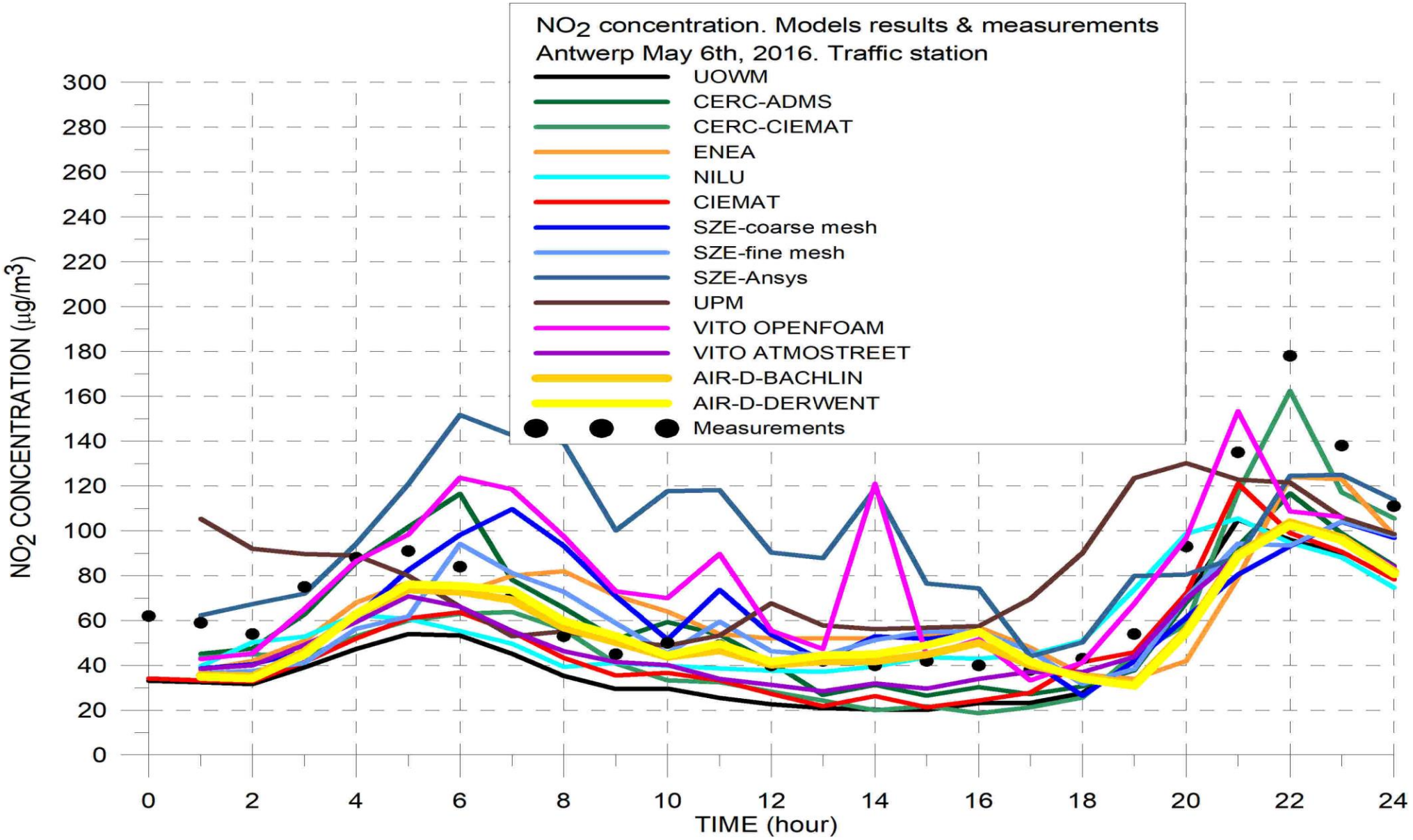
Updates on the statistics from new contributions to WG4 IE

FAIRMODE WG4
Microscale Modelling

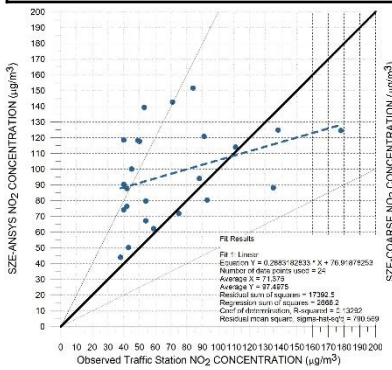
Step 1. May 6th, 2016 time series plot (Traffic AQ station)



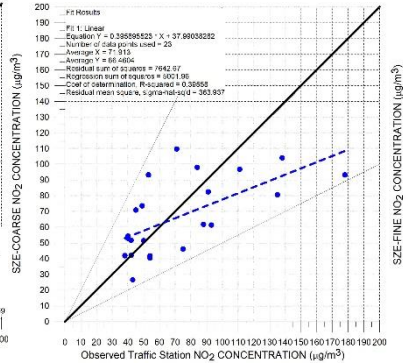
Step 1. May 6th, 2016 Scatter-Plots (Traffic AQ station)

TRAFFIC STATION

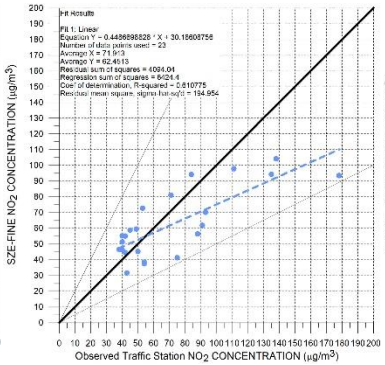
SZE-ANSYS



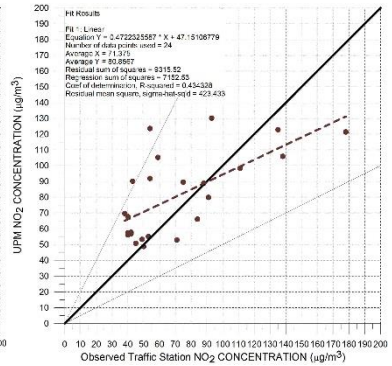
SZE-COARSE



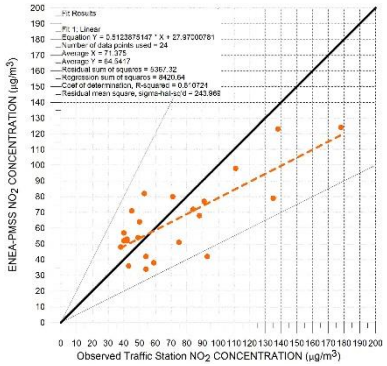
SZE-FINE



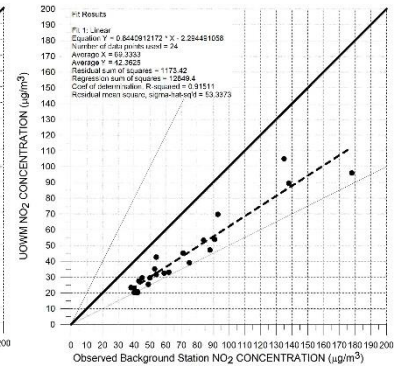
UPM-PALM4U



ENEA-PMSS

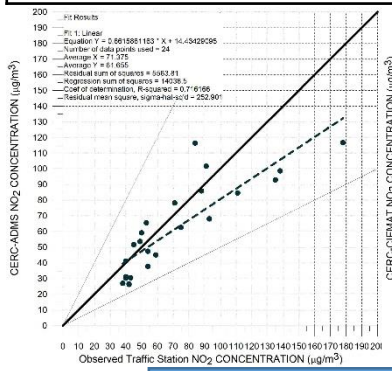


UOWM

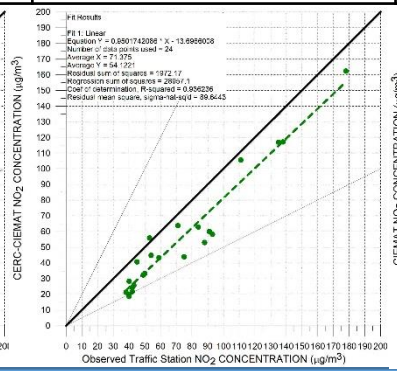


TRAFFIC STATION

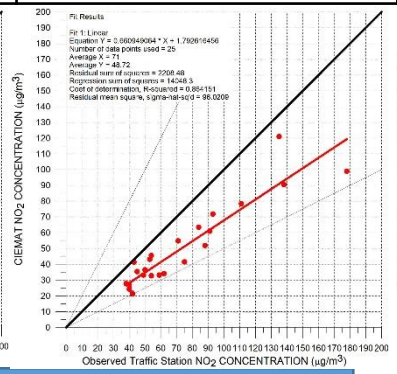
CERC-ADMS



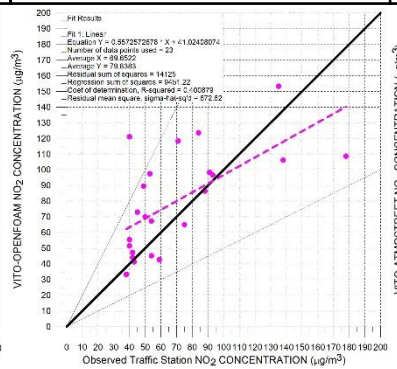
CERC-CIEMAT



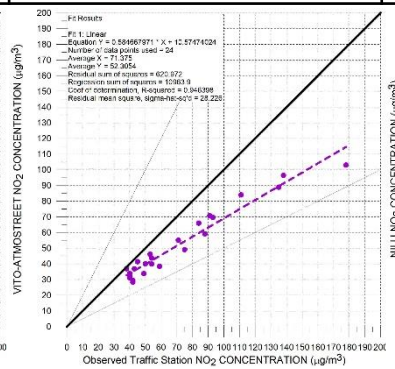
CIEMAT



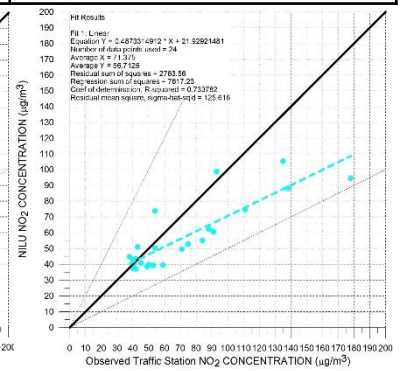
VITO-OPENFOAM



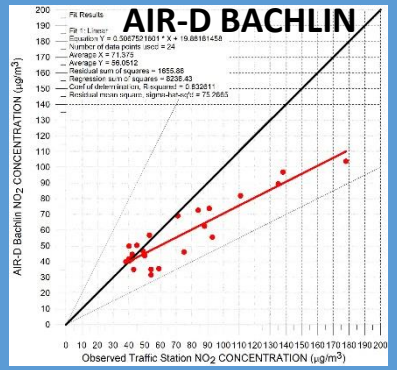
VITO-ATMOSTREET



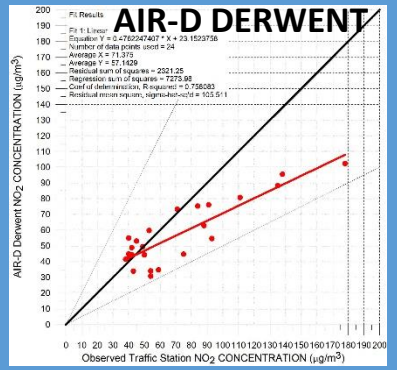
NILU-EPISODE



AIR-D BACHLIN



AIR-D DERWENT

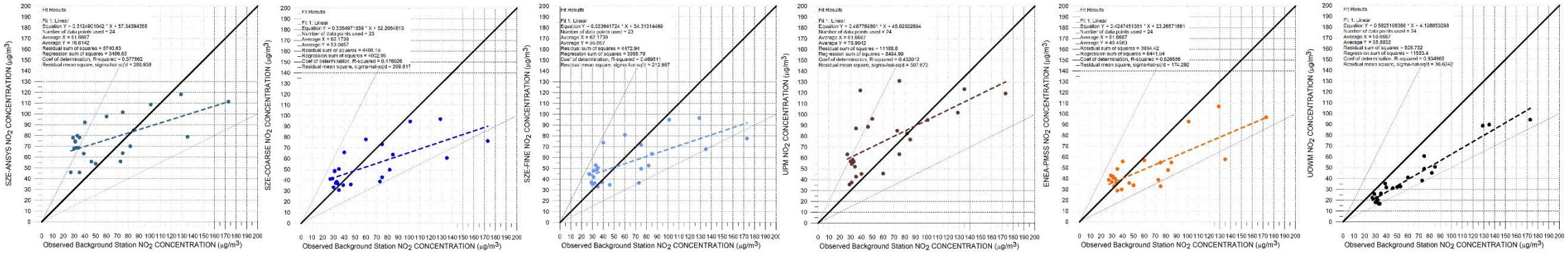


Step 1. May 6th, 2016 time series plot (BG AQ station)

Step 1. May 6th, 2016 Scatter-Plots (Background AQ station)

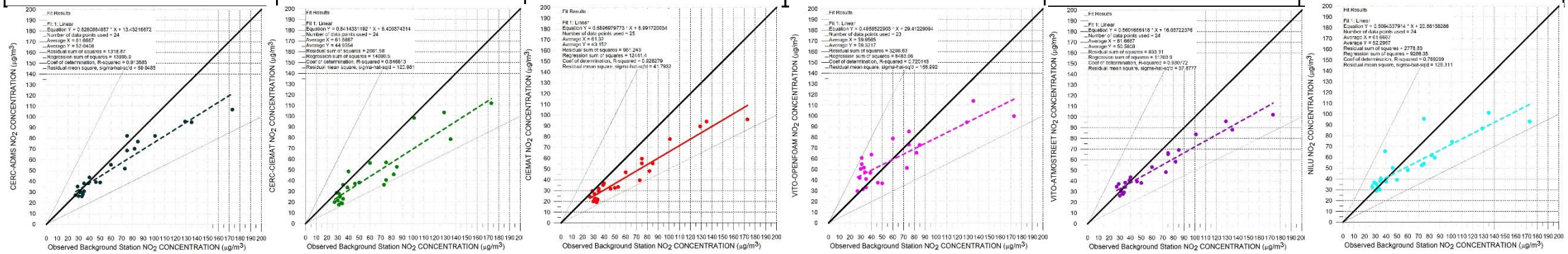
BACKGROUND STATION

SZE-ANSYS	SZE-COARSE	SZE-FINE	UPM-PALM4U	ENEA-PMSS	UOWM



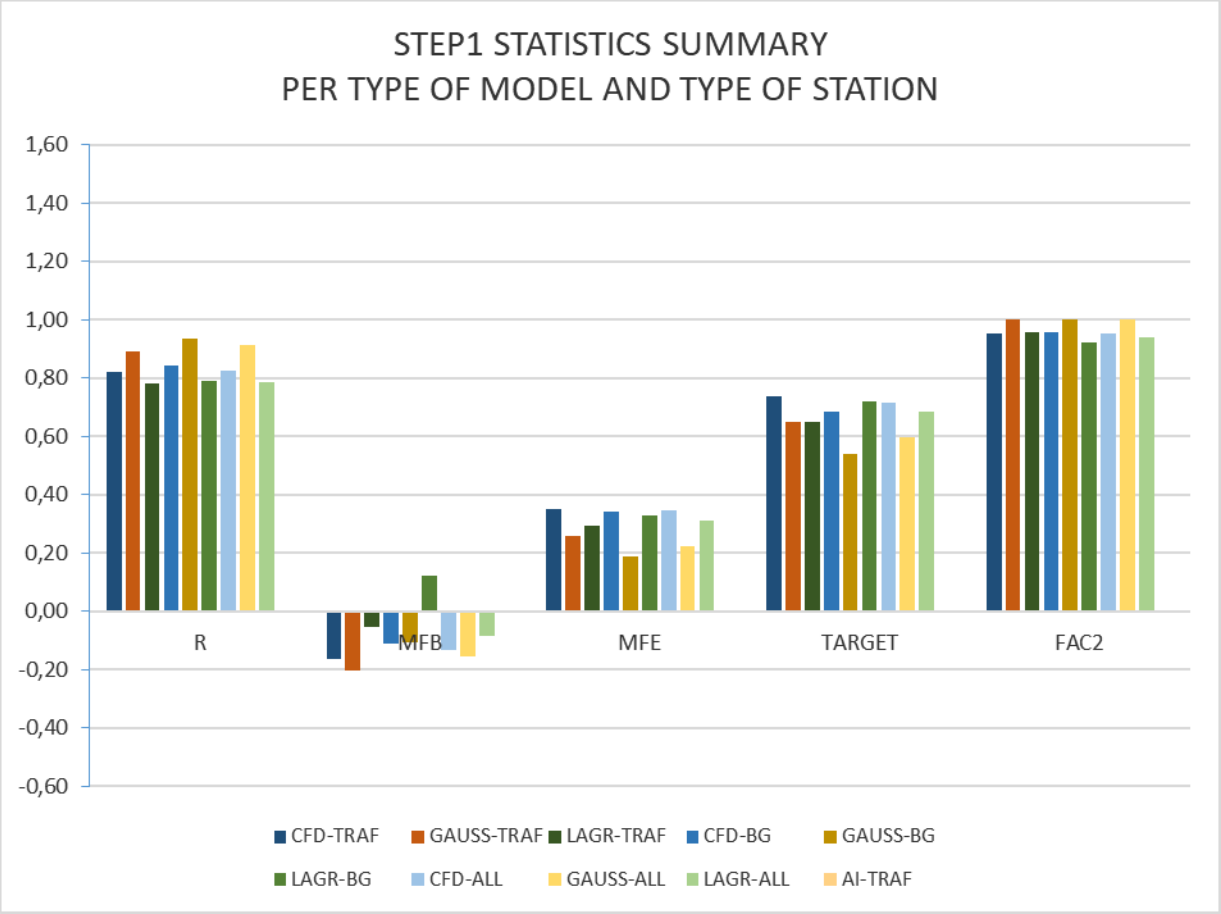
BACKGROUND STATION

CERC-ADMS	CERC-CIEMAT	CIEMAT	VITO-OPENFOAM	VITO-ATMOSTREET	NILU-EPISODE



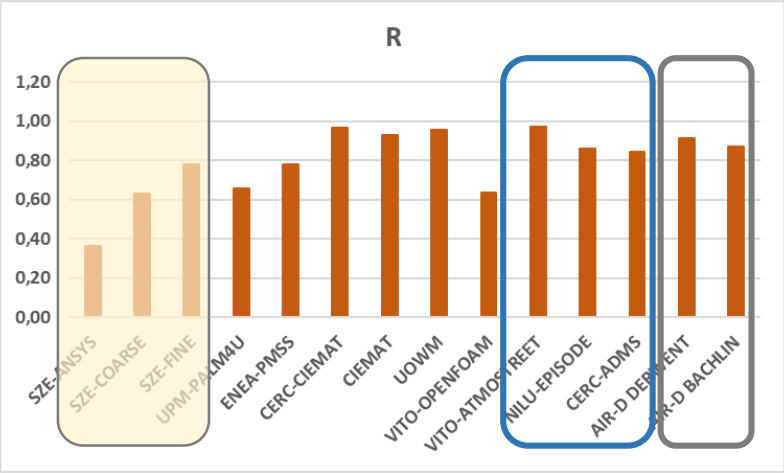
Step 1. Statistics for (May 6th, 2016) time series of NO_2 at AQ stations

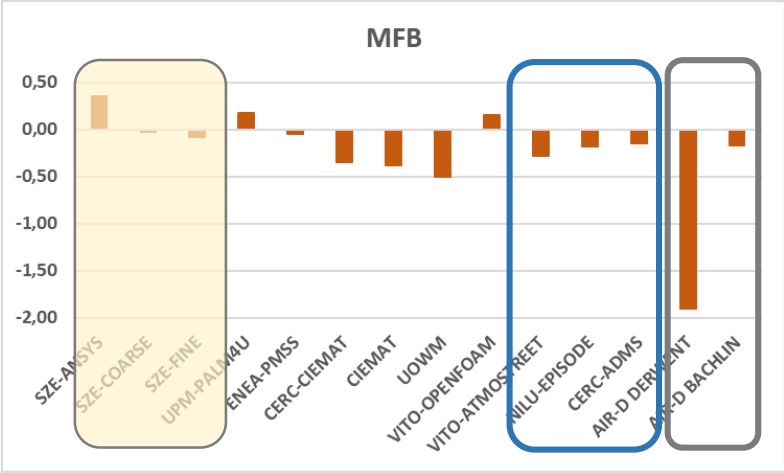
MODEL TYPE	CFD-TRAF	GAUSS-TRAF	LAGR-TRAF	AI-TRAF	CFD-BG	GAUSS-BG	LAGR-BG	AI-BG	CFD-ALL	GAUSS-ALL	LAGR-ALL	AI-ALL
R	0,82	0,89	0,78	0,89	0,84	0,93	0,79		0,83	0,91	0,79	
MFB	-0,16	-0,20	-0,05	-1,03	-0,11	-0,11	0,12		-0,13	-0,15	-0,09	
MFE	0,35	0,26	0,29	0,25	0,34	0,19	0,33		0,35	0,22	0,31	
TARGET	0,74	0,65	0,65	0,68	0,68	0,54	0,72		0,71	0,59	0,68	
FAC2	0,95	1,00	0,96	1,00	0,96	1,00	0,92		0,95	1,00	0,94	

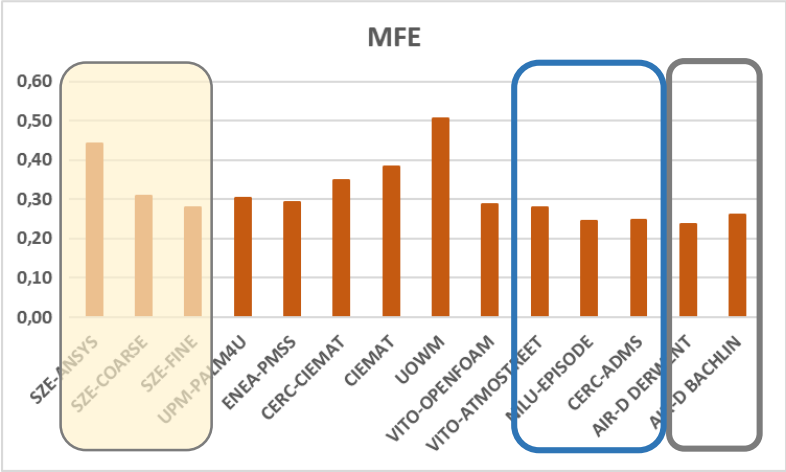


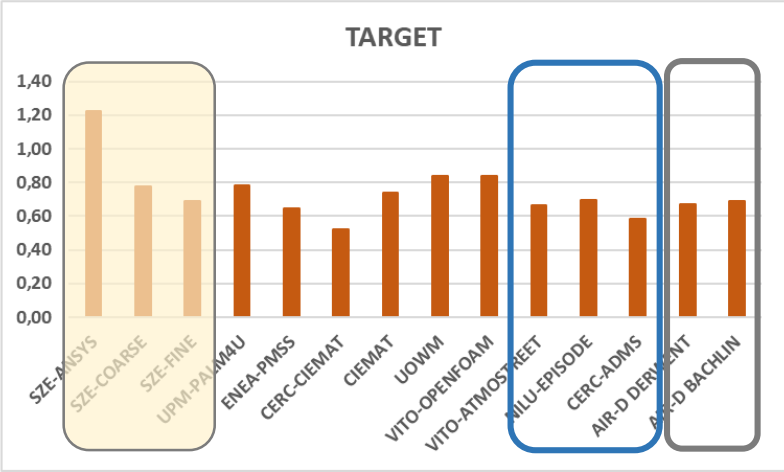
Step 1. Statistics for (May 6th, 2016) time series of NO_2 at AQ stations

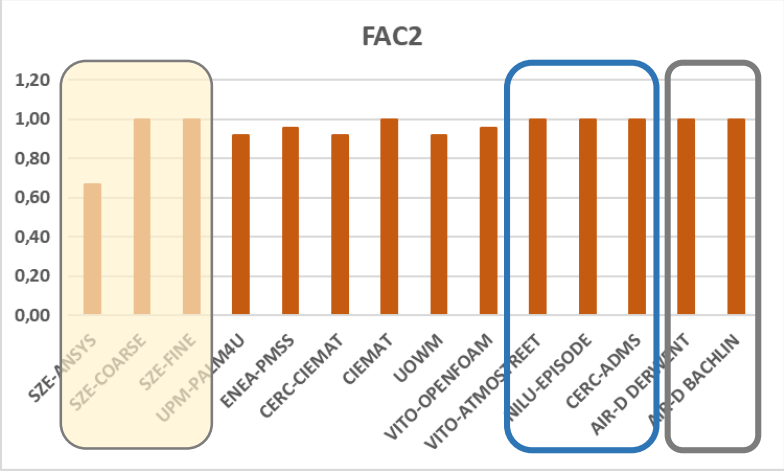
Traffic AQ station





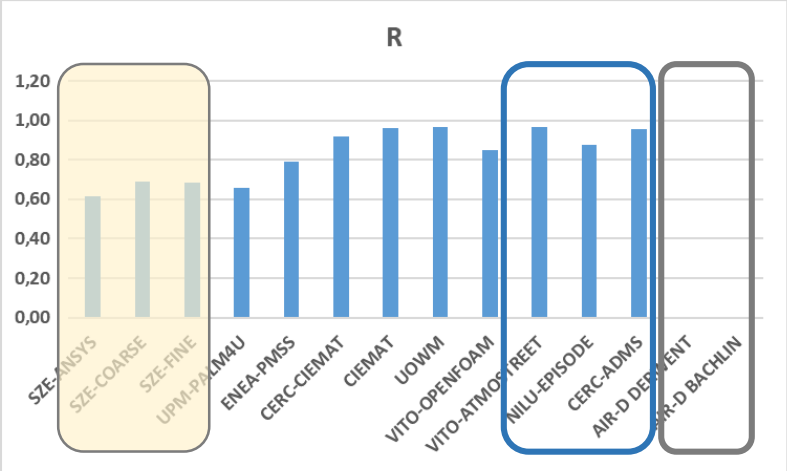


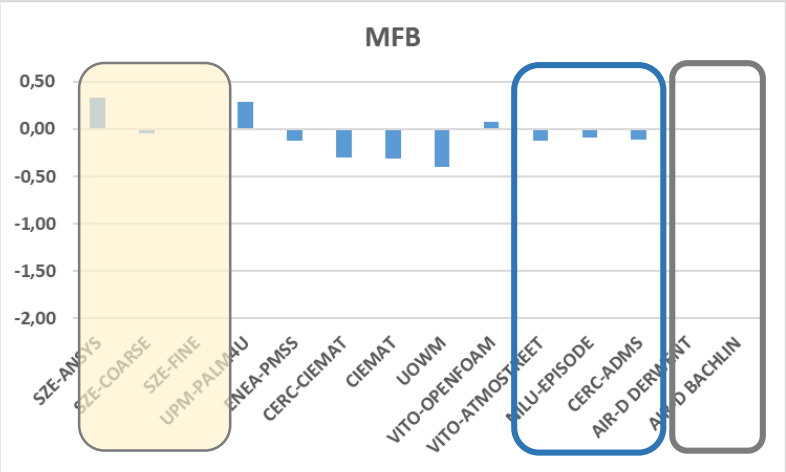


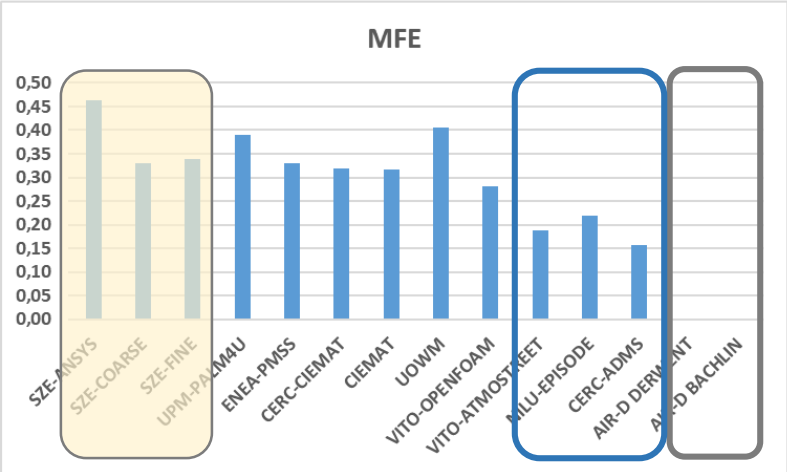


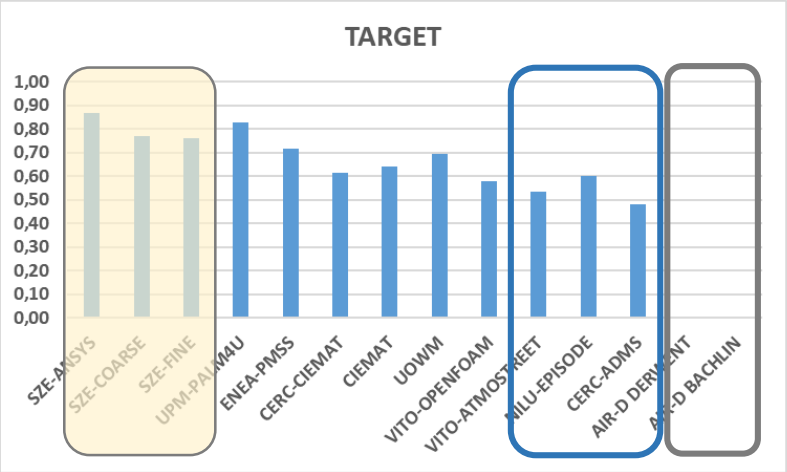
Step 1. Statistics for (May 6th, 2016) time series of NO_2 at AQ stations

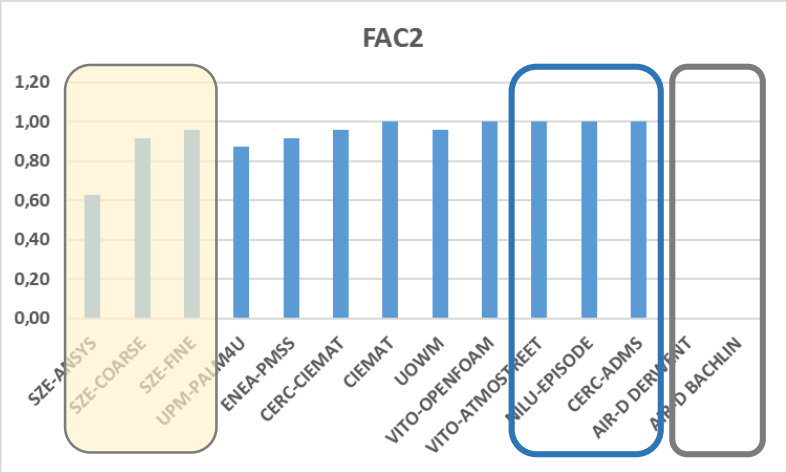
Background AQ station





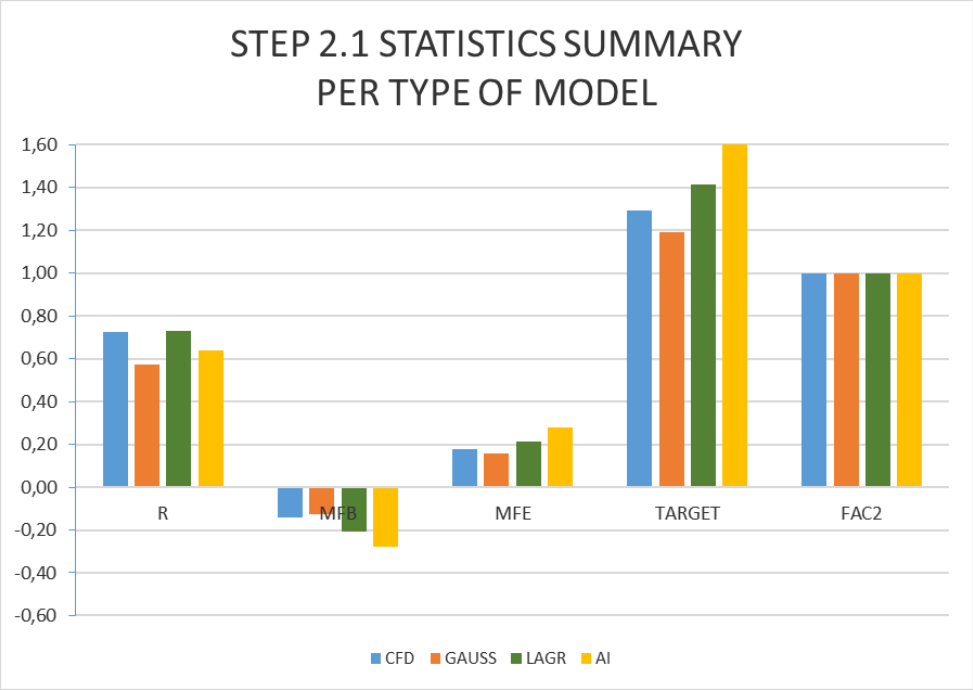


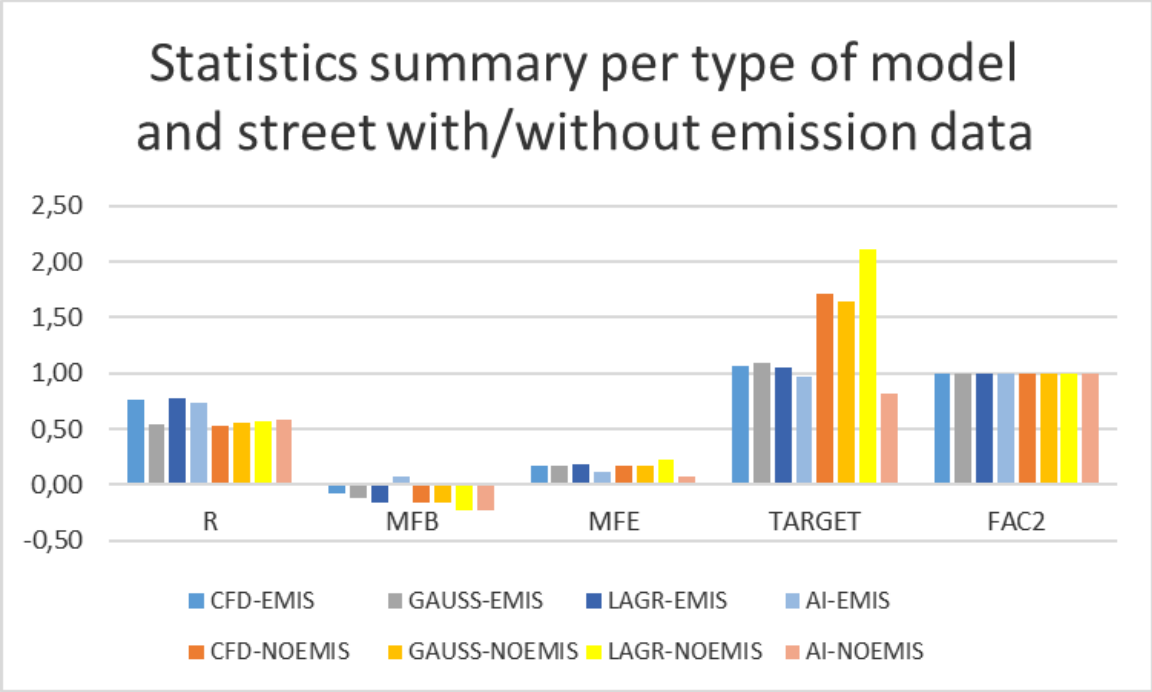




Step 2.1. Statistics for April 30-May 28, 2016. Samplers

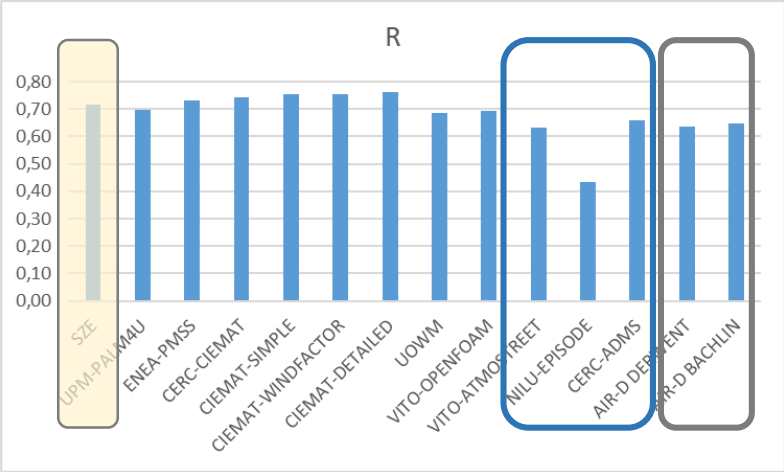
MODEL TYPE	CFD	CFD-EMIS	CFD-NOEMIS	GAUSS	GAUSS-EMIS	GAUSS-NOEMIS	LAGR	LAGR-EMIS	LAGR-NOEM	AI	AI-EMIS	AI-NOEMIS
R	0,73	0,76	0,53	0,57	0,54	0,56	0,73	0,77	0,57	0,64	0,73	0,58
MFB	-0,14	-0,08	-0,16	-0,13	-0,12	-0,16	-0,21	-0,17	-0,23	-0,28	0,07	-0,23
MFE	0,18	0,17	0,17	0,16	0,17	0,17	0,22	0,18	0,23	0,28	0,118	0,07
TARGET	1,29	1,06	1,71	1,19	1,09	1,65	1,42	1,05	2,11	1,83	0,97	0,82
FAC2	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1	1	1

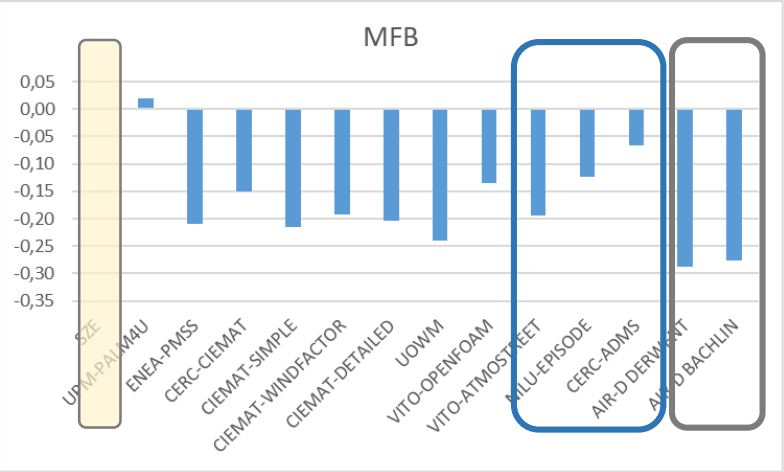


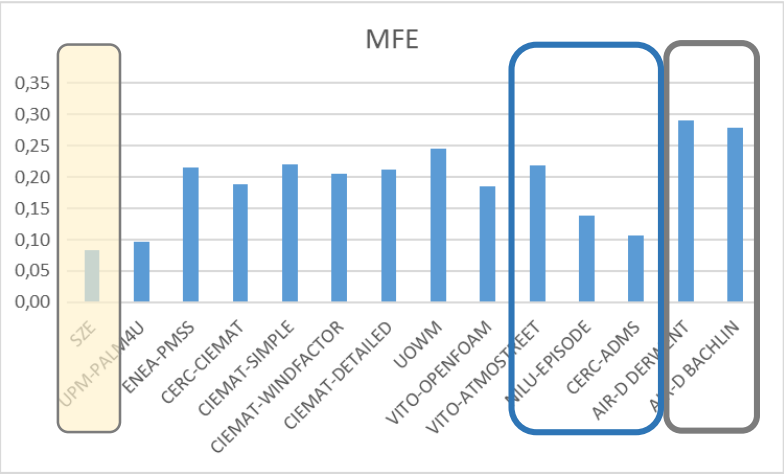


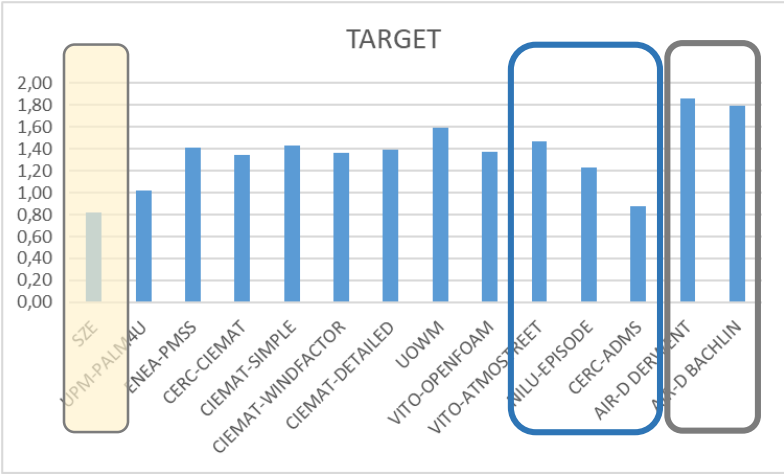
Step 2.1. Statistics for April 30-May 28, 2016. Samplers

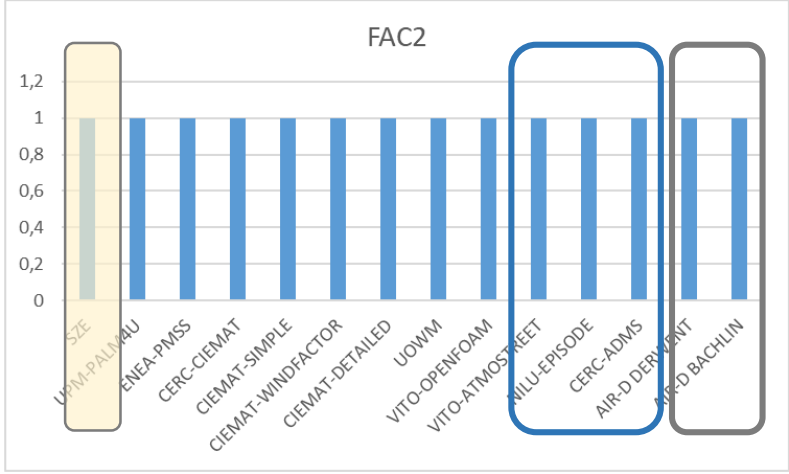
- NO_2 concentration at samplers



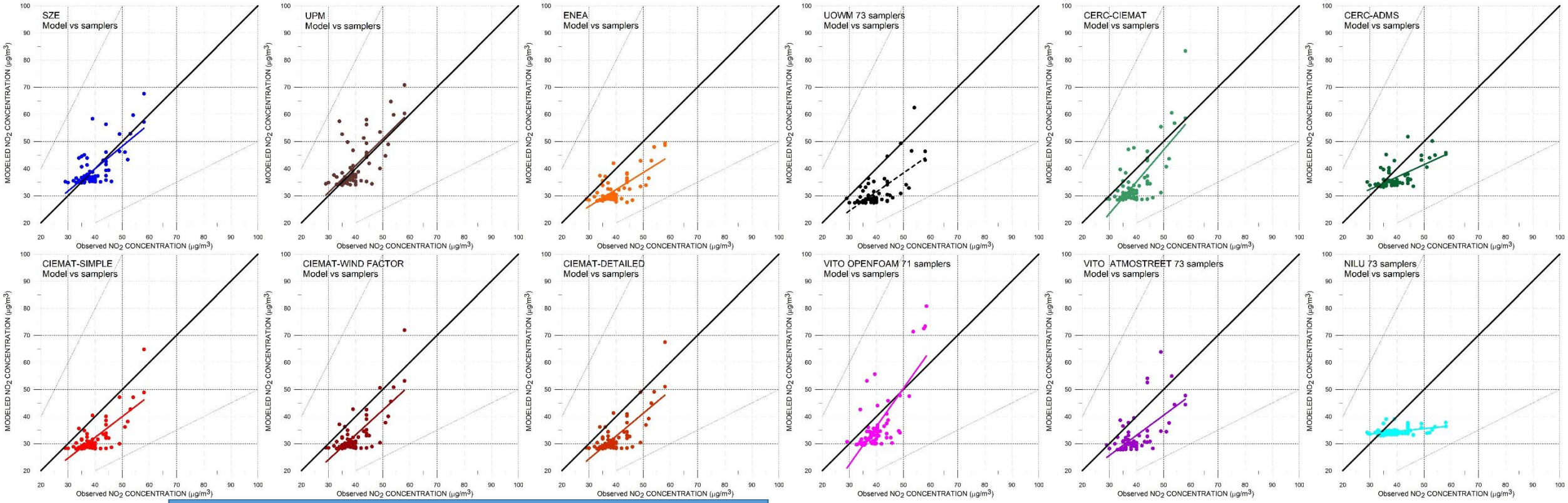


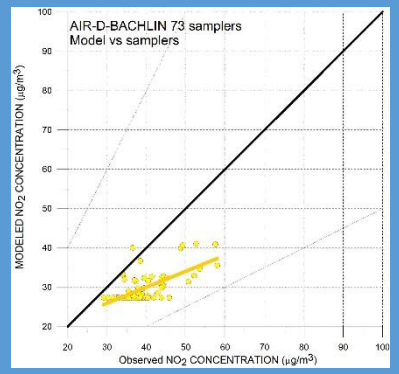


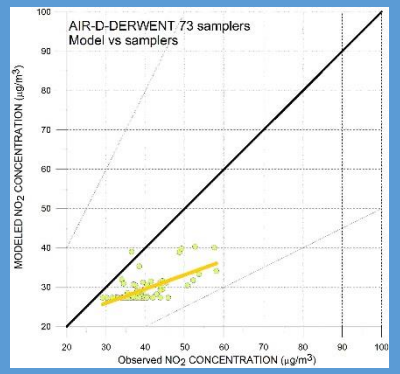




Step 2.1. Scatter-Plots – Concentrations April 30-May 28, 2016. Samplers

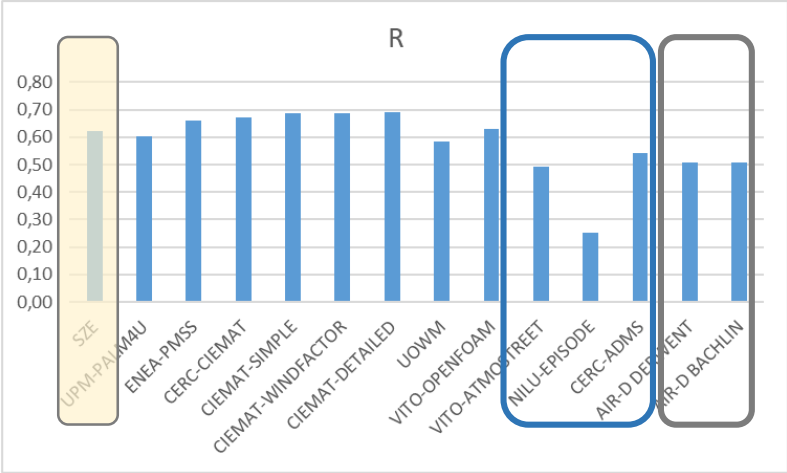


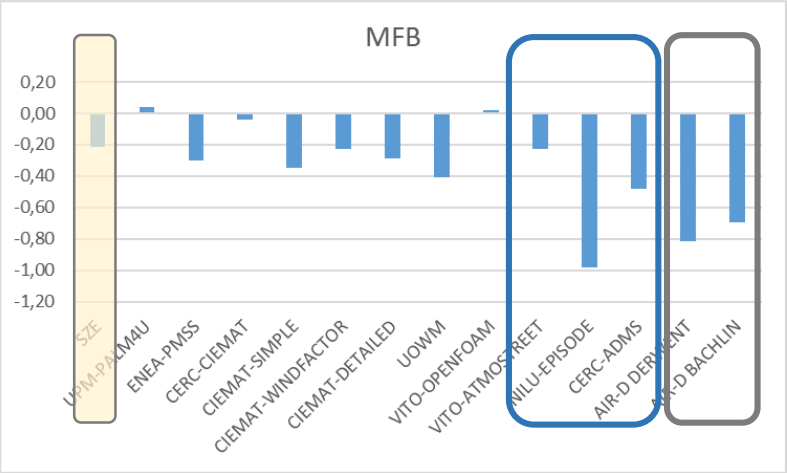


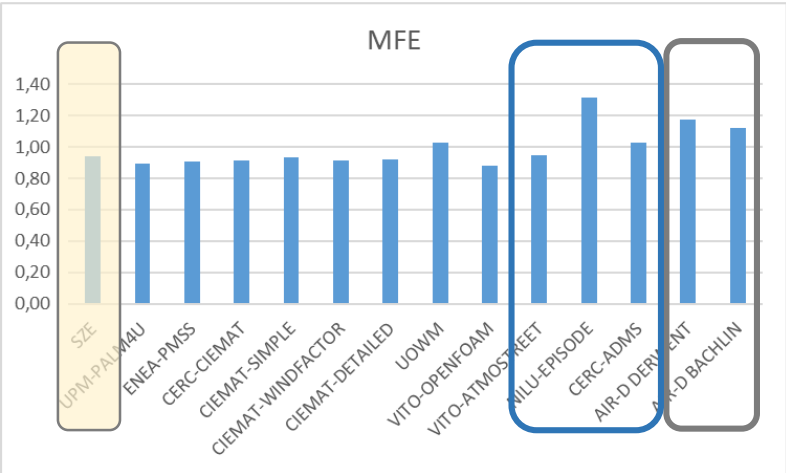


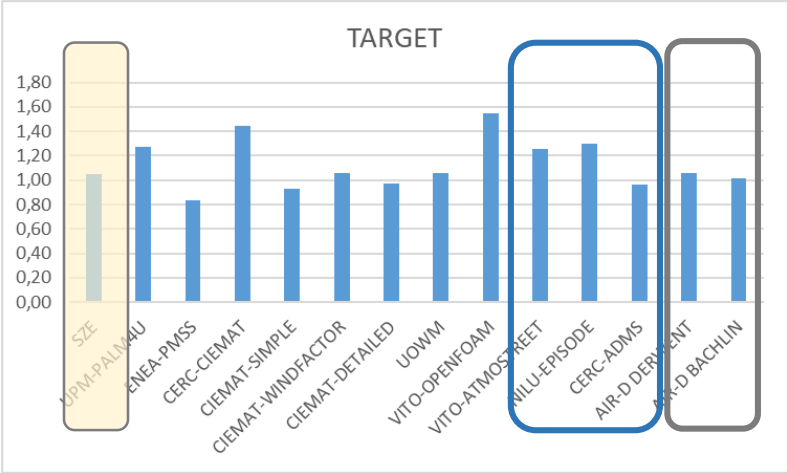
Step 2.1. Statistics for April 30-May 28, 2016. Diff. Conc.Samplers

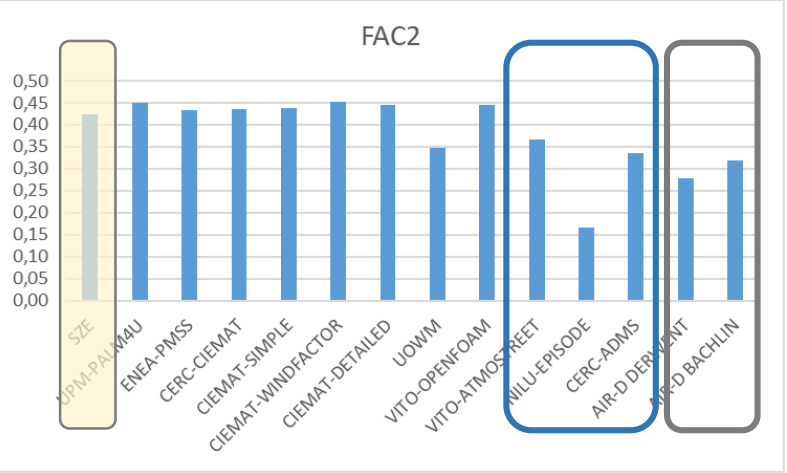
- Difference of NO_2 concentration between pair of samplers









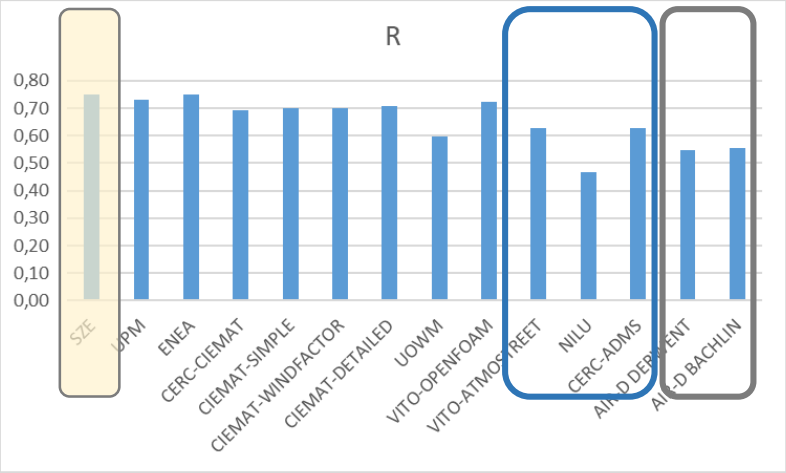


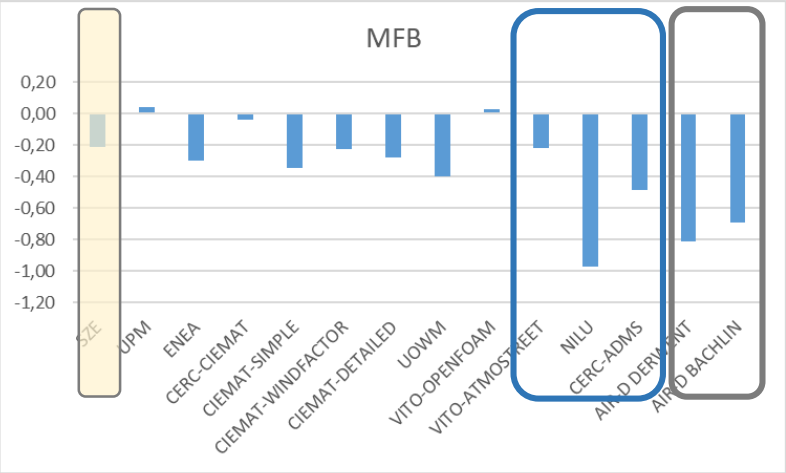
Step 2.1. Statistics – Concentration Gradient

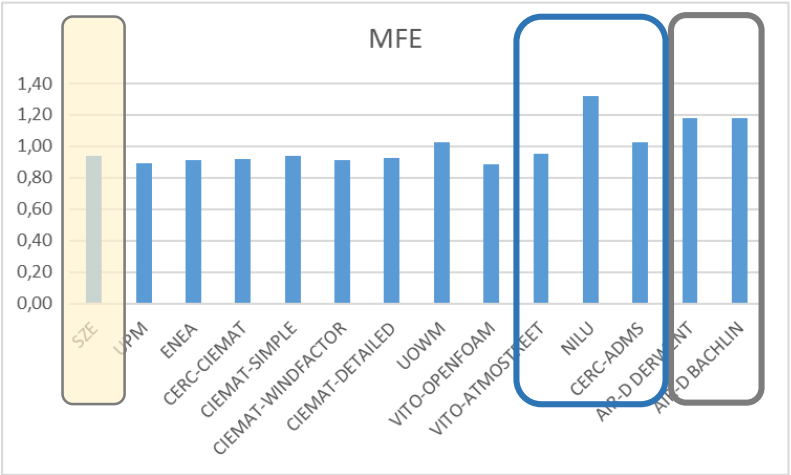
model	Correl	MFB	MFE	TARGET	FAC2
SZE	0,75	-0,21	0,94	0,81	0,41
UPM	0,73	0,04	0,90	1,02	0,44
ENEA	0,75	-0,30	0,91	0,68	0,42
CERC-CIEMAT	0,69	-0,04	0,92	1,57	0,43
CIEMAT-SIMPLE	0,70	-0,34	0,94	0,99	0,43
CIEMAT-WINDFACTOR	0,70	-0,23	0,91	1,18	0,44
CIEMAT-DETAILED	0,71	-0,28	0,93	1,04	0,43
UOWM	0,60	-0,40	1,03	1,13	0,34
VITO-OPENFOAM	0,72	0,03	0,88	1,51	0,44
VITO-ATMOSTREET	0,63	-0,22	0,95	0,95	0,36
NILU	0,47	-0,98	1,32	1,07	0,16
CERC-ADMS	0,63	-0,48	1,03	0,83	0,33
AIR-D DERWENT	0,55	-0,81	1,18	0,91	0,276
AIR-D BACHLIN	0,56	-0,69	1,18	0,89	0,316
AVERAGE	0,66	-0,35	1,00	1,04	0,37

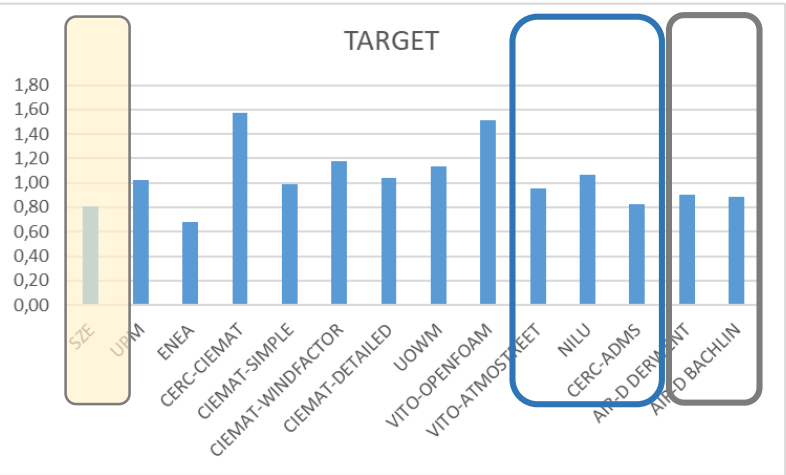
Step 2.1. Statistics for April 30-May 28, 2016. Conc. Grad. Samplers

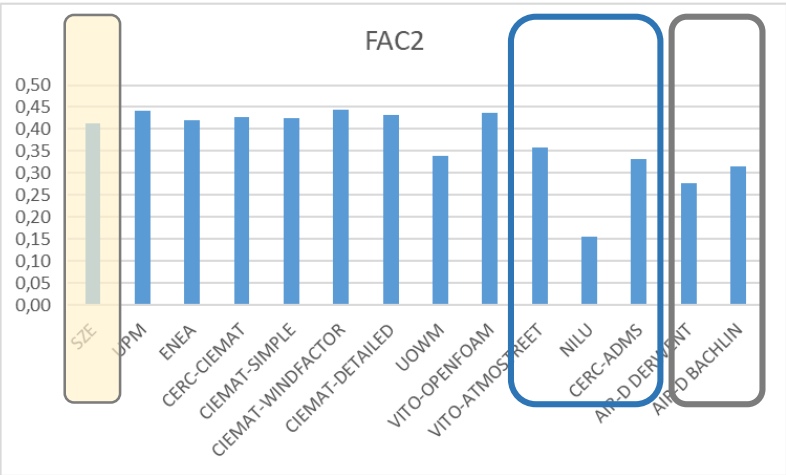
- Gradient of NO_2 concentration between pair of samplers



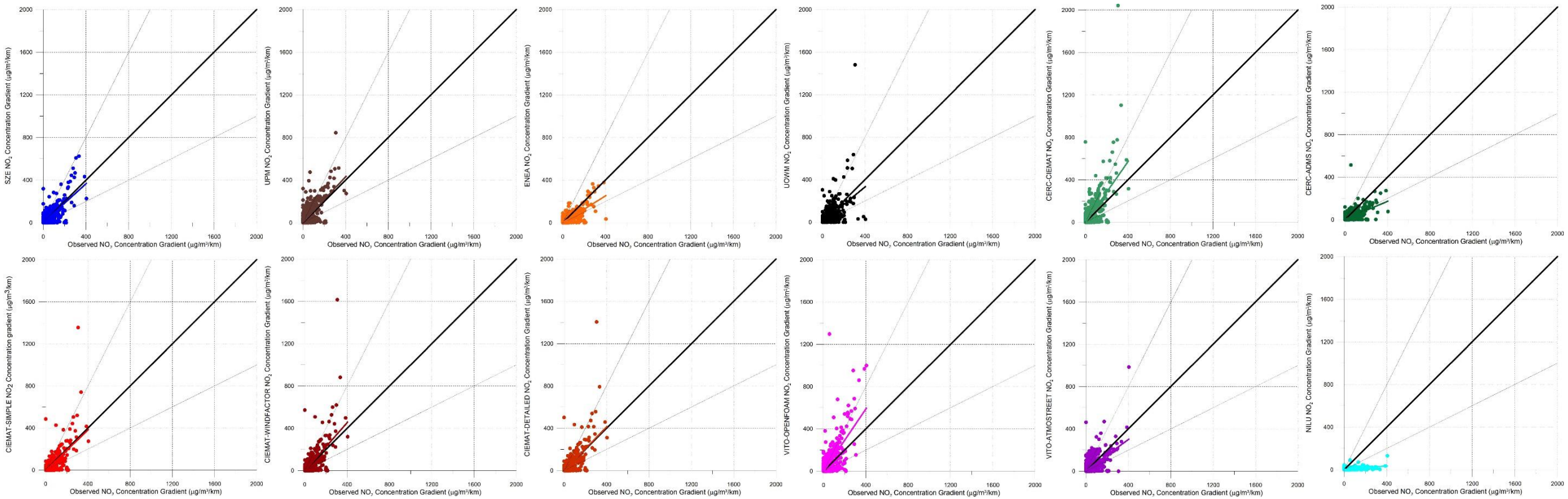


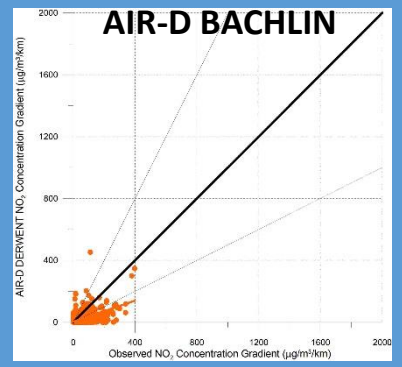


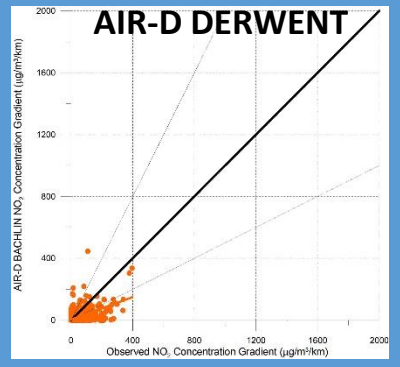




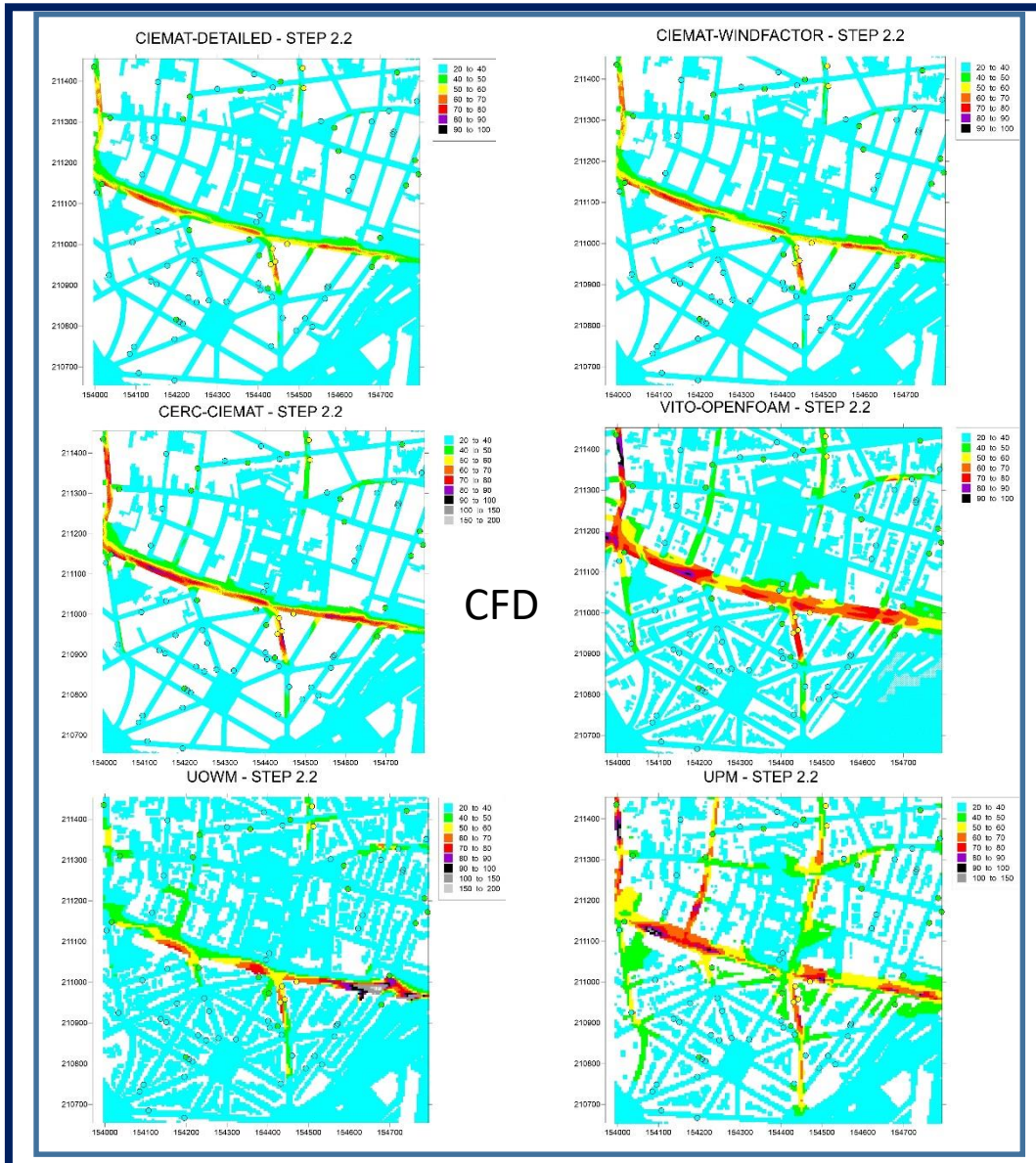
Step 2.1. Scatter-Plots – Conc. Grad. April 30-May 28, 2016. Samplers



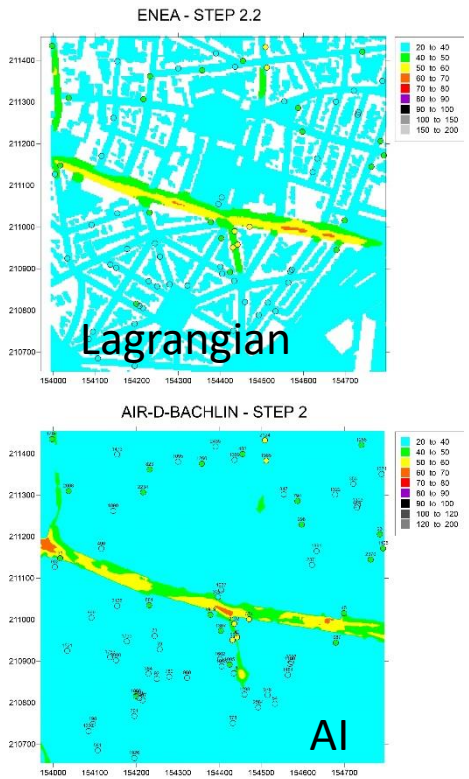




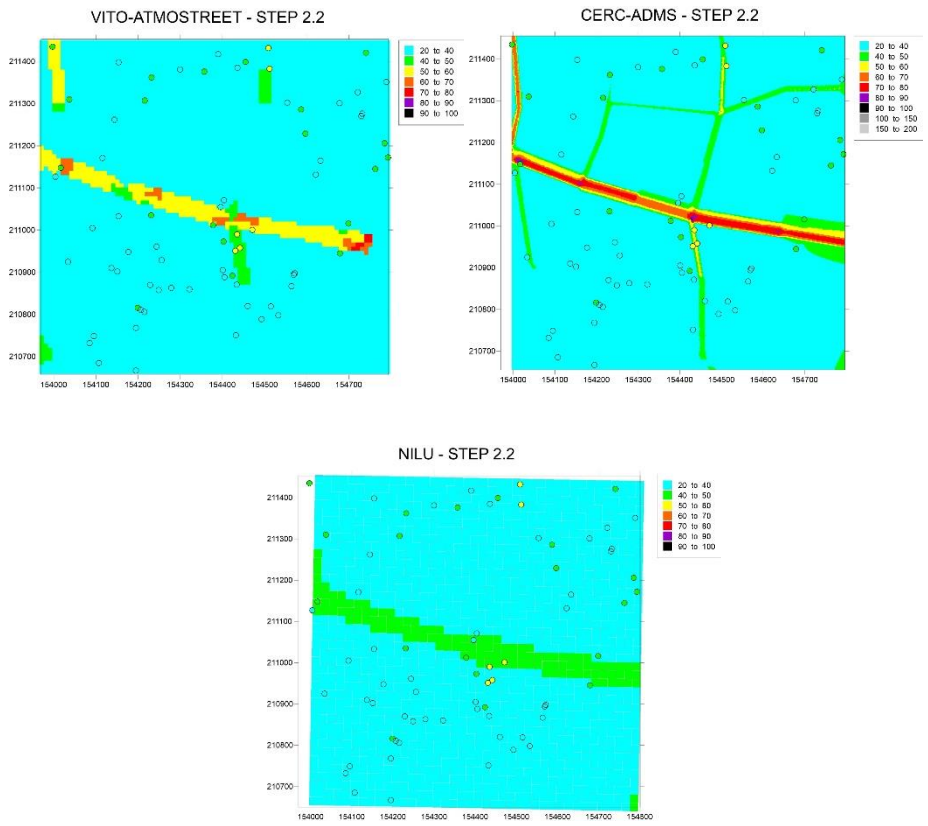
2016 “monthly” NO_2 concentration maps



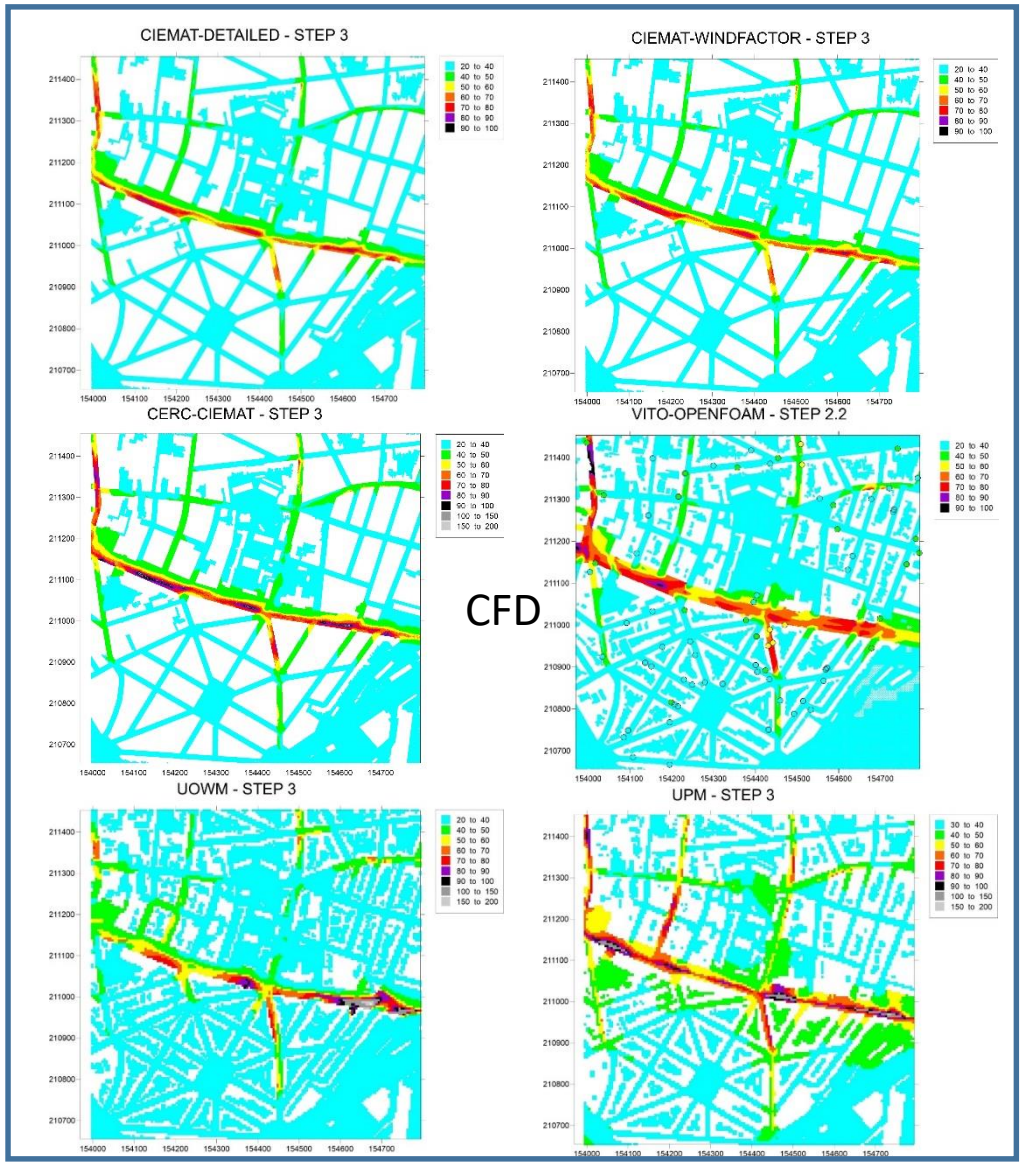
NO- Gaussian



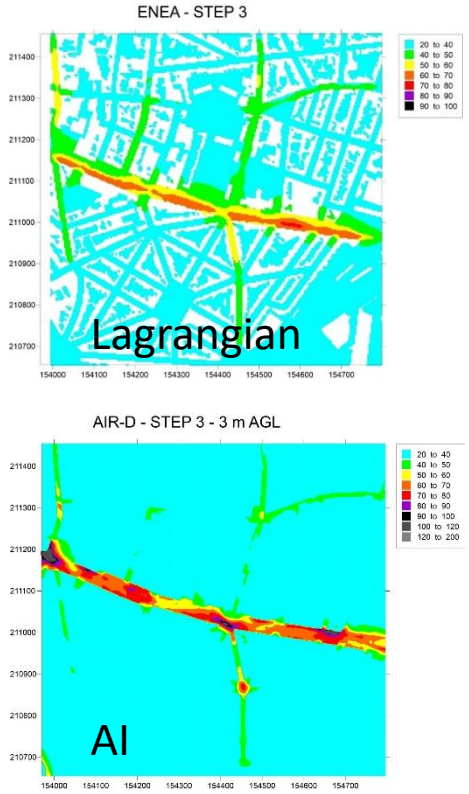
Gaussian



2016 annual NO_2 concentration maps



NO- Gaussian



Gaussian