Modeling traffic-related air pollution in Torino with generalized additive models

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Abstract: Vehicular traffic typically plays an important role in the increase of atmospheric pollutants concentration (e.g. CO, NO_x, PM and O_3). This is especially true in urban area, where high pollutant concentrations are often observed. In this work, we consider hourly concentration of nitrogen dioxide (NO_2) measured in the city of Torino. To model its behavior, we employ generalized additive models (GAM) focusing in particular on traffic and meteorological predictors.

Keywords: Air quality, Generalized additive models, Vehicular traffic.