Referee#3's comments to MS amtd_2012-284 by Tuszon et al.

The manuscript by Tuzson et al. focuses the performance of a QCLAS instrument for the reliable measurement of low atmospheric mixing ratios of NO, NO_2 (and NOy?) at a remote European site (using a standard chemiluminescence analyzer as reference). The MS is a prime example for solid and seminal work. I recommend publication of the MS in ATM. Nevertheless, the authors may consider some of the following comments.

Considering referee#1's comments, this referee (#3) agrees that (a) the total uncertainty for NO and NO_2 measurements should be quantified, and (b) it would be nice, if the comparison between the QCLAS and CLD measurements could be expressed in a quantitative matter.

Following referee#2: (a) the specification of the QCLAS physical size (dimensions, weight, power requirements) is missing, and (b) it would be truly fruitful, if the mentioned measurement details about relative humidity could be addressed.

Page 8980, lines 1–4: „*In order to minimize the scatter due to synchronization differences between instruments, the error of the mean of each individual value was taken as a measure of the variance during that time window and was used to filter out data points which exhibited too large short-term variations*." The procedure is unclear and magnitudes of scatter/error/variance/short-term variations are far from being quantitative.

Finally, the NOy problem. The referee admits frankly, he doubts basically the value of NOy measurements, due to the obvious conversion problems of the Au-converter which are well known for decades now! ("NOy" should be termed as "NOwhy?"). However, the authors made most likely the best out of their results, however some more quantitative argumentation would be desirable (s. referee#1's comments). The authors are encouraged to follow referee#2's recommendation as to make strong statement(s) for the need of the development of more reliable, robust conversion techniques for NOy.