Interactive comment on "Lightning-produced NOx during the Northern Australian monsoon; results from the ACIVE campaign". Response to referee #3

We thank the referee for his/her useful comments.

P. 10648, line 17: here and many other places in the manuscript the word "accretion" is used. I think the word "accumulation" would be better.

R. Done

P. 10648, line 26: LNO_X is a more standard notation than $LtNO_x$.

R. Changed

P. 10649, line 22: Another paper from STEP demonstrating the impact of LNOx is Pickering et al. (1993).

R. The paper in question ha been referenced, although with the caveat that the results therein reflect conditions typical of the maritime continent.

P. 10651, line 8:

R:Counts per second. Spelled out in the text now.

P. 10652, line 5.

R:Done.

P. 10656, line 23

R: Done.

P. 10656, lines 25 and 28: Done.

P. 10658, lines 5 and 8.

R:Done.

P. 10659, lines 8-9:

R:Agreed. A 5-pannel figure has been added that consist of the 5-day back-trajectory for transect 6 for each day along with the LINET strokes for that day. The figures shows that the airmass sampled on transects 1-5 which originated due

east of the sampling point, on the northern end of the Cape York peninsula, were exposed to the highest lightning activity on 21 and 22 January, as it approached the Darwin area, whereas those sampled on transects 6-9, originating south of the sampling points, had a longer exposure to convection, including 17 and 22 January. This is now discussed in the text.

P. 10660, lines 2-3.

R:Done

P. 10661, line 14:

R: TTL. The presence of VOCs in a highly convective environment, with its attendant potential for fast vertical transport and NO_x production by lightning increases the possibility of ozone production in the tropical tropopause layer.

Figure 6: Image taken on 22/01/06 at 0730 UTC. Added to the caption.