

*The authors have satisfactorily addressed most of my comments. There is only one outstanding comment that should be addressed prior to publication.*

*Reviewer Comment 11: Vertical gradients in HONO are well known (e.g., multiple references from Stutz et al., see below, VandenBoer et al. 2013). Why would vertical transport be negligible?*

*Comment 11 Author Response: We have carefully read the literatures. And according to literatures mentioned above (Wong et al., 2011; Wong et al., 2012; Wong et al., 2013; Pinto et al., 2014; Stutz et al., 2002; Wang et al., 2006; VandenBoer et al., 2013; Young et al., 2012), photolytic HONO formation at the ground is the major formation pathway in the lowest 20 m, while a combination of gas-phase, photolytic formation on aerosol, and vertical transport is responsible for daytime HONO between 200-300 meters above the ground. In our work, the measurement was conducted on the rooftop of one building, about eight meters above the ground. Therefore, the contribution of vertical transport to the near-surface HONO source is not significant. We have revised the statement in the manuscript and added the related literatures to the manuscript. (Page 12-13, line 283-288).*

*The response does not fully address the original comment. It would not be possible to conclude that vertical transport is unimportant without also calculating the rate of vertical exchange of the air mass for an 8 m height in which vertical gradients are known to exist. This point must be addressed prior to publication. If it is not possible to calculate a vertical exchange rate, then the statement that vertical transport is negligible must be removed. In its place, a statement is required that vertical exchange is unknown since the data to calculate its effect on HONO measured at 8 m is not available. Therefore, all subsequent analysis relies on the assumption that vertical exchange is unimportant, but this assumption represents an uncertainty that is not easily quantified.*

Response: We thank Anonymous Referee #3 for the comment. Indeed, due to the unavailability of corresponding data, we are unable to calculate the vertical exchange rate. We have made revisions in the main text according to the reviewer's advice.

“According to related observations (Wong et al., 2011; Wong et al., 2012; Wong et al., 2013; Pinto et al., 2014; Stutz et al., 2002; Wang et al., 2006; VandenBoer et al., 2013; Young et al., 2012), photolytic HONO formation at the ground is the major formation pathway in the lowest 20 m, while a combination of gas-phase, photolytic formation on aerosol, and vertical transport is responsible for daytime HONO between 200-300 meters above the ground. In our work, the measurement was conducted on the rooftop of one building, about eight meters above the ground. As vertical exchange is unknown since the data to calculate its effect on HONO measured at 8 m is not available. Therefore, all subsequent analysis relies on the assumption that vertical exchange is unimportant, but this assumption represents an uncertainty that is not easily quantified” (Page 12-13, line 284-291)