Figure S 1. Vertical profile for median modeled (red) and measured (black) NO, NO$_2$, and CO for INTEX-A flight data binned by kilometer.
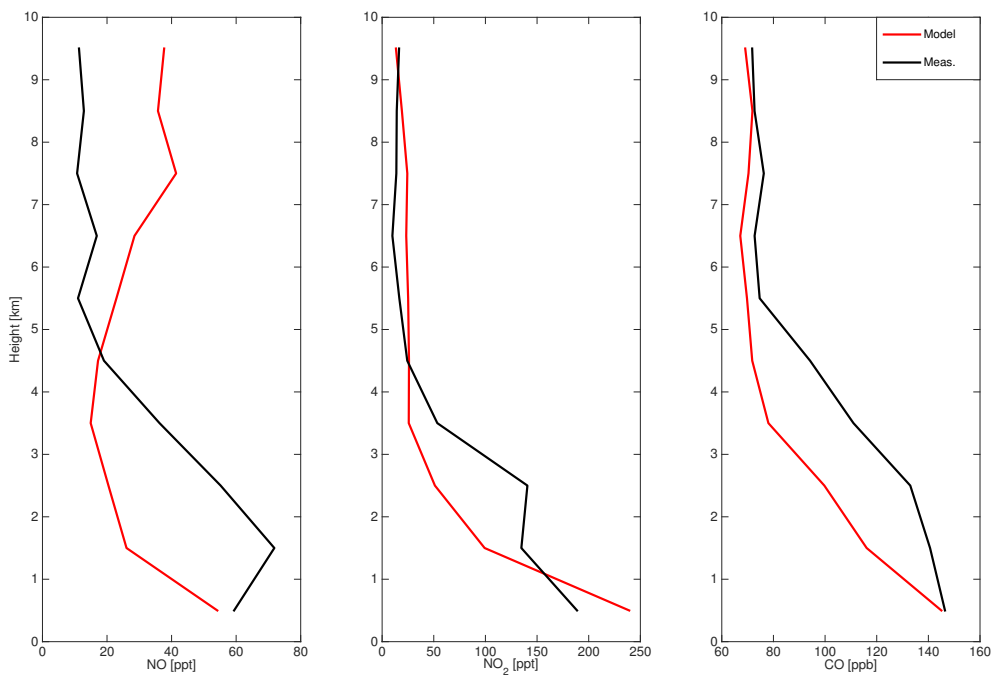
Figure S 2. Vertical profile for median modeled (red) and measured (black) NO, NO$_2$, and CO for Houston based INTEX-B flight data binned by kilometer
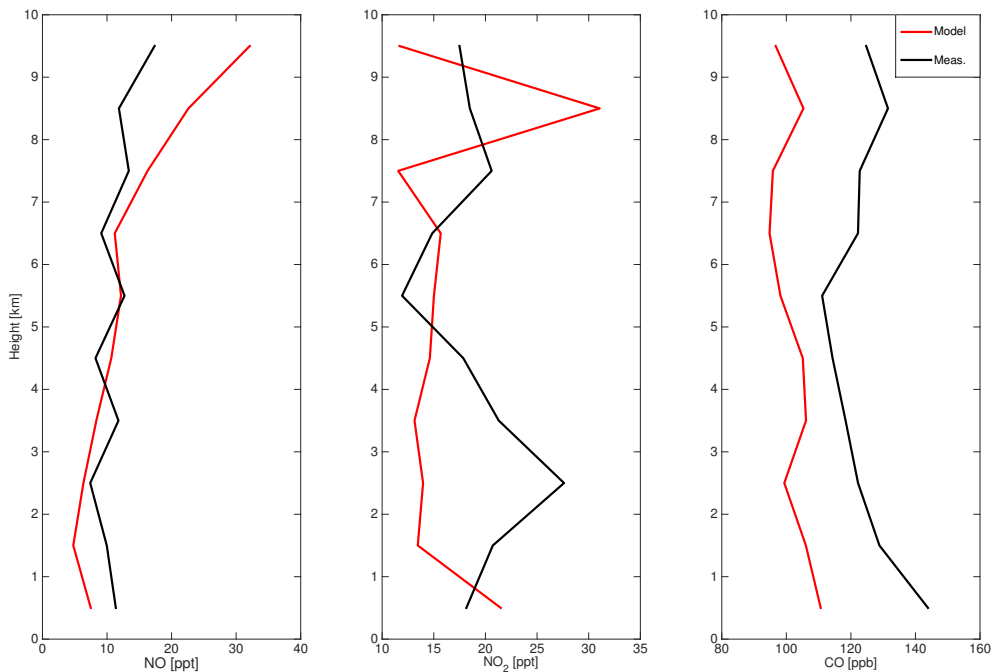
Figure S 3. Vertical profile for median modeled (red) and measured (black) NO, NO$_2$, and CO for Honolulu based INTEX-B flight data binned by kilometer
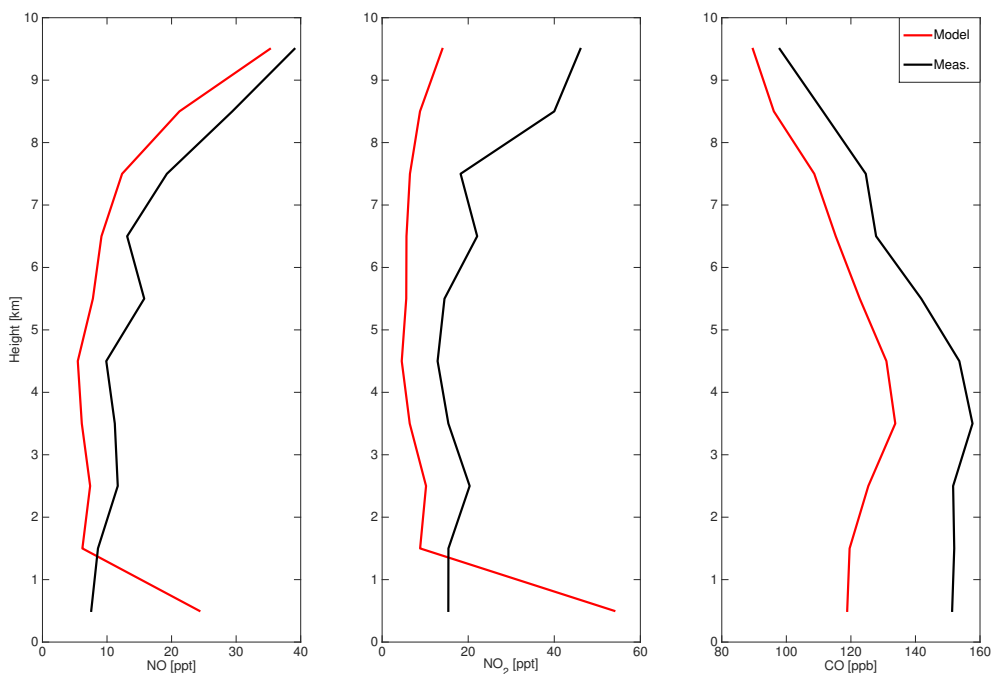
Figure S 4. Vertical profile for median modeled (red) and measured (black) NO, NO$_2$, and CO for Anchorage based INTEX-B flight data binned by kilometer