## Supplemental Material

## Prenatal Exposure to Air Pollution and Autism Spectrum Disorder: Sensitive Windows of Exposure and Sex Differences

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**Table S1.** Characteristics of samples included vs. excluded.

**Table S2.** Air pollutants concentrations during entire year, dry season, and wet season.

**Table S3.** Correlations between air pollutants during entire year, dry season, and wet season.

**Figure S1.** Deviation of study sample.

**Figure S2.** Distribution of $PM_{2.5}$, $NO_2$, and $O_3$ concentrations during pregnancy across birth year 2001-2014. The solid, long dash, dotted boxes represent the distribution of $PM_{2.5}$, $NO_2$, and $O_3$, respectively. The box shows the interquartile range, the line in the box is the median, and the diamond is the mean. The whiskers represent the upper 25% and lower 25% of the data.

**Figure S3.** Association between weekly $PM_{2.5}$, $NO_2$, and $O_3$ exposures over gestation and ASD among boys and girls when follow-up was censored at child age five such that all children reached the minimum of age 5 with a maximum follow-up till age 5 (N= 294,937). Gray shade indicates 95% confidence intervals; dashed vertical lines demarcate trimesters. All the models were adjusted for child sex, maternal race/ethnicity, maternal age at delivery, parity, education, maternal comorbidities, medical centers, household income, birth year, and season.

**Figure S4.** Association between weekly $PM_{2.5}$, $NO_2$, and $O_3$ exposures over gestation and ASD among boys and girls when only full-term births $\geq$ 39 gestational weeks were included (total 220,981 singleton children). Gray shade indicates 95% confidence intervals; dashed vertical lines demarcate trimesters. All the models were adjusted for child sex, maternal race/ethnicity, maternal age at delivery, parity, education, maternal comorbidities, medical centers, household income, birth year, and season.

**Figure S5.** Association between weekly $PM_{2.5}$, $NO_2$, and $O_3$ exposures over gestation and ASD among boys and girls when further adjusting for pre-pregnancy obesity and diabetes along with covariates included in primary analyses. Gray shade indicates 95% confidence intervals; dashed vertical lines demarcate trimesters.

**Example R code of DLM modeling**