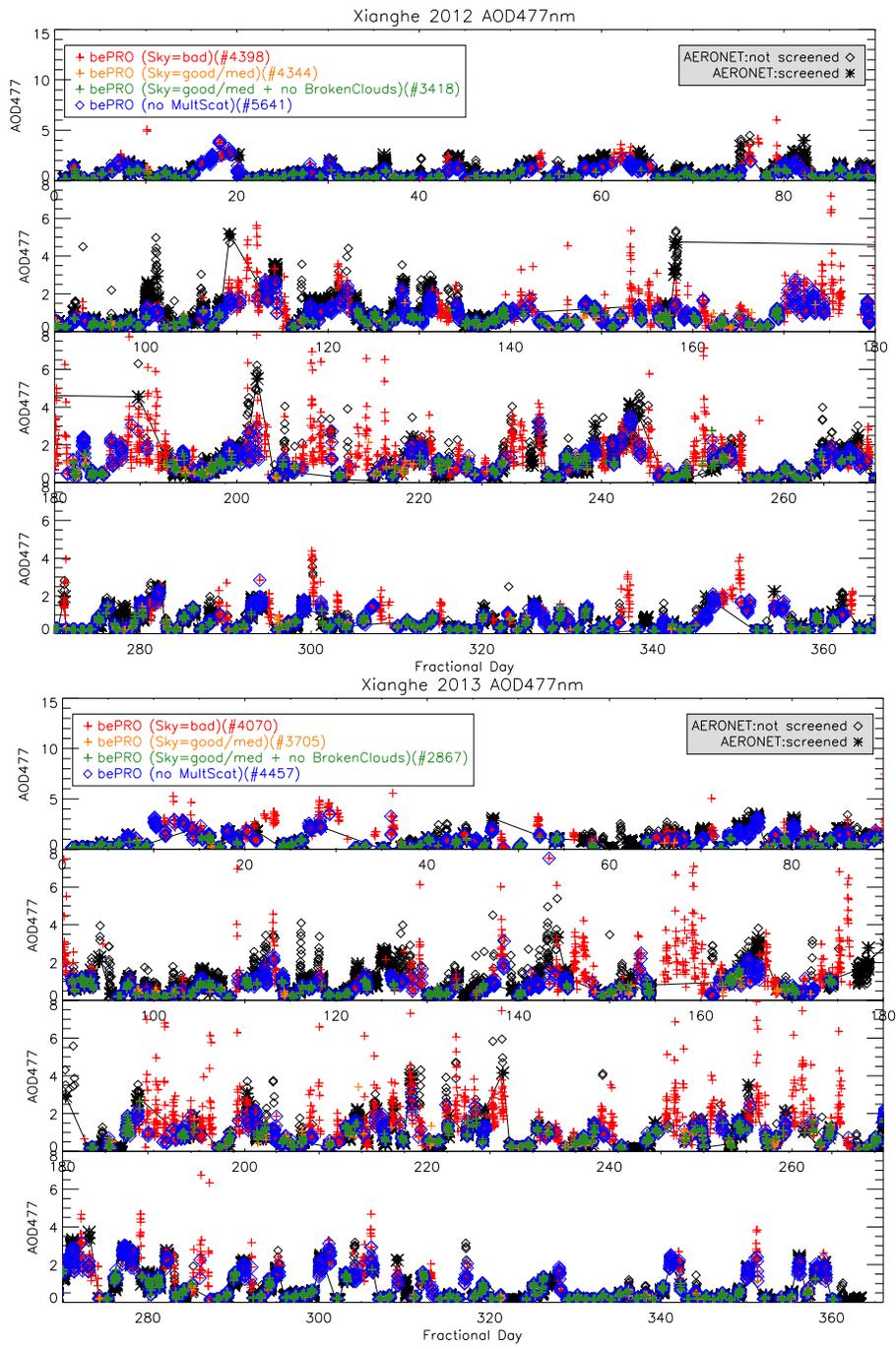


Figure 2: Same as Fig. 1 but for Xianghe retrievals at 477 nm.

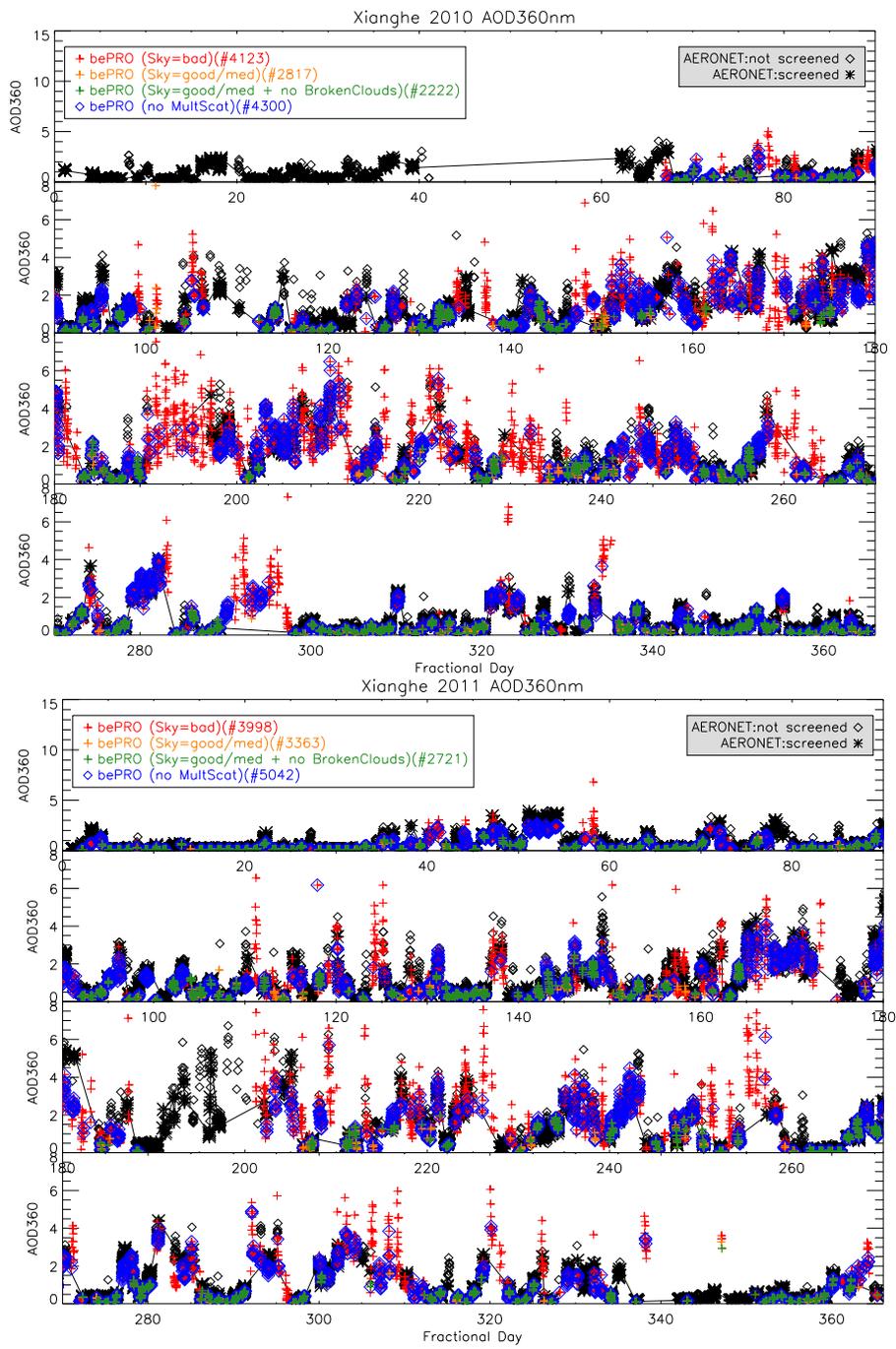


Figure 3: Continued below.

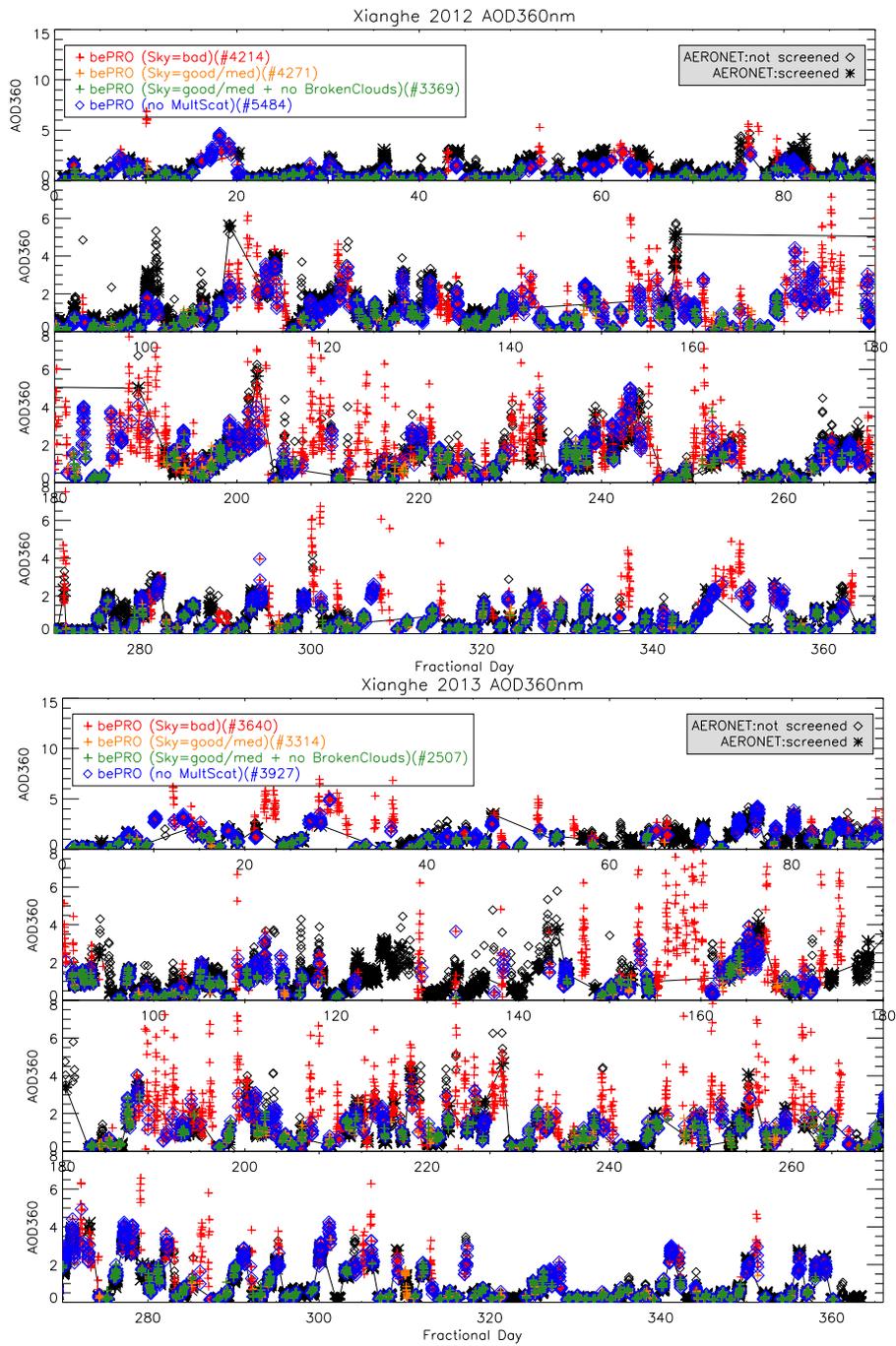


Figure 3: Same as Fig. 2 but for retrievals at 360 nm.

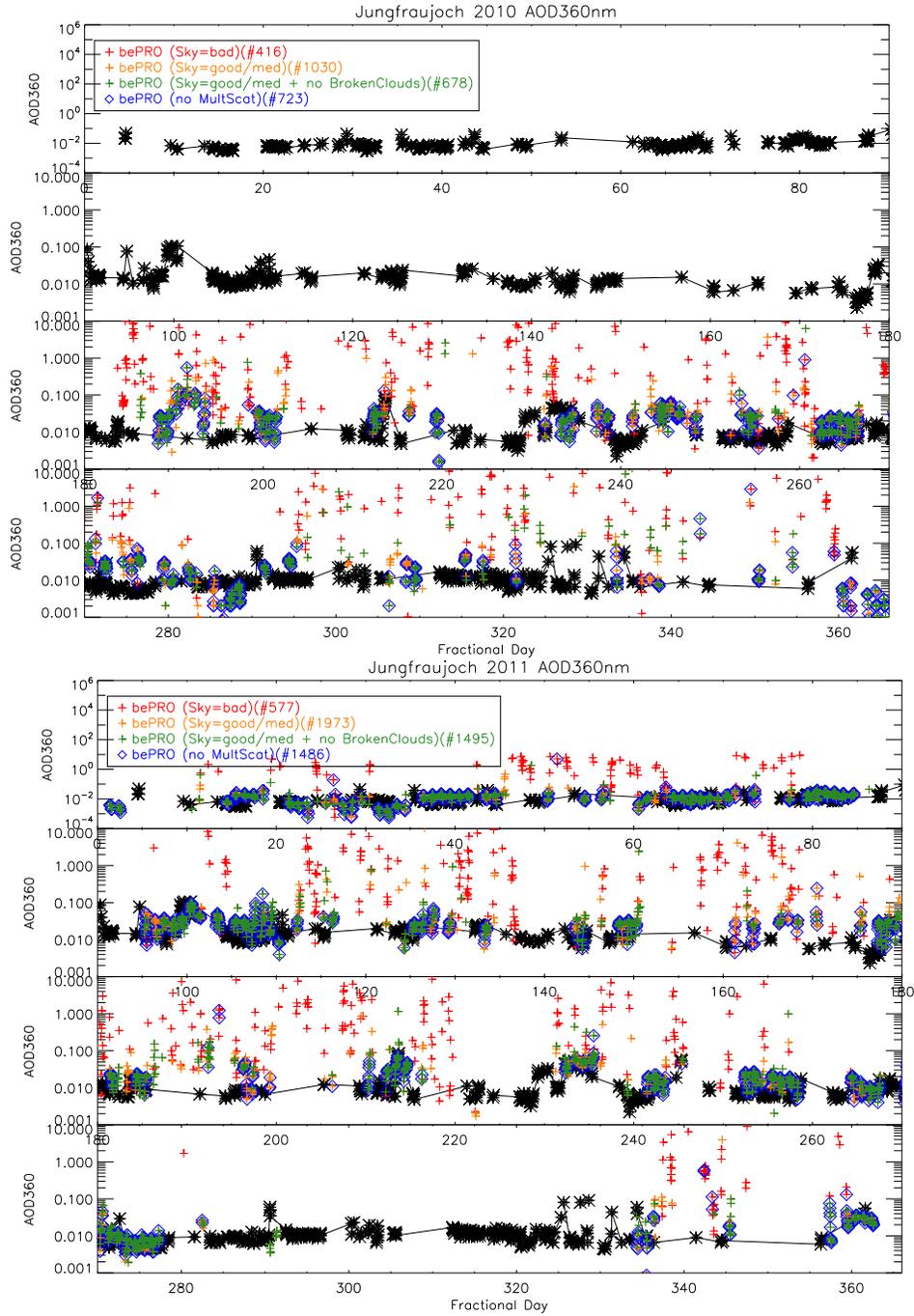


Figure 4: Continued below.

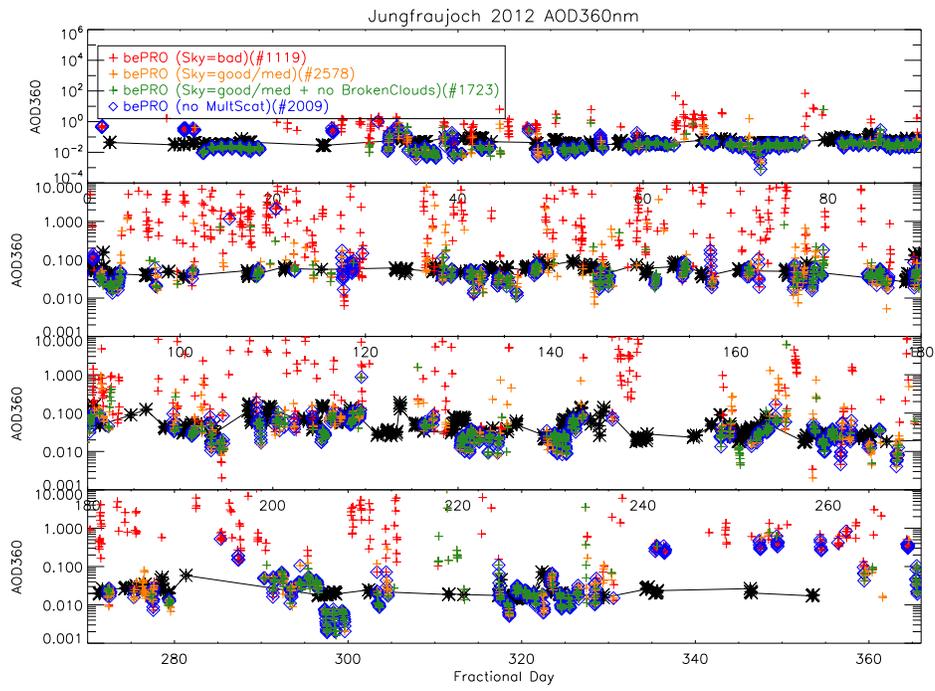


Figure 4: Same as Fig. 1 but for the Jungfraujoch data set at 360 nm.

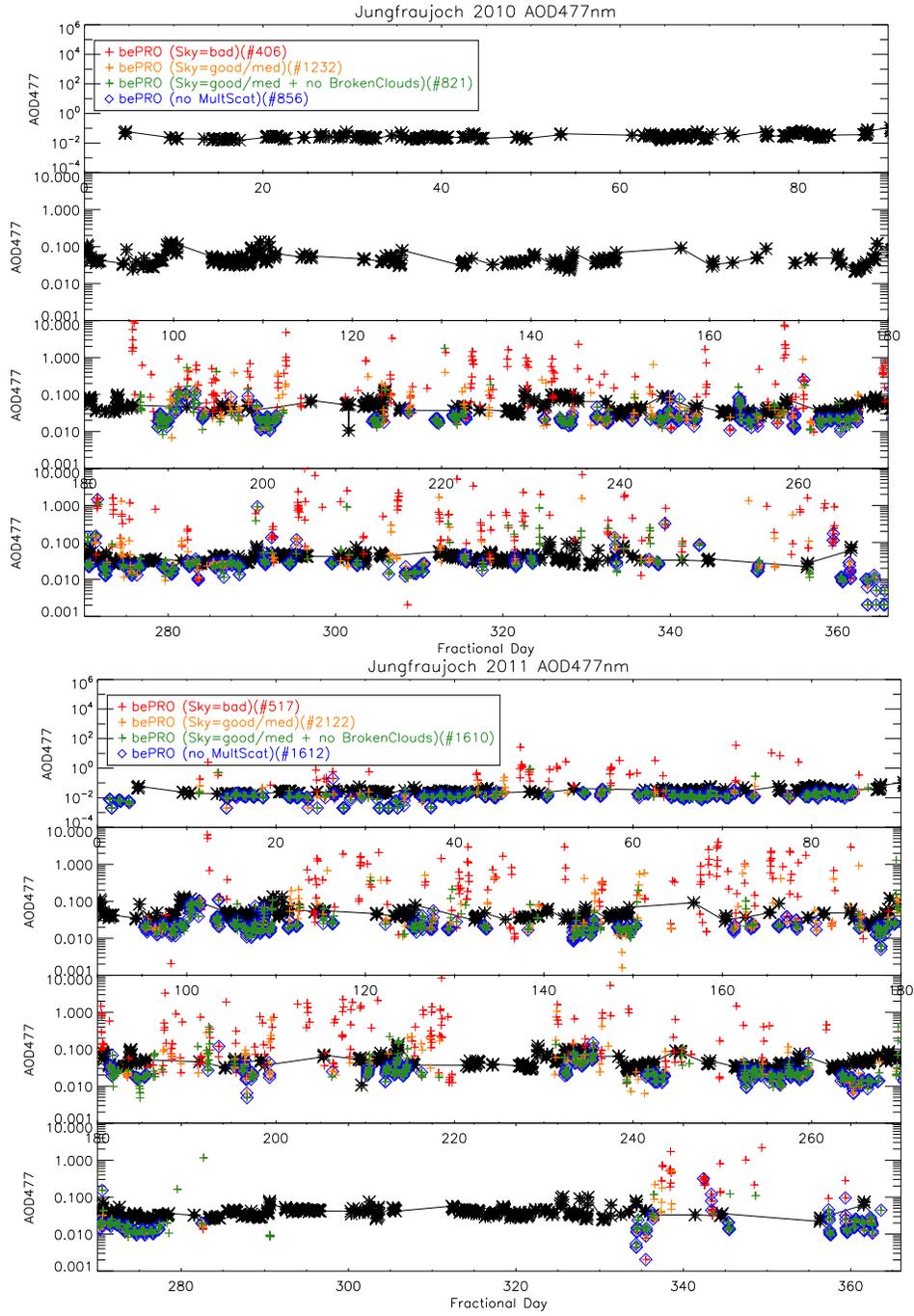


Figure 5: Continued below.

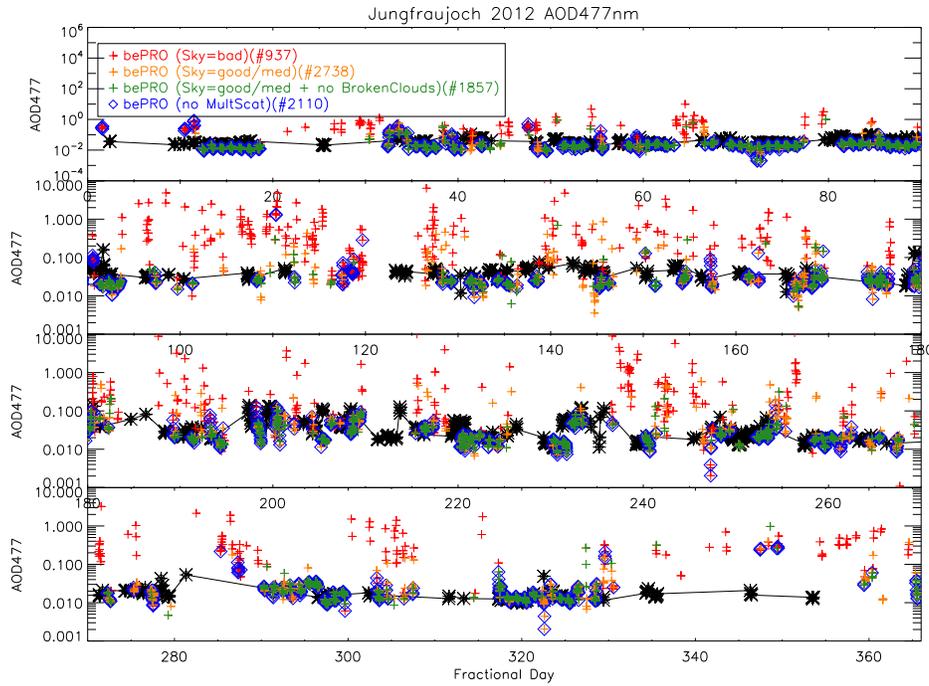


Figure 5: Same as Fig. 1 but for the Jungfraujoch data set at 477 nm.

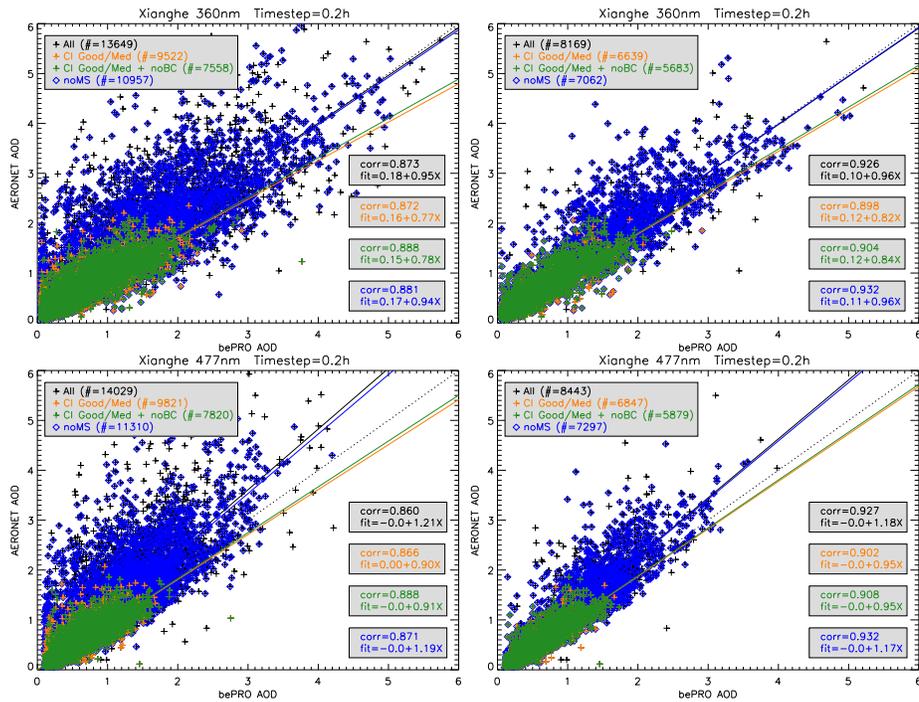


Figure 6: Continued below.

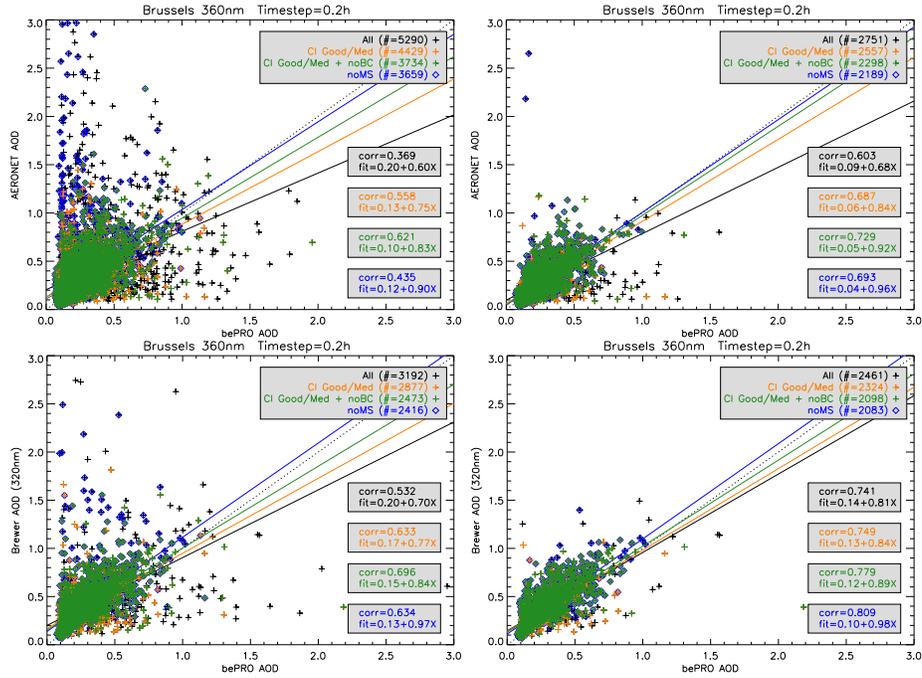


Figure 6: Correlation plots of our bePRO MAX-DOAS AOD retrievals and measured AOD values for the Xianghe and Jungfraujoch data set at 360 and 477 nm and for the Brussels at 360 nm, in time steps of 0.2 hour for Xianghe and Brussels and 1 hour for Jungfraujoch. The figures on the left use non-screened AERONET/Brewer data, whereas the figures on the right use cloud-screened measurements. The full non-cloud-screening data is given by black crosses. Cloud-screened data (based on the CI) with a ‘good/mediocre’ sky flag are marked in orange, data with ‘good/mediocre’ sky flag and no broken-cloud flag are marked in green crosses. Data with no multiple-scattering flag (based on the O_4 DSCDs) are marked with blue diamonds. For each sample set we also give the linear regression lines and correlation information.