Table of Contents

Summary of correlations of sensor kits and sensor modules

Sensorkits: RIVM_807D3A9369F4 RIVM_30aea4ec7cf8 RIVM_30aea4505888 NL10131
Report generated on: Tue 19 May 15:00:20 CEST 2020

R-square and statistical summary

Measurement PM10 correlation key values

Correlation 1 - **PM10** - kit RIVM_807D3A9369F4 sensor type **PMSX003** with kit RIVM_30aea4ec7cf8 sensor type **SPS30**:

 nr samples 3514, min= 1.00, max=145.00
 avg=12.15, std dev=10.13
 R-squared:
 0.6725

 Best fit polynomial coefficients:
  [1.827e+00, 4.827e-01]

Correlation 2 - **PM10** - kit RIVM_807D3A9369F4 sensor type **PMSX003** with kit RIVM_30aea4505888 sensor type **SDS011**:

 nr samples 1696, min= 1.60, max=143.90
 avg=14.08, std dev=14.21
 R-squared:
 0.6959

 Best fit polynomial coefficients:
  [4.337e-01, 6.876e-01]

Correlation 3 - **PM10** - kit RIVM_807D3A9369F4 sensor type **PMSX003** with kit NL10131 sensor type **BAM1020**:

 nr samples 3300, min=-5.81, max=149.07
 avg=29.44, std dev=20.53
 R-squared:
 0.1111

 Best fit polynomial coefficients:
  [2.093e+01, 3.912e-01]

Correlation 4 - **PM10** - kit RIVM_30aea4ec7cf8 sensor type **SPS30** with kit RIVM_30aea4505888 sensor type **SDS011**:

 nr samples 2091, min= 1.60, max=143.90
 avg=14.78, std dev=15.60
 R-squared:
 0.8099

 Best fit polynomial coefficients:
  [7.368e-01, 1.198e+00]

Correlation 5 - **PM10** - kit RIVM_30aea4ec7cf8 sensor type **SPS30** with kit NL10131 sensor type **BAM1020**:

 nr samples 4067, min=-5.81, max=149.07
 avg=29.57, std dev=20.56
 R-squared:
 0.0911

 Best fit polynomial coefficients:
  [2.241e+01, 5.665e-01]

Correlation 6 - **PM10** - kit RIVM_30aea4505888 sensor type **SDS011** with kit NL10131 sensor type **BAM1020**:

 nr samples 1563, min=-5.81, max=149.07
 avg=24.21, std dev=18.34
 R-squared:
 0.1785

 Best fit polynomial coefficients:
  [1.703e+01, 4.753e-01]

Measurement PM2.5 correlation key values

Correlation 7 - **PM2.5** - kit RIVM_807D3A9369F4 sensor type **PMSX003** with kit RIVM_30aea4ec7cf8 sensor type **SPS30**:

 nr samples 3514, min= 1.00, max=143.10
 avg=11.77, std dev= 9.99
 R-squared:
 0.9713

Best fit polynomial coefficients:
  [5.877e-01, 6.233e-01]

Correlation 8 - **PM2.5** - kit RIVM_807D3A9369F4 sensor type **PMSX003** with kit RIVM_30aea4505888 sensor type **SDS011**:

nr samples 1696, min= 0.90, max=115.00
avg=10.23, std dev=11.52
R-squared:
0.9219

Best fit polynomial coefficients:
 [-9.553e-01, 6.643e-01]

Correlation 9 - **PM2.5** - kit RIVM_807D3A9369F4 sensor type **PMSX003** with kit NL10131 sensor type **BAM1020**:

nr samples 3534, min= 1.61, max=86.59
avg=12.69, std dev= 8.04
R-squared:
0.6335

Best fit polynomial coefficients:
 [5.425e+00, 4.044e-01]

Correlation 10 - **PM2.5** - kit RIVM_30aea4ec7cf8 sensor type **SPS30** with kit RIVM_30aea4505888 sensor type **SDS011**:

nr samples 2091, min= 0.90, max=115.00
avg=10.88, std dev=13.16
R-squared:
0.9208

Best fit polynomial coefficients:
 [-1.659e+00, 1.102e+00]

Correlation 11 - **PM2.5** - kit RIVM_30aea4ec7cf8 sensor type **SPS30** with kit NL10131 sensor type **BAM1020**:

nr samples 4341, min= 1.61, max=86.59
avg=12.84, std dev= 8.25
R-squared:
0.6418

Best fit polynomial coefficients:
 [5.303e+00, 6.245e-01]

Correlation 12 - **PM2.5** - kit RIVM_30aea4505888 sensor type **SDS011** with kit NL10131 sensor type **BAM1020**:

nr samples 1712, min= 1.61, max=86.59
avg=11.55, std dev= 8.77
R-squared:
0.5648

Best fit polynomial coefficients:
 [6.080e+00, 4.978e-01]

Sensor pmsx003@RIVM_807D3A9369F4 with sensor sps30@RIVM_30aea4ec7cf8

correlation report for pm10 () measurements

Correlation details of project RIVM sensor kit ID 807D3A9369F4 with project RIVM sensor kit ID 30aea4ec7cf8
Date of correlation report: Tue 19 May 15:00:17 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): pmsx003, sps30
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1425 (avg+2*stddev)
Database table RIVM_807D3A9369F4 sensor (column) pm10: 3581 db records, deleted 4 NaN records.
Auto interval samples is (re)set to 1259 (avg+2*stddev)
Database table RIVM_30aea4ec7cf8 sensor (column) pm10: 4398 db records, deleted 46 NaN records.
Collected 3514 values in sample time frame (20m/59s) for the graph. Skipped 67 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 20m:59s.

Data from table/sheet RIVM_30aea4ec7cf8, sensor (column) pm10:

number 3514, min= 1.00, max=145.00

avg=12.15, std dev=10.13

R-squared (R^2) with RIVM_30aea4ec7cf8/pm10: 0.6725

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_807D3A9369F4/pm10 (sps30)-> best fit coefficients:

1.827e+00, 4.827e-01

Statistical summary linear regression for RIVM_807D3A9369F4/pm10 with ['RIVM_30aea4ec7cf8/pm10']:

OLS Regression Results

Dep. Variable:	RIVM_807D3A9369F4/pm10	R-squared:	0.673
Model:	OLS	Adj. R-squared:	0.672
Method:	Least Squares	F-statistic:	7213.
Date:	Tue, 19 May 2020	Prob (F-statistic):	0.00
Time:	15:00:18	Log-Likelihood:	-13022.
No. Observations:	3514	AIC:	2.605e+04
Df Residuals:	3512	BIC:	2.606e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
RIVM_30aea4ec7cf8/pm10	4.4588	0.259	17.182	0.000	3.950	4.968

Omnibus:	4455.502	Durbin-Watson:	1.726
Prob(Omnibus):	0.000	Jarque-Bera (JB):	1020490.639
Skew:	6.773	Prob(JB):	0.00
Kurtosis:	85.379	Cond. No.	24.8
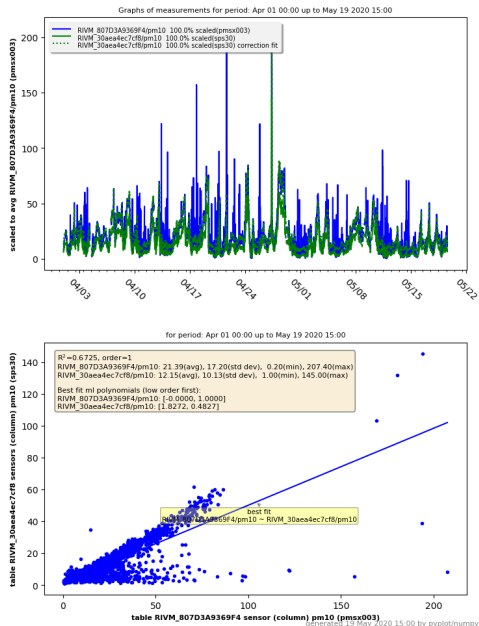
Sensor pmsx003@RIVM_807D3A9369F4 with sensor sds011@RIVM_30aea4505888

correlation report for pm10 () measurements

Correlation details of project RIVM sensor kit ID 807D3A9369F4 with project RIVM sensor kit ID 30aea4505888
Date of correlation report: Tue 19 May 15:00:21 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): pmsx003, sds011
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1425 (avg+2*stddev)
Database table RIVM_807D3A9369F4 sensor (column) pm10: 3581 db records, deleted 4 NaN records.
Auto interval samples is (re)set to 1445 (avg+2*stddev)
Database table RIVM_30aea4505888 sensor (column) pm10: 1758 db records, deleted 0 NaN records.
Collected 1696 values in sample time frame (24m/5s) for the graph. Skipped 1885 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 24m:5s.

Data from table/sheet RIVM_30aea4505888, sensor (column) pm10:

number 1696, min= 1.60, max=143.90

avg=14.08, std dev=14.21

R-squared (R^2) with RIVM_30aea4505888/pm10: 0.6959

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_807D3A9369F4/pm10 (sds011)-> best fit coefficients:

4.337e-01, 6.876e-01

Statistical summary linear regression for RIVM_807D3A9369F4/pm10 with ['RIVM_30aea4505888/pm10']:

OLS Regression Results

Dep. Variable:	RIVM_807D3A9369F4/pm10	R-squared:	0.696
Model:	OLS	Adj. R-squared:	0.696
Method:	Least Squares	F-statistic:	3877.
Date:	Tue, 19 May 2020	Prob (F-statistic):	0.00
Time:	15:00:21	Log-Likelihood:	-6225.5
No. Observations:	1696	AIC:	1.246e+04
Df Residuals:	1694	BIC:	1.247e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
RIVM_30aea4505888/pm10	5.5935	0.325	17.207	0.000	4.956	6.231

Omnibus:	543.423	Durbin-Watson:	1.399
Prob(Omnibus):	0.000	Jarque-Bera (JB):	20133.363
Skew:	0.805	Prob(JB):	0.00
Kurtosis:	19.802	Cond. No.	28.2
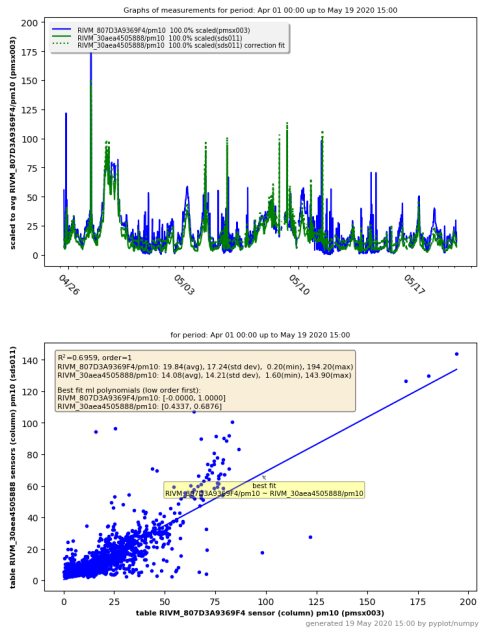
Sensor pmsx003@RIVM_807D3A9369F4 with sensor bam1020@NL10131

correlation report for pm10 () measurements

Correlation details of project RIVM sensor kit ID 807D3A9369F4 with project NL10131 sensor kit ID NL10131
Date of correlation report: Tue 19 May 15:00:24 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): pmsx003, bam1020
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1425 (avg+2*stddev)
Database table RIVM_807D3A9369F4 sensor (column) pm10: 3581 db records, deleted 4 NaN records.
Auto interval samples is (re)set to 3600 (avg+2*stddev)
Database table NL10131 sensor (column) pm_10: 1079 db records, deleted 0 NaN records.
Collected 3300 values in sample time frame (60m/0s) for the graph. Skipped 281 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 60m:0s.

Data from table/sheet NL10131, sensor (column) pm_10:

number 3300, min=-5.81, max=149.07

avg=29.44, std dev=20.53

R-squared (R^2) with NL10131/pm_10: 0.1111

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_807D3A9369F4/pm10 (bam1020)-> best fit coefficients:

2.093e+01, 3.912e-01

Statistical summary linear regression for RIVM_807D3A9369F4/pm10 with ['NL10131/pm_10']:

OLS Regression Results

Dep. Variable:	RIVM_807D3A9369F4/pm10	R-squared:	0.111
Model:	OLS	Adj. R-squared:	0.111
Method:	Least Squares	F-statistic:	412.2
Date:	Tue, 19 May 2020	Prob (F-statistic):	1.93e-86
Time:	15:00:25	Log-Likelihood:	-13932.
No. Observations:	3300	AIC:	2.787e+04
Df Residuals:	3298	BIC:	2.788e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
NL10131/pm_10	13.3984	0.502	26.687	0.000	12.414	14.383

Omnibus:	1875.226	Durbin-Watson:	0.748
Prob(Omnibus):	0.000	Jarque-Bera (JB):	33797.397
Skew:	2.321	Prob(JB):	0.00
Kurtosis:	17.975	Cond. No.	62.8
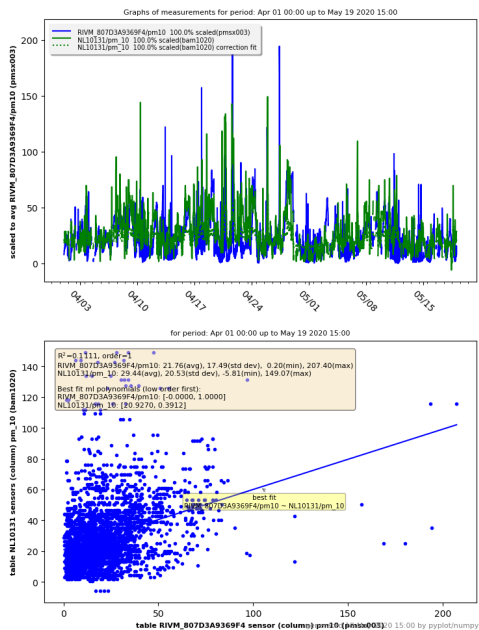
Sensor sps30@RIVM_30aea4ec7cf8 with sensor sds011@RIVM_30aea4505888

correlation report for pm10 () measurements

Correlation details of project RIVM sensor kit ID 30aea4ec7cf8 with project RIVM sensor kit ID 30aea4505888
Date of correlation report: Tue 19 May 15:00:27 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): sds011, sps30
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1259 (avg+2*stddev)
Database table RIVM_30aea4ec7cf8 sensor (column) pm10: 4398 db records, deleted 46 NaN records.
Auto interval samples is (re)set to 1445 (avg+2*stddev)
Database table RIVM_30aea4505888 sensor (column) pm10: 1758 db records, deleted 0 NaN records.
Collected 2091 values in sample time frame (24m/5s) for the graph. Skipped 2307 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 24m:5s.

Data from table/sheet RIVM_30aea4505888, sensor (column) pm10:

number 2091, min= 1.60, max=143.90

avg=14.78, std dev=15.60

R-squared (R^2) with RIVM_30aea4505888/pm10: 0.8099

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_30aea4ec7cf8/pm10 (sds011)-> best fit coefficients:

7.368e-01, 1.198e+00

Statistical summary linear regression for RIVM_30aea4ec7cf8/pm10 with ['RIVM_30aea4505888/pm10']:

OLS Regression Results

Dep. Variable:	RIVM_30aea4ec7cf8/pm10	R-squared:	0.810
Model:	OLS	Adj. R-squared:	0.810
Method:	Least Squares	F-statistic:	8903.
Date:	Tue, 19 May 2020	Prob (F-statistic):	0.00
Time:	15:00:28	Log-Likelihood:	-6377.2
No. Observations:	2091	AIC:	1.276e+04
Df Residuals:	2089	BIC:	1.277e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
RIVM_30aea4505888/pm10	1.7293	0.154	11.233	0.000	1.427	2.031

Omnibus:	1057.972	Durbin-Watson:	0.564
Prob(Omnibus):	0.000	Jarque-Bera (JB):	135167.970
Skew:	-1.369	Prob(JB):	0.00
Kurtosis:	42.293	Cond. No.	29.6
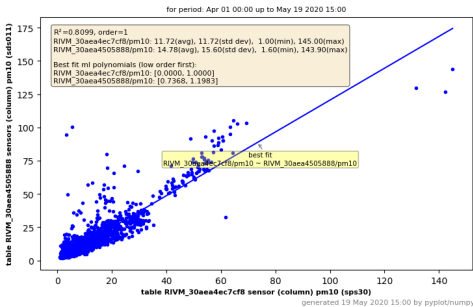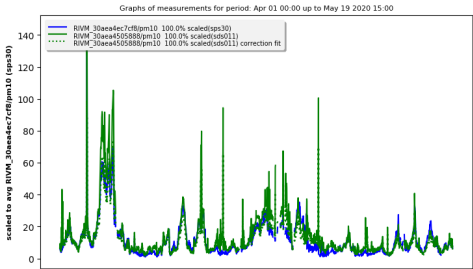
Sensor sps30@RIVM_30aea4ec7cf8 with sensor bam1020@NL10131

correlation report for pm10 () measurements

Correlation details of project RIVM sensor kit ID 30aea4ec7cf8 with project NL10131 sensor kit ID NL10131
Date of correlation report: Tue 19 May 15:00:30 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): sps30, bam1020
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1259 (avg+2*stddev)
Database table RIVM_30aea4ec7cf8 sensor (column) pm10: 4398 db records, deleted 46 NaN records.
Auto interval samples is (re)set to 3600 (avg+2*stddev)
Database table NL10131 sensor (column) pm_10: 1079 db records, deleted 0 NaN records.
Collected 4067 values in sample time frame (60m/0s) for the graph. Skipped 331 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 60m:0s.

Data from table/sheet NL10131, sensor (column) pm_10:

number 4067, min=-5.81, max=149.07

avg=29.57, std dev=20.56

R-squared (R^2) with NL10131/pm_10: 0.0911

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_30aea4ec7cf8/pm10 (bam1020)-> best fit coefficients:

2.241e+01, 5.665e-01

Statistical summary linear regression for RIVM_30aea4ec7cf8/pm10 with ['NL10131/pm_10']:

OLS Regression Results

Dep. Variable:	RIVM_30aea4ec7cf8/pm10	R-squared:	0.091
Model:	OLS	Adj. R-squared:	0.091
Method:	Least Squares	F-statistic:	407.5
Date:	Tue, 19 May 2020	Prob (F-statistic):	1.99e-86
Time:	15:00:31	Log-Likelihood:	-15312.
No. Observations:	4067	AIC:	3.063e+04
Df Residuals:	4065	BIC:	3.064e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
NL10131/pm_10	7.8902	0.287	27.498	0.000	7.328	8.453

Omnibus:	2551.436	Durbin-Watson:	0.109
Prob(Omnibus):	0.000	Jarque-Bera (JB):	63203.768
Skew:	2.564	Prob(JB):	0.00
Kurtosis:	21.619	Cond. No.	63.1
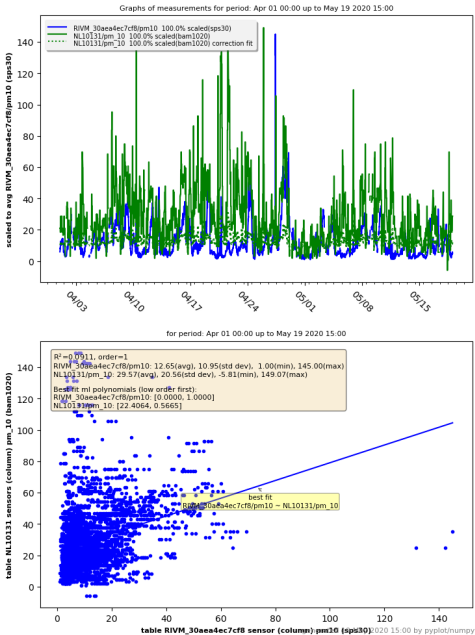
Sensor sds011@RIVM_30aea4505888 with sensor bam1020@NL10131

correlation report for pm10 () measurements

Correlation details of project RIVM sensor kit ID 30aea4505888 with project NL10131 sensor kit ID NL10131
Date of correlation report: Tue 19 May 15:00:34 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): sds011, bam1020
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1445 (avg+2*stddev)
Database table RIVM_30aea4505888 sensor (column) pm10: 1758 db records, deleted 0 NaN records.
Auto interval samples is (re)set to 3600 (avg+2*stddev)
Database table NL10131 sensor (column) pm_10: 1079 db records, deleted 0 NaN records.
Collected 1563 values in sample time frame (60m/0s) for the graph. Skipped 195 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 60m:0s.

Data from table/sheet NL10131, sensor (column) pm_10:

number 1563, min=-5.81, max=149.07

avg=24.21, std dev=18.34

R-squared (R^2) with NL10131/pm_10: 0.1785

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_30aea4505888/pm10 (bam1020)-> best fit coefficients:

1.703e+01, 4.753e-01

Statistical summary linear regression for RIVM_30aea4505888/pm10 with ['NL10131/pm_10']:

OLS Regression Results

Dep. Variable:	RIVM_30aea4505888/pm10	R-squared:	0.178
Model:	OLS	Adj. R-squared:	0.178
Method:	Least Squares	F-statistic:	339.1
Date:	Tue, 19 May 2020	Prob (F-statistic):	1.11e-68
Time:	15:00:34	Log-Likelihood:	-6426.5
No. Observations:	1563	AIC:	1.286e+04
Df Residuals:	1561	BIC:	1.287e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
NL10131/pm_10	6.0197	0.619	9.722	0.000	4.805	7.234

Omnibus:	1019.584	Durbin-Watson:	0.386
Prob(Omnibus):	0.000	Jarque-Bera (JB):	15454.602
Skew:	2.835	Prob(JB):	0.00
Kurtosis:	17.323	Cond. No.	50.3
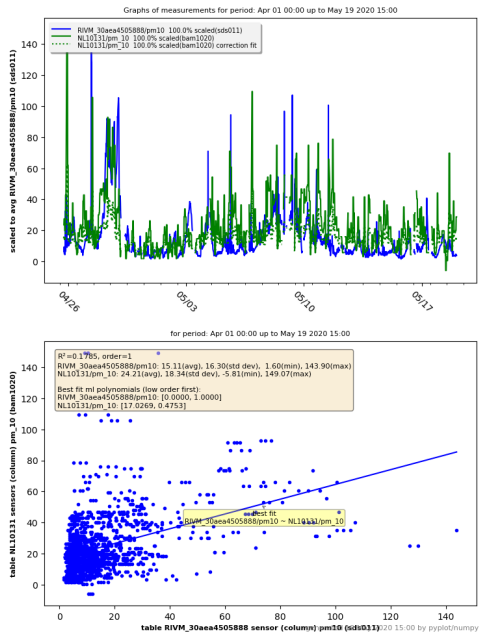
Sensor pmsx003@RIVM_807D3A9369F4 with sensor sps30@RIVM_30aea4ec7cf8

correlation report for pm25 () measurements

Correlation details of project RIVM sensor kit ID 807D3A9369F4 with project RIVM sensor kit ID 30aea4ec7cf8
Date of correlation report: Tue 19 May 15:00:37 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): pmsx003, sps30
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1425 (avg+2*stddev)
Database table RIVM_807D3A9369F4 sensor (column) pm25: 3581 db records, deleted 4 NaN records.
Auto interval samples is (re)set to 1259 (avg+2*stddev)
Database table RIVM_30aea4ec7cf8 sensor (column) pm25: 4398 db records, deleted 46 NaN records.
Collected 3514 values in sample time frame (20m/59s) for the graph. Skipped 67 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 20m:59s.

Data from table/sheet RIVM_30aea4ec7cf8, sensor (column) pm25:

    number 3514, min= 1.00, max=143.10

    avg=11.77, std dev= 9.99

    R-squared (R^2) with RIVM_30aea4ec7cf8/pm25: 0.9713

    Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

    RIVM_807D3A9369F4/pm25 (sps30)-> best fit coefficients:

    5.877e-01, 6.233e-01

Statistical summary linear regression for RIVM_807D3A9369F4/pm25 with ['RIVM_30aea4ec7cf8/pm25']:

OLS Regression Results

Dep. Variable:	RIVM_807D3A9369F4/pm25	**R-squared:**	0.971
Model:	OLS	**Adj. R-squared:**	0.971
Method:	Least Squares	**F-statistic:**	1.188e+05
Date:	Tue, 19 May 2020	**Prob (F-statistic):**	0.00
Time:	15:00:38	**Log-Likelihood:**	-8444.5
No. Observations:	3514	**AIC:**	1.689e+04
Df Residuals:	3512	**BIC:**	1.691e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
RIVM_30aea4ec7cf8/pm25	-0.4006	0.070	-5.741	0.000	-0.537	-0.264

Omnibus:	1666.042	**Durbin-Watson:**	1.207
Prob(Omnibus):	0.000	**Jarque-Bera (JB):**	149798.157
Skew:	1.335	**Prob(JB):**	0.00
Kurtosis:	34.874	**Cond. No.**	23.9
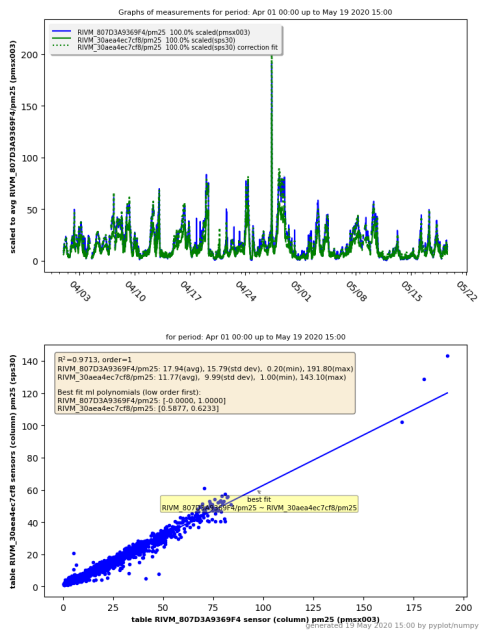
Sensor pmsx003@RIVM_807D3A9369F4 with sensor sds011@RIVM_30aea4505888

correlation report for pm25 () measurements

Correlation details of project RIVM sensor kit ID 807D3A9369F4 with project RIVM sensor kit ID 30aea4505888
Date of correlation report: Tue 19 May 15:00:40 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): pmsx003, sds011
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1425 (avg+2*stddev)
Database table RIVM_807D3A9369F4 sensor (column) pm25: 3581 db records, deleted 4 NaN records.
Auto interval samples is (re)set to 1445 (avg+2*stddev)
Database table RIVM_30aea4505888 sensor (column) pm25: 1758 db records, deleted 0 NaN records.
Collected 1696 values in sample time frame (24m/5s) for the graph. Skipped 1885 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 24m:5s.

Data from table/sheet RIVM_30aea4505888, sensor (column) pm25:

number 1696, min= 0.90, max=115.00

avg=10.23, std dev=11.52

R-squared (R^2) with RIVM_30aea4505888/pm25: 0.9219

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_807D3A9369F4/pm25 (sds011)-> best fit coefficients:

-9.553e-01, 6.643e-01

Statistical summary linear regression for RIVM_807D3A9369F4/pm25 with ['RIVM_30aea4505888/pm25']:

OLS Regression Results

Dep. Variable:	RIVM_807D3A9369F4/pm25	R-squared:	0.922
Model:	OLS	Adj. R-squared:	0.922
Method:	Least Squares	F-statistic:	2.001e+04
Date:	Tue, 19 May 2020	Prob (F-statistic):	0.00
Time:	15:00:41	Log-Likelihood:	-5014.2
No. Observations:	1696	AIC:	1.003e+04
Df Residuals:	1694	BIC:	1.004e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
RIVM_30aea4505888/pm25	2.6404	0.151	17.463	0.000	2.344	2.937

Omnibus:	366.686	Durbin-Watson:	0.252
Prob(Omnibus):	0.000	Jarque-Bera (JB):	2950.549
Skew:	0.782	Prob(JB):	0.00
Kurtosis:	9.270	Cond. No.	20.6
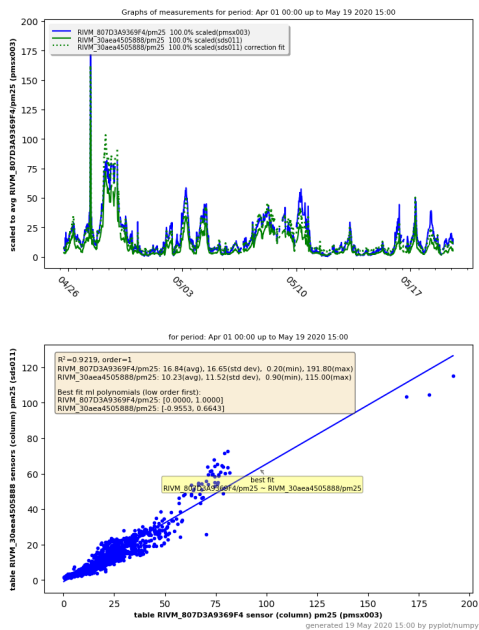
Sensor pmsx003@RIVM_807D3A9369F4 with sensor bam1020@NL10131

correlation report for pm25 () measurements

Correlation details of project RIVM sensor kit ID 807D3A9369F4 with project NL10131 sensor kit ID NL10131
Date of correlation report: Tue 19 May 15:00:44 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): pmsx003, bam1020
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1425 (avg+2*stddev)
Database table RIVM_807D3A9369F4 sensor (column) pm25: 3581 db records, deleted 4 NaN records.
Auto interval samples is (re)set to 3600 (avg+2*stddev)
Database table NL10131 sensor (column) pm_25: 1153 db records, deleted 0 NaN records.
Collected 3534 values in sample time frame (60m/0s) for the graph. Skipped 47 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 60m:0s.

Data from table/sheet NL10131, sensor (column) pm_25:

number 3534, min= 1.61, max=86.59

avg=12.69, std dev= 8.04

R-squared (R^2) with NL10131/pm_25: 0.6335

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_807D3A9369F4/pm25 (bam1020)-> best fit coefficients:

5.425e+00, 4.044e-01

Statistical summary linear regression for RIVM_807D3A9369F4/pm25 with ['NL10131/pm_25']:

OLS Regression Results

Dep. Variable:	RIVM_807D3A9369F4/pm25	R-squared:	0.633
Model:	OLS	Adj. R-squared:	0.633
Method:	Least Squares	F-statistic:	6104.
Date:	Tue, 19 May 2020	Prob (F-statistic):	0.00
Time:	15:00:44	Log-Likelihood:	-12999.
No. Observations:	3534	AIC:	2.600e+04
Df Residuals:	3532	BIC:	2.602e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
NL10131/pm_25	-1.9097	0.301	-6.340	0.000	-2.500	-1.319

Omnibus:	2312.174	Durbin-Watson:	0.390
Prob(Omnibus):	0.000	Jarque-Bera (JB):	372216.590
Skew:	2.119	Prob(JB):	0.00
Kurtosis:	53.098	Cond. No.	28.2
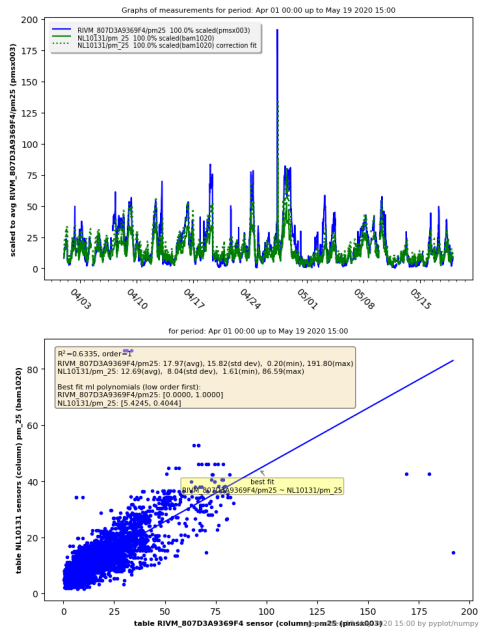
Sensor sps30@RIVM_30aea4ec7cf8 with sensor sds011@RIVM_30aea4505888

correlation report for pm25 () measurements

Correlation details of project RIVM sensor kit ID 30aea4ec7cf8 with project RIVM sensor kit ID 30aea4505888
Date of correlation report: Tue 19 May 15:00:47 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): sds011, sps30
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1259 (avg+2*stddev)
Database table RIVM_30aea4ec7cf8 sensor (column) pm25: 4398 db records, deleted 46 NaN records.
Auto interval samples is (re)set to 1445 (avg+2*stddev)
Database table RIVM_30aea4505888 sensor (column) pm25: 1758 db records, deleted 0 NaN records.
Collected 2091 values in sample time frame (24m/5s) for the graph. Skipped 2307 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 24m:5s.

Data from table/sheet RIVM_30aea4505888, sensor (column) pm25:

number 2091, min= 0.90, max=115.00

avg=10.88, std dev=13.16

R-squared (R^2) with RIVM_30aea4505888/pm25: 0.9208

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_30aea4ec7cf8/pm25 (sds011)-> best fit coefficients:

-1.659e+00, 1.102e+00

Statistical summary linear regression for RIVM_30aea4ec7cf8/pm25 with ['RIVM_30aea4505888/pm25']:

OLS Regression Results

Dep. Variable:	RIVM_30aea4ec7cf8/pm25	R-squared:	0.921
Model:	OLS	Adj. R-squared:	0.921
Method:	Least Squares	F-statistic:	2.428e+04
Date:	Tue, 19 May 2020	Prob (F-statistic):	0.00
Time:	15:00:48	Log-Likelihood:	-5415.2
No. Observations:	2091	AIC:	1.083e+04
Df Residuals:	2089	BIC:	1.085e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
RIVM_30aea4505888/pm25	2.2876	0.092	24.988	0.000	2.108	2.467

Omnibus:	2152.900	Durbin-Watson:	0.317
Prob(Omnibus):	0.000	Jarque-Bera (JB):	436919.211
Skew:	4.527	Prob(JB):	0.00
Kurtosis:	73.234	Cond. No.	22.2
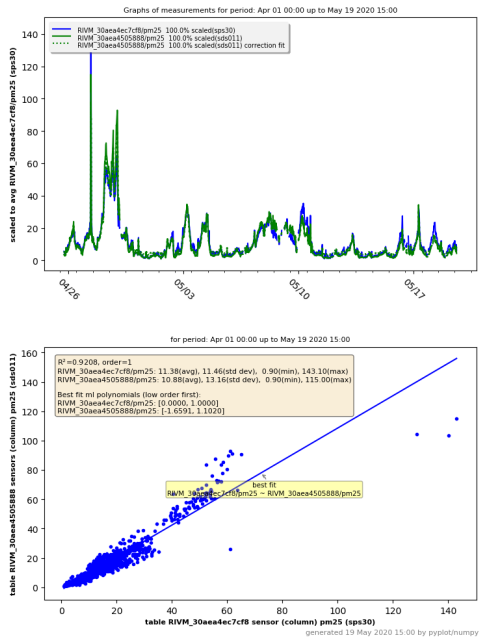
Sensor sps30@RIVM_30aea4ec7cf8 with sensor bam1020@NL10131

correlation report for pm25 () measurements

Correlation details of project RIVM sensor kit ID 30aea4ec7cf8 with project NL10131 sensor kit ID NL10131
Date of correlation report: Tue 19 May 15:00:50 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): sps30, bam1020
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1259 (avg+2*stddev)
Database table RIVM_30aea4ec7cf8 sensor (column) pm25: 4398 db records, deleted 46 NaN records.
Auto interval samples is (re)set to 3600 (avg+2*stddev)
Database table NL10131 sensor (column) pm_25: 1153 db records, deleted 0 NaN records.
Collected 4341 values in sample time frame (60m/0s) for the graph. Skipped 57 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 60m:0s.

Data from table/sheet NL10131, sensor (column) pm_25:

number 4341, min= 1.61, max=86.59

avg=12.84, std dev= 8.25

R-squared (R^2) with NL10131/pm_25: 0.6418

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_30aea4ec7cf8/pm25 (bam1020)-> best fit coefficients:

5.303e+00, 6.245e-01

Statistical summary linear regression for RIVM_30aea4ec7cf8/pm25 with ['NL10131/pm_25']:

OLS Regression Results

Dep. Variable:	RIVM_30aea4ec7cf8/pm25	R-squared:	0.642
Model:	OLS	Adj. R-squared:	0.642
Method:	Least Squares	F-statistic:	7774.
Date:	Tue, 19 May 2020	Prob (F-statistic):	0.00
Time:	15:00:51	Log-Likelihood:	-14175.
No. Observations:	4341	AIC:	2.835e+04
Df Residuals:	4339	BIC:	2.837e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025 0.975]
NL10131/pm_25	-1.1260	0.178	-6.328	0.000	-1.475 -0.777

Omnibus:	3542.309	Durbin-Watson:	0.315
Prob(Omnibus):	0.000	Jarque-Bera (JB):	1041938.447
Skew:	2.934	Prob(JB):	0.00
Kurtosis:	78.671	Cond. No.	28.3
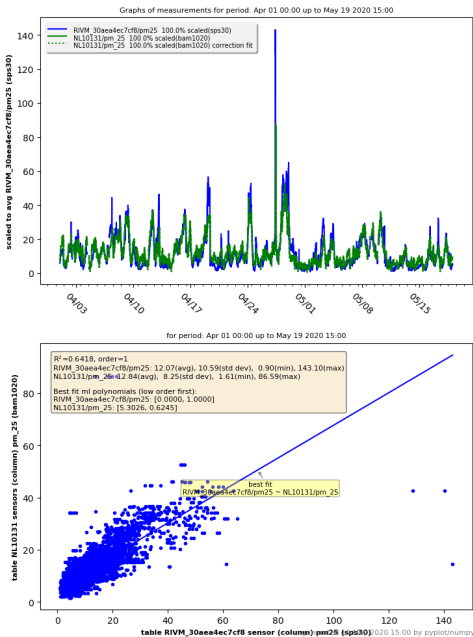
Sensor sds011@RIVM_30aea4505888 with sensor bam1020@NL10131

correlation report for pm25 () measurements

Correlation details of project RIVM sensor kit ID 30aea4505888 with project NL10131 sensor kit ID NL10131
Date of correlation report: Tue 19 May 15:00:54 CEST 2020
From date 1 April upto 2020-05-19 15:00
Origin of measurement time serie data from InFluxDB host: lunar
Report generated by MyRegression.py (GPL V4) (user teus)

General statistical information for the measurements graphs

Regression best fit calculation details for sensor type(s): sds011, bam1020
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Auto interval samples is (re)set to 1445 (avg+2*stddev)
Database table RIVM_30aea4505888 sensor (column) pm25: 1758 db records, deleted 0 NaN records.
Auto interval samples is (re)set to 3600 (avg+2*stddev)
Database table NL10131 sensor (column) pm_25: 1153 db records, deleted 0 NaN records.
Collected 1712 values in sample time frame (60m/0s) for the graph. Skipped 46 db records, could not find any value(s) in same sample interval.

Samples period: Apr 01 00:00 up to May 19 2020 15:00, interval timing 60m:0s.

Data from table/sheet NL10131, sensor (column) pm_25:

number 1712, min= 1.61, max=86.59

avg=11.55, std dev= 8.77

R-squared (R^2) with NL10131/pm_25: 0.5648

Best fit linear single polynomial regression curve ($A_0*X^0 + A_1*X^1$):

RIVM_30aea4505888/pm25 (bam1020)-> best fit coefficients:

6.080e+00, 4.978e-01

Statistical summary linear regression for RIVM_30aea4505888/pm25 with ['NL10131/pm_25']:

OLS Regression Results

Dep. Variable:	RIVM_30aea4505888/pm25	R-squared:	0.565
Model:	OLS	Adj. R-squared:	0.565
Method:	Least Squares	F-statistic:	2219.
Date:	Tue, 19 May 2020	Prob (F-statistic):	2.93e-311
Time:	15:00:54	Log-Likelihood:	-6139.2
No. Observations:	1712	AIC:	1.228e+04
Df Residuals:	1710	BIC:	1.229e+04
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025 0.975]
NL10131/pm_25	-2.1196	0.349	-6.070	0.000	-2.804 -1.435

Omnibus:	775.085	Durbin-Watson:	0.291
Prob(Omnibus):	0.000	Jarque-Bera (JB):	93987.994
Skew:	1.106	Prob(JB):	0.00
Kurtosis:	39.231	Cond. No.	24.0