

## **Response**

1) I think the authors have presented a thorough revision of their paper and have taken into account the comments by the reviewers very well. I therefore recommend accepting the paper for publication in ACP.

Thank you, we are glad to hear the revision was to the reviewer's satisfaction.

Just one remark:

Regarding the conversion of SO<sub>2</sub> to sulphate in the Nabro plume it might be helpful to have a reference to a study regarding the chemistry of the conversion of SO<sub>2</sub> by reaction with OH (under conditions of the UTLS, i.e. basically an estimate of OH concentrations) rather than the somewhat indirect evidence from the OSIRIS observations.

We included an additional reference on the chemistry of SO<sub>2</sub> conversion.

2) Update the reference of Ploeger et al: Citation: Ploeger, F., Gottschling, C., Griessbach, S., Grooß, J.-U., Guenther, G., Konopka, P., Müller, R., Riese, M., Stroh, F., Tao, M., Ungermann, J., Vogel, B., and von Hobe, M.: A potential vorticity-based determination of the transport barrier in the Asian summer monsoon anticyclone, *Atmos. Chem. Phys.*, 15, 13145-13159, doi:10.5194/acp-15-13145-2015, 2015.

Done.