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# Summary of correlations of sensor kits and sensor modules

Sensorkits: BdP 3f18c330 BdP 8d5ba45f

Report generated on: Tue 11 Sep 13:23:01 CEST 2018

### R-square and statistical summary

#### Measurement TEMP correlation key values

```
Correlation 1 - TEMP - kit BdP_3f18c330 sensor type SHT31 with kit BdP_3f18c330 sensor type BME280:
nr samples 97, min=23.40, max=27.10
avg=25.27, std dev= 1.21
R-squared:
0.9852
Best fit polynomial coefficients:
 [-8.134e-01, 1.029e+00]
Correlation 2 - TEMP - kit BdP_3f18c330 sensor type SHT31 with kit BdP_3f18c330 sensor type SPEC:
nr samples 97, min=24.50, max=29.00
avg=26.41, std dev= 1.28
R-squared:
0.9804
Best fit polynomial coefficients:
 [-9.702e-01, 1.080e+00]
Correlation 3 - TEMP - kit BdP_3f18c330 sensor type SHT31 with kit BdP_8d5ba45f sensor type SHT31:
nr samples 97, min=23.45, max=27.00
avg=25.32, std dev= 1.18
R-squared:
0.9370
Best fit polynomial coefficients:
 [5.269e-01, 9.781e-01]
Correlation 4 - TEMP - kit BdP_3f18c330 sensor type SHT31 with kit BdP_8d5ba45f sensor type BME280:
nr samples 97, min=24.77, max=28.17
avg=26.56, std dev= 1.11
R-squared:
0.9444
Best fit polynomial coefficients:
 [ 3.138e+00, 9.239e-01]
Correlation 5 - TEMP - kit BdP_3f18c330 sensor type SHT31 with kit BdP_8d5ba45f sensor type SPEC:
nr samples 97, min=23.50, max=27.16
avg=25.46, std dev= 1.14
R-squared:
0.9216
Best fit polynomial coefficients:
 [ 1.736e+00, 9.357e-01]
Correlation 6 - TEMP - kit BdP_3f18c330 sensor type BME280 with kit BdP_3f18c330 sensor type SPEC:
nr samples 97, min=24.50, max=29.00
avg=26.41, std dev= 1.28
R-squared:
0.9725
Best fit polynomial coefficients:
 [ 1.863e-01, 1.038e+00]
Correlation 7 - TEMP - kit BdP_3f18c330 sensor type BME280 with kit BdP_8d5ba45f sensor type SHT31:
nr samples 97, min=23.45, max=27.00
avg=25.32, std dev= 1.18
R-squared:
0.9556
Best fit polynomial coefficients:
 [ 1.243e+00, 9.529e-01]
```

Correlation 8 - TEMP - kit BdP\_3f18c330 sensor type BME280 with kit BdP\_8d5ba45f sensor type BME280: nr samples 97, min=24.77, max=28.17 avg=26.56, std dev= 1.11 R-squared: 0.9672 Best fit polynomial coefficients: [3.767e+00, 9.019e-01] Correlation 9 - TEMP - kit BdP\_3f18c330 sensor type BME280 with kit BdP\_8d5ba45f sensor type SPEC: nr samples 97, min=23.50, max=27.16 avg=25.46, std dev= 1.14 R-squared: 0.9411 Best fit polynomial coefficients: [2.406e+00, 9.122e-01] Correlation 10 - TEMP - kit BdP 3f18c330 sensor type SPEC with kit BdP 8d5ba45f sensor type SHT31: nr samples 97, min=23.45, max=27.00 avg=25.32, std dev= 1.18 R-squared: 0.9098 Best fit polynomial coefficients: [1.987e+00, 8.837e-01] Correlation 11 - TEMP - kit BdP\_3f18c330 sensor type SPEC with kit BdP\_8d5ba45f sensor type BME280: nr samples 97, min=24.77, max=28.17 avg=26.56, std dev= 1.11 R-squared: 0.9168 Best fit polynomial coefficients: [4.520e+00, 8.346e-01] Correlation 12 - TEMP - kit BdP\_3f18c330 sensor type SPEC with kit BdP\_8d5ba45f sensor type SPEC: nr samples 97, min=23.50, max=27.16 avg=25.46, std dev= 1.14 R-squared: 0.8927 Best fit polynomial coefficients: [3.160e+00, 8.444e-01] Correlation 13 - TEMP - kit BdP 8d5ba45f sensor type SHT31 with kit BdP 8d5ba45f sensor type BME280: nr samples 158, min=24.77, max=28.17 avg=26.55, std dev= 1.12 R-squared: 0.9782 Best fit polynomial coefficients: [ 2.994e+00, 9.305e-01] Correlation 14 - TEMP - kit BdP 8d5ba45f sensor type SHT31 with kit BdP 8d5ba45f sensor type SPEC: nr samples 158, min=23.50, max=27.16 avg=25.45, std dev= 1.14 R-squared: 0.9768 Best fit polynomial coefficients: [ 1.391e+00, 9.505e-01] Correlation 15 - TEMP - kit BdP 8d5ba45f sensor type BME280 with kit BdP 8d5ba45f sensor type SPEC: nr samples 158, min=23.50, max=27.16 avg=25.45, std dev= 1.14 R-squared: 0.9678

Best fit polynomial coefficients: [-1.232e+00, 1.005e+00]

# Sensor sht31@BdP\_3f18c330 with sensor bme280@BdP 3f18c330

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 3f18c330 Date of correlation report: Tue 11 Sep 13:22:58 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:22 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): bme280, sht31 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) stemp: 97 db records, deleted 0 NaN records. Database table BdP\_3f18c330 sensor (column) temp: 97 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:22, interval timing 15m:0s.

Data from table/sheet BdP\_3f18c330, sensor (column) temp:

number 97, min=23.40, max=27.10

avg=25.27, std dev= 1.21

R-squared (R<sup>2</sup>) with BdP\_3f18c330/temp: 0.9852

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

BdP\_3f18c330/stemp (bme280)-> best fit coefficients:

-8.134e-01, 1.029e+00

Statistical summary linear regression for BdP\_3f18c330/stemp with ['BdP\_3f18c330/temp']:

#### **OLS Regression Results**

Dep. Variable:	BdP_3f18c330/stemp	R-squared:	0.985
Model:	OLS	Adj. R-squared:	0.985
Method:	Least Squares	F-statistic:	6328.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	9.72e-89
Time:	13:22:59	Log-Likelihood:	51.425
No. Observations:	97	AIC:	-98.85
Df Residuals:	95	BIC:	-93.70
Df Model:	1		
Covariance Type:	nonrobust		

coef std err t P>|t| [0.025 0.975

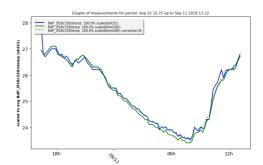
BdP\_3f18c330/temp 1.1538 0.305 3.789 0.000 0.549 1.758

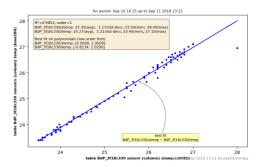
 Omnibus:
 123.505
 Durbin-Watson:
 0.882

 Prob(Omnibus):
 0.000
 Jarque-Bera (JB):
 3342.437

 Skew:
 4.215
 Prob(JB):
 0.00

 Kurtosis:
 30.494
 Cond. No.
 528.





# Sensor sht31@BdP\_3f18c330 with sensor spec@BdP\_3f18c330

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 3f18c330 Date of correlation report: Tue 11 Sep 13:23:01 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): spec, sht31 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) stemp: 97 db records, deleted 0 NaN records. Database table BdP\_3f18c330 sensor (column) gtemp: 97 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_3f18c330, sensor (column) gtemp:

number 97, min=24.50, max=29.00

avg=26.41, std dev= 1.28

R-squared (R<sup>2</sup>) with BdP\_3f18c330/gtemp: 0.9804

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

BdP\_3f18c330/stemp (spec)-> best fit coefficients:

-9.702e-01, 1.080e+00

Statistical summary linear regression for BdP\_3f18c330/stemp with ['BdP\_3f18c330/gtemp']:

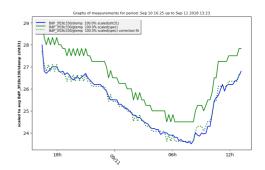
#### **OLS Regression Results**

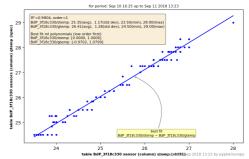
Dep. Variable:	BdP_3f18c330/stemp	R-squared:	0.980
Model:	OLS	Adj. R-squared:	0.980
Method:	Least Squares	F-statistic:	4753.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	6.22e-83
Time:	13:23:01	Log-Likelihood:	37.777
No. Observations:	97	AIC:	-71.55
Df Residuals:	95	BIC:	-66.40
Df Model:	1		
Covariance Type:	nonrobust		

coef std err t P>|t| [0.025 0.975]
BdP 3f18c330/atemp 1.3776 0.348 3.957 0.000 0.686 2.069

Omnibus: 3.143 Durbin-Watson: 1.751
Prob(Omnibus): 0.208 Jarque-Bera (JB): 2.514

Skew: -0.366 Prob(JB): 0.28
Kurtosis: 3.294 Cond. No. 548.





# Sensor sht31@BdP\_3f18c330 with sensor sht31@BdP\_8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:03 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): sht31
Graphs based on data MYSQL from luchtmetingen on server lunar as user teus:
Database table BdP\_3f18c330 sensor (column) stemp: 97 db records, deleted 0 NaN records.
Database table BdP\_8d5ba45f sensor (column) stemp: 158 db records, deleted 0 NaN records.
Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) stemp:

number 97, min=23.45, max=27.00

avg=25.32, std dev= 1.18

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/stemp: 0.9370

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

BdP\_3f18c330/stemp (sht31)-> best fit coefficients:

5.269e-01, 9.781e-01

Statistical summary linear regression for BdP\_3f18c330/stemp with ['BdP\_8d5ba45f/stemp']:

#### **OLS Regression Results**

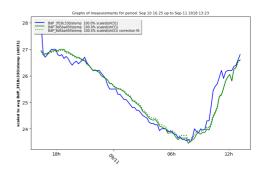
Dep. Variable:	BdP_3f18c330/stemp	R-squared:	0.937
Model:	OLS	Adj. R-squared:	0.936
Method:	Least Squares	F-statistic:	1413.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	7.78e-59
Time:	13:23:03	Log-Likelihood:	-18.855
No. Observations:	97	AIC:	41.71
Df Residuals:	95	BIC:	46.86
Df Model:	1		
Covariance Type:	nonrobust		

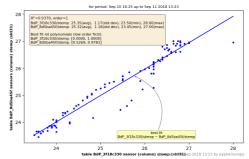
coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/stemp 1.0922 0.646 1.691 0.094 -0.190 2.375

 Omnibus:
 46.069
 Durbin-Watson:
 0.324

 Prob(Omnibus):
 0.000
 Jarque-Bera (JB):
 105.629

 Skew:
 1.845
 Prob(JB):
 1.16e-23





# Sensor sht31@BdP\_3f18c330 with sensor bme280@BdP 8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:04 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): bme280, sht31 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) stemp: 97 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) temp: 158 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) temp:

number 97, min=24.77, max=28.17

avg=26.56, std dev= 1.11

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/temp: 0.9444

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

BdP\_3f18c330/stemp (bme280)-> best fit coefficients:

3.138e+00, 9.239e-01

Statistical summary linear regression for BdP\_3f18c330/stemp with ['BdP\_8d5ba45f/temp']:

#### **OLS Regression Results**

Dep. Variable:	BdP_3f18c330/stemp	R-squared:	0.944
Model:	OLS	Adj. R-squared:	0.944
Method:	Least Squares	F-statistic:	1614.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	2.03e-61
Time:	13:23:05	Log-Likelihood:	-12.785
No. Observations:	97	AIC:	29.57
Df Residuals:	95	BIC:	34.72
Df Model:	1		
Covariance Type:	nonrohuet		

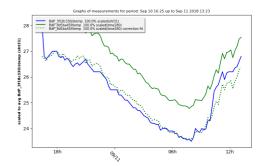
coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/temp -1.7987 0.676 -2.659 0.009 -3.141 -0.456

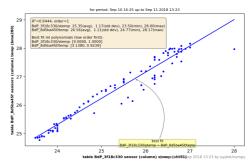
 Omnibus:
 40.277
 Durbin-Watson:
 0.345

 Prob(Omnibus):
 0.000
 Jarque-Bera (JB):
 83.344

 Skew:
 1.645
 Prob(JB):
 7.98e-19

 Kurtosis:
 6.129
 Cond. No.
 636.





# Sensor sht31@BdP\_3f18c330 with sensor spec@BdP\_8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:06 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): spec, sht31 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) stemp: 97 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) gtemp: 158 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) gtemp:

number 97, min=23.50, max=27.16

avg=25.46, std dev= 1.14

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/gtemp: 0.9216

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

BdP\_3f18c330/stemp (spec)-> best fit coefficients:

1.736e+00, 9.357e-01

Statistical summary linear regression for BdP\_3f18c330/stemp with ['BdP\_8d5ba45f/gtemp']:

#### **OLS Regression Results**

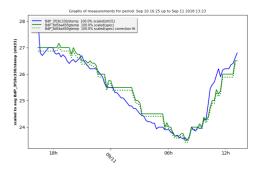
Dep. Variable:	BdP_3f18c330/stemp	R-squared:	0.922
Model:	OLS	Adj. R-squared:	0.921
Method:	Least Squares	F-statistic:	1117.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	2.54e-54
Time:	13:23:07	Log-Likelihood:	-29.457
No. Observations:	97	AIC:	62.91
Df Residuals:	95	BIC:	68.06
Df Model:	1		
Covariance Type:	nonrobust		

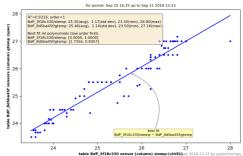
coef std err t P>|t| [0.025 0.975 BdP 8d5ba45f/gtemp 0.2778 0.751 0.370 0.712 -1.213 1.769

 Omnibus:
 21.674
 Durbin-Watson:
 0.400

 Prob(Omnibus):
 0.000
 Jarque-Bera (JB):
 29.358

 Skew:
 1.076
 Prob(JB):
 4.22e-07





# Sensor bme280@BdP\_3f18c330 with sensor spec@BdP\_3f18c330

## correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 3f18c330 Date of correlation report: Tue 11 Sep 13:23:08 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): bme280, spec Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) temp: 97 db records, deleted 0 NaN records. Database table BdP\_3f18c330 sensor (column) gtemp: 97 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_3f18c330, sensor (column) gtemp:

number 97, min=24.50, max=29.00

avg=26.41, std dev= 1.28

R-squared (R<sup>2</sup>) with BdP\_3f18c330/gtemp: 0.9725

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

BdP\_3f18c330/temp (spec)-> best fit coefficients:

1.863e-01, 1.038e+00

Statistical summary linear regression for BdP\_3f18c330/temp with ['BdP\_3f18c330/gtemp']:

#### **OLS Regression Results**

Dep. Variable:	BdP_3f18c330/temp	R-squared:	0.973
Model:	OLS	Adj. R-squared:	0.972
Method:	Least Squares	F-statistic:	3363.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	5.83e-76
Time:	13:23:08	Log-Likelihood:	17.899
No. Observations:	97	AIC:	-31.80
Df Residuals:	95	BIC:	-26.65
Df Model:	1		
Covariance Type:	nonrobust		

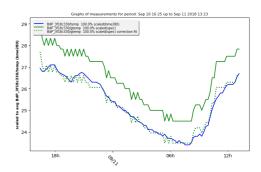
coef std err t P>|t| [0.025 0.975]
BdP 3f18c330/atemp 0.5197 0.427 1.216 0.227 -0.329 1.368

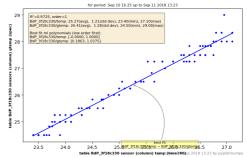
 Omnibus:
 10.800
 Durbin-Watson:
 1.143

 Prob(Omnibus):
 0.005
 Jarque-Bera (JB):
 12.825

 Skew:
 0.0599
 Prob(JB):
 0.00164

 Kurtosis:
 4.317
 Cond. No.
 548.





# Sensor bme280@BdP\_3f18c330 with sensor sht31@BdP\_8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:10 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): bme280, sht31 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) temp: 97 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) stemp: 158 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) stemp:

number 97, min=23.45, max=27.00

avg=25.32, std dev= 1.18

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/stemp: 0.9556

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

BdP\_3f18c330/temp (sht31)-> best fit coefficients:

1.243e+00, 9.529e-01

Statistical summary linear regression for BdP\_3f18c330/temp with ['BdP\_8d5ba45f/stemp']:

#### **OLS Regression Results**

Dep. Variable:	BdP_3f18c330/temp	R-squared:	0.956
Model:	OLS	Adj. R-squared:	0.955
Method:	Least Squares	F-statistic:	2045.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	4.62e-6
Time:	13:23:10	Log-Likelihood:	-5.3666
No. Observations:	97	AIC:	14.73
Df Residuals:	95	BIC:	19.88
Df Model:	1		
Covariance Type:	nonrobust		

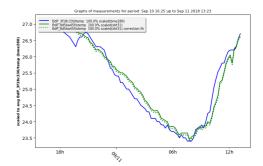
coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/stemp -0.1247 0.562 -0.222 0.825 -1.241 0.991

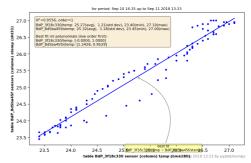
 Omnibus:
 12.062
 Durbin-Watson:
 0.192

 Prob(Omnibus):
 0.002
 Jarque-Bera (JB):
 12.555

 Skew:
 0.822
 Prob(JB):
 0.00188

 Kurtosis:
 3.636
 Cond. No.
 544.





# Sensor bme280@BdP\_3f18c330 with sensor bme280@BdP\_8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:11 CEST 2018
From date 2018-09-10 16:25:18 upto 2018-09-11 13:23
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): bme280 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) temp: 97 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) temp: 158 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) temp:

number 97, min=24.77, max=28.17

avg=26.56, std dev= 1.11

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/temp: 0.9672

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

BdP\_3f18c330/temp (bme280)-> best fit coefficients:

3.767e+00, 9.019e-01

Statistical summary linear regression for BdP\_3f18c330/temp with ['BdP\_8d5ba45f/temp']:

#### **OLS Regression Results**

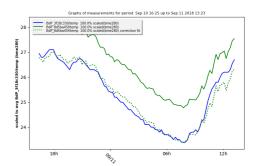
Dep. Variable:	BdP_3f18c330/temp	R-squared:	0.967
Model:	OLS	Adj. R-squared:	0.967
Method:	Least Squares	F-statistic:	2798.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	2.79e-72
Time:	13:23:12	Log-Likelihood:	9.2485
No. Observations:	97	AIC:	-14.50
Df Residuals:	95	BIC:	-9.348
Df Model:	1		
Covariance Type:	nonrobust		

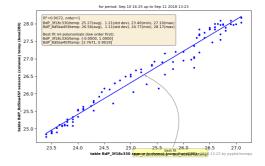
coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/temp -3.2101 0.539 -5.956 0.000 -4.280 -2.140

 Omnibus:
 14.591
 Durbin-Watson:
 0.309

 Prob(Omnibus):
 0.001
 Jarque-Bera (JB):
 16.023

 Skew:
 0.925
 Prob(JB):
 0.000332





# Sensor bme280@BdP\_3f18c330 with sensor spec@BdP\_8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:13 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): bme280, spec Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) temp: 97 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) gtemp: 158 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) gtemp:

number 97, min=23.50, max=27.16 avg=25.46, std dev= 1.14

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/gtemp: 0.9411

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

BdP\_3f18c330/temp (spec)-> best fit coefficients:

2.406e+00, 9.122e-01

Statistical summary linear regression for BdP\_3f18c330/temp with ['BdP\_8d5ba45f/gtemp']:

#### **OLS Regression Results**

Dep. Variable:	BdP_3f18c330/temp	R-squared:	0.941
Model:	OLS	Adj. R-squared:	0.940
Method:	Least Squares	F-statistic:	1518.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	3.19e-60
Time:	13:23:14	Log-Likelihood:	-19.085
No. Observations:	97	AIC:	42.17
Df Residuals:	95	BIC:	47.32
Df Model:	1		
Covariance Type:	nonrobust		

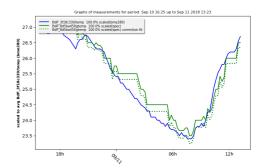
coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/gtemp -0.9939 0.675 -1.473 0.144 -2.334 0.346

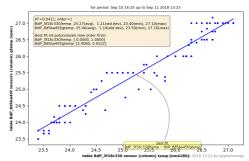
 Omnibus:
 0.517
 Durbin-Watson:
 0.338

 Prob(Omnibus):
 0.772
 Jarque-Bera (JB):
 0.662

 Skew:
 0.140
 Prob(JB):
 0.718

 Kurtosis:
 2.708
 Cond. No.
 570.





# Sensor spec@BdP\_3f18c330 with sensor sht31@BdP 8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:15 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): spec, sht31 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) gtemp: 97 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) stemp: 158 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) stemp:

number 97, min=23.45, max=27.00

avg=25.32, std dev= 1.18

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/stemp: 0.9098

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

BdP\_3f18c330/gtemp (sht31)-> best fit coefficients:

1.987e+00, 8.837e-01

Statistical summary linear regression for BdP\_3f18c330/gtemp with ['BdP\_8d5ba45f/stemp']:

#### **OLS Regression Results**

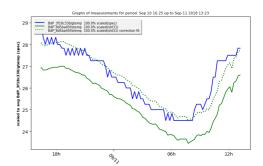
Dep. Variable:	BdP_3f18c330/gtemp	R-squared:	0.910
Model:	OLS	Adj. R-squared:	0.909
Method:	Least Squares	F-statistic:	958.6
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	1.98e-51
Time:	13:23:15	Log-Likelihood:	-44.669
No. Observations:	97	AIC:	93.34
Df Residuals:	95	BIC:	98.49
Df Model:	1		
Covariance Type:	nonrobust		

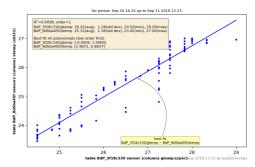
coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/stemp 0.3353 0.843 0.398 0.692 -1.338 2.009

Omnibus: 21.485 Durbin-Watson: 0.419
Prob(Omnibus): 0.000 Jarque-Bera (JB): 27.401

Prob(Omnibus): 0.000 Jarque-Bera (JB): 27.401

Skew: 1.144 Prob(JB): 1.12e-06





# Sensor spec@BdP\_3f18c330 with sensor bme280@BdP 8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:17 CEST 2018
From date 2018-09-10 16:25:18 upto 2018-09-11 13:23
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): bme280, spec Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) gtemp: 97 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) temp: 158 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) temp:

number 97, min=24.77, max=28.17

avg=26.56, std dev= 1.11

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/temp: 0.9168

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

BdP 3f18c330/gtemp (bme280)-> best fit coefficients:

4.520e+00, 8.346e-01

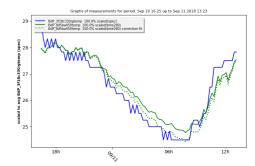
Statistical summary linear regression for BdP\_3f18c330/gtemp with ['BdP\_8d5ba45f/temp']:

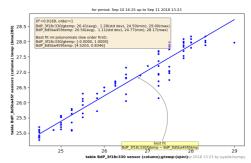
#### **OLS Regression Results**

Dep. Variable:	BdP_3f18c330/gtemp	R-squared:	0.917
Model:	OLS	Adj. R-squared:	0.916
Method:	Least Squares	F-statistic:	1046.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	4.41e-53
Time:	13:23:17	Log-Likelihood:	-40.785
No. Observations:	97	AIC:	85.57
Df Residuals:	95	BIC:	90.72
Df Model:	1		
Covariance Type:	nonrobust		

coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/temp -2.7675 0.903 -3.066 0.003 -4.560 -0.975

Omnibus: 17.954 Durbin-Watson: 0.506 Prob(Omnibus): 0.000 Jarque-Bera (JB): 21.108 Skew: 1.052 Prob(JB): 2.61e-05 Kurtosis: 3.893 Cond No. 636





# Sensor spec@BdP\_3f18c330 with sensor spec@BdP\_8d5ba45f

## correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 3f18c330 with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:18 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): spec Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_3f18c330 sensor (column) gtemp: 97 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) gtemp: 158 db records, deleted 0 NaN records. Collected 97 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) gtemp:

number 97, min=23.50, max=27.16

avg=25.46, std dev= 1.14

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/gtemp: 0.8927

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

BdP\_3f18c330/gtemp (spec)-> best fit coefficients:

3.160e+00, 8.444e-01

Statistical summary linear regression for BdP\_3f18c330/gtemp with ['BdP\_8d5ba45f/gtemp']:

#### **OLS Regression Results**

Dep. Variable:	BdP_3f18c330/gtemp	R-squared:	0.893
Model:	OLS	Adj. R-squared:	0.892
Method:	Least Squares	F-statistic:	790.6
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	7.65e-48
Time:	13:23:19	Log-Likelihood:	-53.091
No. Observations	: 97	AIC:	110.2
Df Residuals:	95	BIC:	115.3
Df Model:	1		
Covariance Type:	nonrobust		

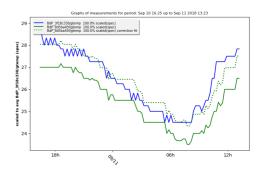
 coef
 std err
 t
 P>|t|
 [0.025 0.975]

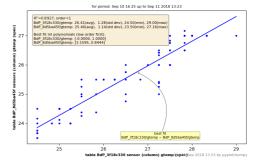
 BdP\_8d5ba45f/gtemp -0.5075
 0.958
 -0.530
 0.598 -2.410 1.395

 Omnibus:
 7.736
 Durbin-Watson:
 0.530

 Prob(Omnibus):
 0.021
 Jarque-Bera (JB):
 7.261

 Skew:
 0.616
 Prob(JB):
 0.026





# Sensor sht31@BdP\_8d5ba45f with sensor bme280@BdP 8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 8d5ba45f with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:20 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): bme280, sht31 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_8d5ba45f sensor (column) stemp: 158 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) temp: 158 db records, deleted 0 NaN records. Collected 158 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) temp:

number 158, min=24.77, max=28.17

avg=26.55, std dev= 1.12

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/temp: 0.9782

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

BdP 8d5ba45f/stemp (bme280)-> best fit coefficients:

2.994e+00, 9.305e-01

Statistical summary linear regression for BdP\_8d5ba45f/stemp with ['BdP\_8d5ba45f/temp']:

#### **OLS Regression Results**

Dep. Variable:	BdP_8d5ba45f/stemp	R-squared:	0.978
Model:	OLS	Adj. R-squared:	0.978
Method:	Least Squares	F-statistic:	7004.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	1.54e-131
Time:	13:23:21	Log-Likelihood:	51.251
No. Observations:	158	AIC:	-98.50
Df Residuals:	156	BIC:	-92.38
Df Model:	1		

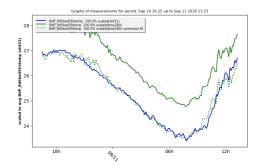
coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/temp -2.5963 0.334 -7.779 0.000 -3.256 -1.937

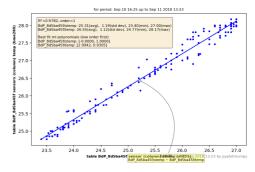
 Omnibus:
 8.015
 Durbin-Watson:
 0.591

 Prob(Omnibus):
 0.018
 Jarque-Bera (JB):
 7.874

 Skew:
 -0.470
 Prob(JB):
 0.0195

Covariance Type: nonrobust





# Sensor sht31@BdP\_8d5ba45f with sensor spec@BdP\_8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 8d5ba45f with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:22 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): spec, sht31 Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_8d5ba45f sensor (column) stemp: 158 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) gtemp: 158 db records, deleted 0 NaN records. Collected 158 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) gtemp:

number 158, min=23.50, max=27.16 avg=25.45, std dev= 1.14

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/gtemp: 0.9768

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

BdP\_8d5ba45f/stemp (spec)-> best fit coefficients:

1.391e+00, 9.505e-01

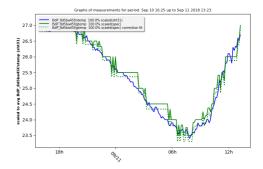
Statistical summary linear regression for BdP\_8d5ba45f/stemp with ['BdP\_8d5ba45f/gtemp']:

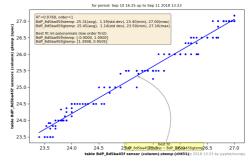
#### **OLS Regression Results**

Dep. Variable:	BdP_8d5ba45f/stemp	R-squared:	0.977
Model:	OLS	Adj. R-squared:	0.977
Method:	Least Squares	F-statistic:	6559.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	2.31e-129
Time:	13:23:22	Log-Likelihood:	46.177
No. Observations:	158	AIC:	-88.35
Df Residuals:	156	BIC:	-82.23
Df Model:	1		
Covariance Type:	nonrobust		

coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/gtemp -0.8413 0.323 -2.603 0.010 -1.480 -0.203

Omnibus: 0.463 Durbin-Watson: 1.319
Prob(Omnibus): 0.793 Jarque-Bera (JB): 0.561
Skew: 0.121 Prob(JB): 0.755
Kurtosis: 2.838 Cond. No. 570.





# Sensor bme280@BdP\_8d5ba45f with sensor spec@BdP\_8d5ba45f

# correlation report for temp () measurements

Correlation details of project BdP sensor kit ID 8d5ba45f with project BdP sensor kit ID 8d5ba45f Date of correlation report: Tue 11 Sep 13:23:24 CEST 2018 From date 2018-09-10 16:25:18 upto 2018-09-11 13:23 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): bme280, spec Graphs based on data MYSQL from luchtmetingen on server lunar as user teus: Database table BdP\_8d5ba45f sensor (column) temp: 158 db records, deleted 0 NaN records. Database table BdP\_8d5ba45f sensor (column) gtemp: 158 db records, deleted 0 NaN records. Collected 158 values in sample time frame (15m/0s) for the graph.

Samples period: Sep 10 16:25 up to Sep 11 2018 13:23, interval timing 15m:0s.

Data from table/sheet BdP\_8d5ba45f, sensor (column) gtemp:

number 158, min=23.50, max=27.16

avg=25.45, std dev= 1.14

R-squared (R<sup>2</sup>) with BdP\_8d5ba45f/gtemp: 0.9678

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

BdP\_8d5ba45f/temp (spec)-> best fit coefficients:

-1.232e+00, 1.005e+00

Statistical summary linear regression for BdP\_8d5ba45f/temp with ['BdP\_8d5ba45f/gtemp']:

#### **OLS Regression Results**

Dep. Variable:	BdP_8d5ba45f/temp	R-squared:	0.968
Model:	OLS	Adj. R-squared:	0.968
Method:	Least Squares	F-statistic:	4683.
Date:	Tue, 11 Sep 2018	Prob (F-statistic):	2.91e-118
Time:	13:23:24	Log-Likelihood:	29.852
No. Observations:	: 158	AIC:	-55.70
Df Residuals:	156	BIC:	-49.58
Df Model:	1		

Covariance Type: nonrobust

coef std err t P>|t| [0.025 0.975]
BdP 8d5ba45f/gtemp 2.0424 0.358 5.698 0.000 1.334 2.750

 Omnibus:
 0.885
 Durbin-Watson:
 1.040

 Prob(Omnibus):
 0.642
 Jarque-Bera (JB):
 0.515

 Skew:
 0.040
 Prob(JB):
 0.773

 Kurtosis:
 3.268
 Cond. No.
 570.

