

**Exp. 8: Photo-smog scenario with diesel exhaust (blind)
(Foreseen May 27th)**

Scheduling	Chamber	Motivation	Measurements
Morning	1. Add hot diesel exhaust gas to clean, open chamber until about 200 ppb NO _x is reached. 2. Re-fuel the chamber with exhaust gas and add standard hydrocarbon (photo smog) mixture (in former times: 450 ppb ethene and n-butane and 150 ppb of toluene).	Examine HONO formation by semi-volatile and/or water-soluble organics on inner surfaces of instruments. Increase VOC/NO _x ratio.	1. Measurements for 2-3 hours. 2. Measurements for 2-3 hours.

NO₂ + diesel interference:

Gutzwiller, L., Arens, F., Baltensperger, U., Gaggeler, H. W., and Ammann, M.: Significance of semivolatile diesel exhaust organics for secondary HONO formation, Environmental Science & Technology, 36, 677-682, 2002.

Local Time	GMT	
8:00-08:30	6:00-06:30	Instruments preparation. Stop chamber flushing
08:30-09:00	06:30-07:00	SF ₆ addition. Background measurements.
09:00-09:01	07:00-07:01	Diesel exhaust injection (30')
09:01-09:30	07:01-07:30	Measurements
09:30-09:35	07:30-07:35	Chamber roof opened
09:35-12:00	07:35-10:00	Measurements
12:00-12:01	10:00-10:01	Diesel exhaust injection (30')
12:01-12:15	10:01-10:15	hydrocarbon mixture injection
12:15-16:00	10:15-14:00	Measurements
16:00-16:05	14:00-14:05	Close chamber
16:05-16:40	14:05-14:40	Measurements
16:40	14:40	Start chamber flushing