

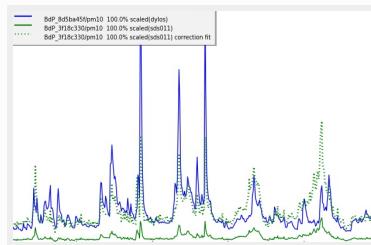
# Summary of correlations of sensor kits and sensor modules

Sensorkits: BdP\_8d5ba45f BdP\_3f18c330 BdP\_33040d54  
Report generated on: Fri Aug 4 16:36:01 CEST 2017

## R-square and statistical summary

### Correlation key values for measurement PM10

Correlation 1 - **PM10** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_3f18c330 sensor type **SDS011**:

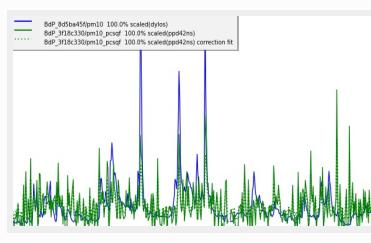


nr samples 480, min= 4.00, max=43.00  
avg=11.11, std dev= 5.60

**R-squared:**  
**0.4394**

Best fit polynomial coefficients:  
[ 9.251e-01, 4.687e+00]

Correlation 2 - **PM10** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_3f18c330 sensor type **PPD42NS**:

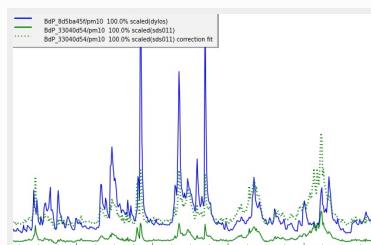


nr samples 463, min= 1.00, max=255.25  
avg=53.51, std dev=32.78

**R-squared:**  
**0.2164**

Best fit polynomial coefficients:  
[ 2.332e+01, 5.684e-01]

Correlation 3 - **PM10** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_33040d54 sensor type **SDS011**:

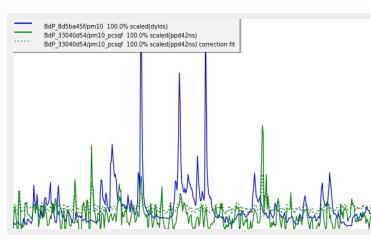


nr samples 480, min= 4.29, max=57.14  
avg=12.84, std dev= 7.22

**R-squared:**  
**0.2883**

Best fit polynomial coefficients:  
[ 1.522e+01, 2.942e+00]

Correlation 4 - **PM10** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_33040d54 sensor type **PPD42NS**:

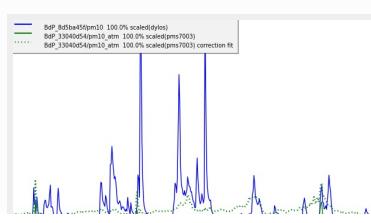


nr samples 474, min= 1.00, max=195.88  
avg=38.47, std dev=21.76

**R-squared:**  
**0.0407**

Best fit polynomial coefficients:  
[ 3.912e+01, 3.684e-01]

Correlation 5 - **PM10** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_33040d54 sensor type **PMS7003**:



nr samples 480, min= 0.67, max=71.40  
avg=16.24, std dev=10.05

**R-squared:**  
**0.0545**

Best fit polynomial coefficients:  
[ 3.806e+01, 9.185e-01]

#### Correlation 6 - **PM10** - kit BdP\_3f18c330 sensor type **SDS011** with kit BdP\_3f18c330 sensor type **PPD42NS**:

nr samples 463, min= 1.00, max=255.25  
avg=53.51, std dev=32.78  
**R-squared:**  
**0.0909**

Best fit polynomial coefficients:  
[ 8.450e+00, 5.197e-02]

#### Correlation 7 - **PM10** - kit BdP\_3f18c330 sensor type **SDS011** with kit BdP\_33040d54 sensor type **SDS011**:

nr samples 480, min= 4.29, max=57.14  
avg=12.84, std dev= 7.22  
**R-squared:**  
**0.9345**

Best fit polynomial coefficients:  
[ 1.491e+00, 7.491e-01]

#### Correlation 8 - **PM10** - kit BdP\_3f18c330 sensor type **SDS011** with kit BdP\_33040d54 sensor type **PPD42NS**:

nr samples 474, min= 1.00, max=195.88  
avg=38.47, std dev=21.76  
**R-squared:**  
**0.0030**

Best fit polynomial coefficients:  
[ 1.062e+01, 1.404e-02]

#### Correlation 9 - **PM10** - kit BdP\_3f18c330 sensor type **SDS011** with kit BdP\_33040d54 sensor type **PMS7003**:

nr samples 480, min= 0.67, max=71.40  
avg=16.24, std dev=10.05  
**R-squared:**  
**0.6651**

Best fit polynomial coefficients:  
[ 3.734e+00, 4.539e-01]

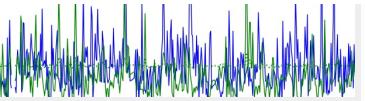
#### Correlation 10 - **PM10** - kit BdP\_3f18c330 sensor type **PPD42NS** with kit BdP\_33040d54 sensor type **SDS011**:

nr samples 463, min= 4.36, max=53.18  
avg=12.89, std dev= 7.16  
**R-squared:**  
**0.0580**

Best fit polynomial coefficients:  
[ 3.929e+01, 1.103e+00]

#### Correlation 11 - **PM10** - kit BdP\_3f18c330 sensor type **PPD42NS** with kit BdP\_33040d54 sensor type **PPD42NS**:

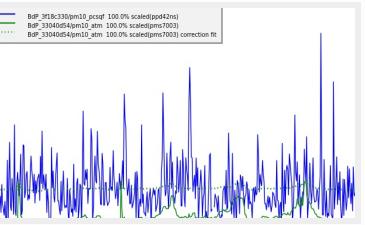
nr samples 440, min= 1.00, max=191.67  
avg=39.24, std dev=24.79  
**R-squared:**



**0.0049**

Best fit polynomial coefficients:  
[ 5.032e+01, 9.362e-02]

Correlation 12 - **PM10** - kit BdP\_3f18c330 sensor type **PPD42NS** with kit BdP\_33040d54 sensor type **PMS7003**:



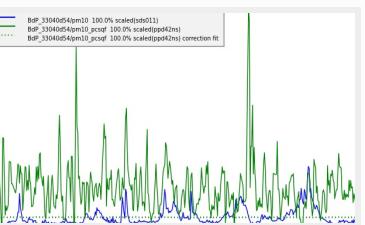
nr samples 463, min= 0.62, max=62.81  
avg=16.29, std dev=10.10

**R-squared:**

**0.0053**

Best fit polynomial coefficients:  
[ 4.967e+01, 2.357e-01]

Correlation 13 - **PM10** - kit BdP\_33040d54 sensor type **SDS011** with kit BdP\_33040d54 sensor type **PPD42NS**:



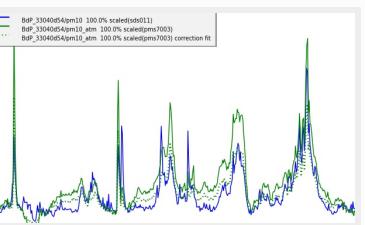
nr samples 474, min= 1.00, max=195.88  
avg=38.47, std dev=21.76

**R-squared:**

**0.0003**

Best fit polynomial coefficients:  
[ 1.266e+01, 5.831e-03]

Correlation 14 - **PM10** - kit BdP\_33040d54 sensor type **SDS011** with kit BdP\_33040d54 sensor type **PMS7003**:



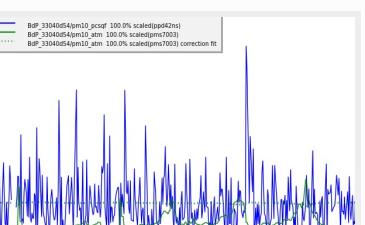
nr samples 480, min= 0.67, max=71.40  
avg=16.24, std dev=10.05

**R-squared:**

**0.7531**

Best fit polynomial coefficients:  
[ 2.712e+00, 6.234e-01]

Correlation 15 - **PM10** - kit BdP\_33040d54 sensor type **PPD42NS** with kit BdP\_33040d54 sensor type **PMS7003**:



nr samples 394, min= 0.91, max=63.79  
avg=16.62, std dev=10.08

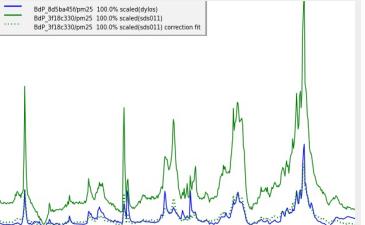
**R-squared:**

**0.0006**

Best fit polynomial coefficients:  
[ 3.934e+01, -6.880e-02]

## Correlation key values for measurement PM2.5

Correlation 16 - **PM2.5** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_3f18c330 sensor type **SDS011**:



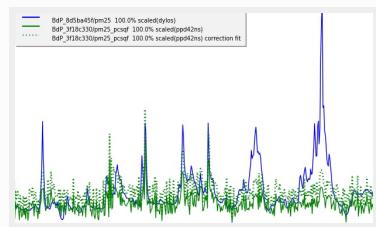
nr samples 480, min=316.14, max=7901.43  
avg=1546.29, std dev=983.13

**R-squared:**

**0.8092**

Best fit polynomial coefficients:  
[ 1.059e+02, 2.811e-01]

Correlation 17 - **PM2.5** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_3f18c330 sensor type **PPD42NS**:



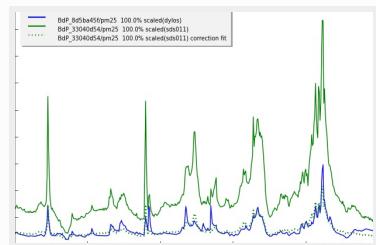
nr samples 480, min=139.90, max=1198.20  
avg=385.40, std dev=118.73

**R-squared:**

**0.2595**

Best fit polynomial coefficients:  
[ 3.253e+01, 1.318e+00]

Correlation 18 - **PM2.5** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_33040d54 sensor type **SDS011**:



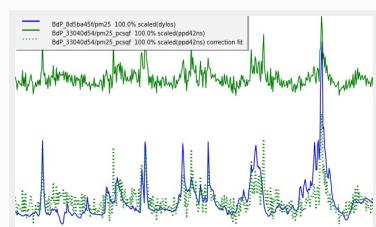
nr samples 480, min=405.57, max=8334.43  
avg=1818.69, std dev=1092.43

**R-squared:**

**0.7772**

Best fit polynomial coefficients:  
[ 8.964e+01, 2.479e-01]

Correlation 19 - **PM2.5** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_33040d54 sensor type **PPD42NS**:



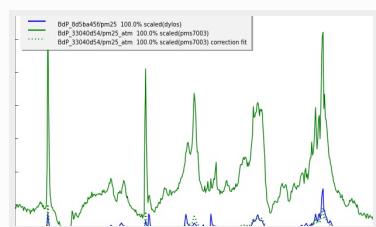
nr samples 480, min=2136.36, max=3351.71  
avg=2402.76, std dev=146.93

**R-squared:**

**0.4418**

Best fit polynomial coefficients:  
[ -2.799e+03, 1.390e+00]

Correlation 20 - **PM2.5** - kit BdP\_8d5ba45f sensor type **DYLOS** with kit BdP\_33040d54 sensor type **PMS7003**:



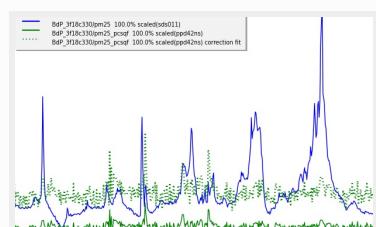
nr samples 480, min=100.60, max=13624.13  
avg=3051.89, std dev=1917.84

**R-squared:**

**0.6605**

Best fit polynomial coefficients:  
[ 1.432e+02, 1.302e-01]

Correlation 21 - **PM2.5** - kit BdP\_3f18c330 sensor type **SDS011** with kit BdP\_3f18c330 sensor type **PPD42NS**:



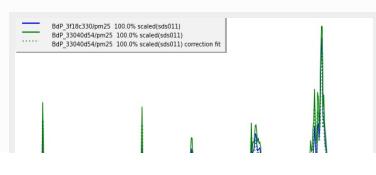
nr samples 480, min=139.90, max=1198.20  
avg=385.40, std dev=118.73

**R-squared:**

**0.0952**

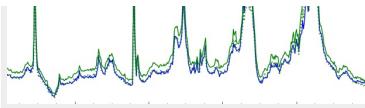
Best fit polynomial coefficients:  
[ 5.614e+02, 2.555e+00]

Correlation 22 - **PM2.5** - kit BdP\_3f18c330 sensor type **SDS011** with kit BdP\_33040d54 sensor type **SDS011**:



nr samples 480, min=405.57, max=8334.43  
avg=1818.69, std dev=1092.43

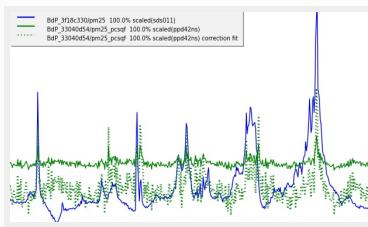
**R-squared:**



**0.9866**

Best fit polynomial coefficients:  
[ -7.946e+01, 8.939e-01]

Correlation 23 - **PM2.5** - kit BdP\_3f18c330 sensor type **SDS011** with kit BdP\_33040d54 sensor type **PPD42NS**:



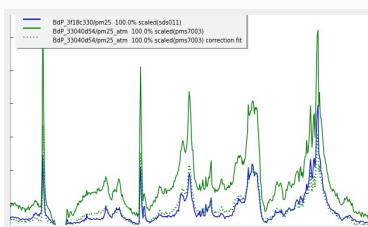
nr samples 480, min=2136.36, max=3351.71  
avg=2402.76, std dev=146.93

**R-squared:**

**0.2955**

Best fit polynomial coefficients:  
[ -7.193e+03, 3.637e+00]

Correlation 24 - **PM2.5** - kit BdP\_3f18c330 sensor type **SDS011** with kit BdP\_33040d54 sensor type **PMS7003**:



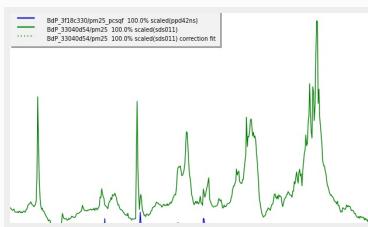
nr samples 480, min=100.60, max=13624.13  
avg=3051.89, std dev=1917.84

**R-squared:**

**0.9009**

Best fit polynomial coefficients:  
[ 6.134e+01, 4.866e-01]

Correlation 25 - **PM2.5** - kit BdP\_3f18c330 sensor type **PPD42NS** with kit BdP\_33040d54 sensor type **SDS011**:



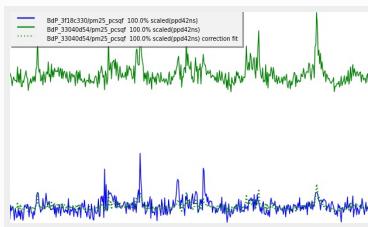
nr samples 480, min=405.57, max=8334.43  
avg=1818.69, std dev=1092.43

**R-squared:**

**0.0828**

Best fit polynomial coefficients:  
[ 3.285e+02, 3.127e-02]

Correlation 26 - **PM2.5** - kit BdP\_3f18c330 sensor type **PPD42NS** with kit BdP\_33040d54 sensor type **PPD42NS**:



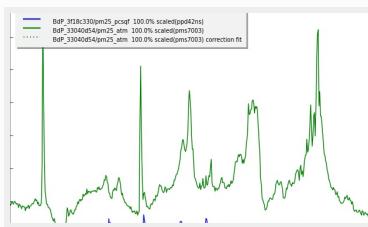
nr samples 480, min=2136.36, max=3351.71  
avg=2402.76, std dev=146.93

**R-squared:**

**0.1983**

Best fit polynomial coefficients:  
[ -4.792e+02, 3.598e-01]

Correlation 27 - **PM2.5** - kit BdP\_3f18c330 sensor type **PPD42NS** with kit BdP\_33040d54 sensor type **PMS7003**:



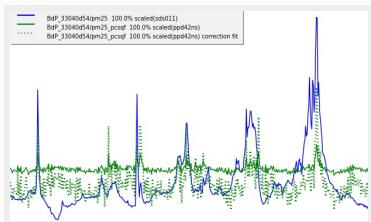
nr samples 480, min=100.60, max=13624.13  
avg=3051.89, std dev=1917.84

**R-squared:**

**0.0862**

Best fit polynomial coefficients:  
[ 3.299e+02, 1.817e-02]

## Correlation 28 - **PM2.5** - kit BdP\_33040d54 sensor type **SDS011** with kit BdP\_33040d54 sensor type **PPD42NS**:



nr samples 480, min=2136.36, max=3351.71  
avg=2402.76, std dev=146.93

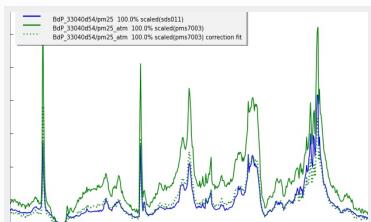
**R-squared:**

**0.2767**

Best fit polynomial coefficients:

[ -7.577e+03, 3.911e+00]

## Correlation 29 - **PM2.5** - kit BdP\_33040d54 sensor type **SDS011** with kit BdP\_33040d54 sensor type **PMS7003**:



nr samples 480, min=100.60, max=13624.13  
avg=3051.89, std dev=1917.84

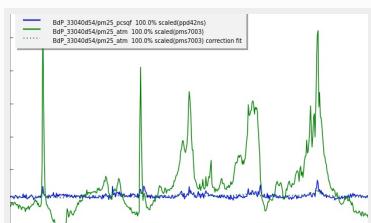
**R-squared:**

**0.9055**

Best fit polynomial coefficients:

[ 1.644e+02, 5.420e-01]

## Correlation 30 - **PM2.5** - kit BdP\_33040d54 sensor type **PPD42NS** with kit BdP\_33040d54 sensor type **PMS7003**:



nr samples 480, min=100.60, max=13624.13  
avg=3051.89, std dev=1917.84

**R-squared:**

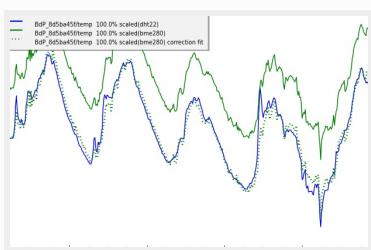
**0.2561**

Best fit polynomial coefficients:

[ 2.284e+03, 3.877e-02]

## Correlation key values for measurement TEMP

### Correlation 31 - **TEMP** - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_8d5ba45f sensor type **BME280**:



nr samples 480, min=26.29, max=31.92  
avg=29.34, std dev= 1.21

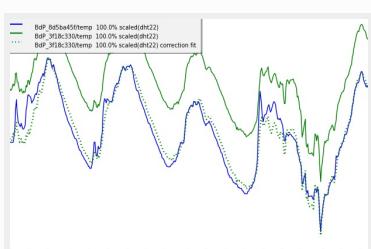
**R-squared:**

**0.9567**

Best fit polynomial coefficients:

[ -4.835e+00, 1.103e+00]

### Correlation 32 - **TEMP** - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_3f18c330 sensor type **DHT22**:



nr samples 480, min=25.65, max=31.98  
avg=29.38, std dev= 1.27

**R-squared:**

**0.9365**

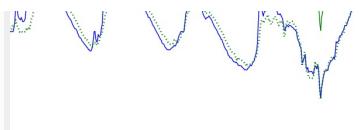
Best fit polynomial coefficients:

[ -2.888e+00, 1.036e+00]

### Correlation 33 - **TEMP** - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_3f18c330 sensor type **BME280**:



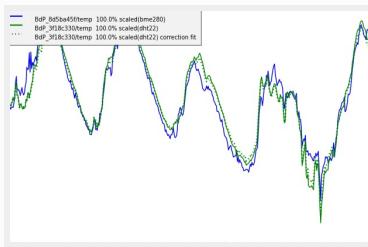
nr samples 480, min=27.14, max=33.73  
avg=30.98, std dev= 1.32



**R-squared:**  
**0.9179**

Best fit polynomial coefficients:  
[ -3.082e+00, 9.883e-01]

#### Correlation 34 - **TEMP** - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **DHT22**:

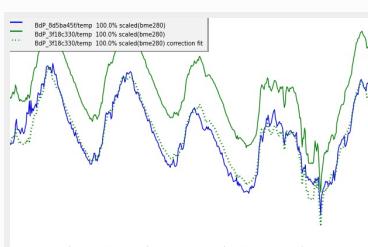


nr samples 480, min=25.65, max=31.98  
avg=29.38, std dev= 1.27

**R-squared:**  
**0.9411**

Best fit polynomial coefficients:  
[ 2.303e+00, 9.202e-01]

#### Correlation 35 - **TEMP** - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **BME280**:

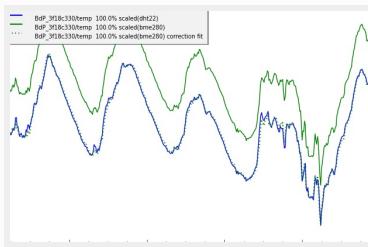


nr samples 480, min=27.14, max=33.73  
avg=30.98, std dev= 1.32

**R-squared:**  
**0.9377**

Best fit polynomial coefficients:  
[ 1.905e+00, 8.856e-01]

#### Correlation 36 - **TEMP** - kit BdP\_3f18c330 sensor type **DHT22** with kit BdP\_3f18c330 sensor type **BME280**:



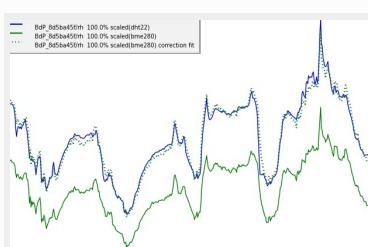
nr samples 480, min=27.14, max=33.73  
avg=30.98, std dev= 1.32

**R-squared:**  
**0.9956**

Best fit polynomial coefficients:  
[ -4.200e-01, 9.619e-01]

### Correlation key values for measurement RH

#### Correlation 37 - **RH** - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_8d5ba45f sensor type **BME280**:

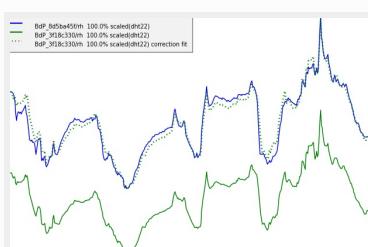


nr samples 480, min=35.96, max=56.00  
avg=44.49, std dev= 3.70

**R-squared:**  
**0.9761**

Best fit polynomial coefficients:  
[ -7.952e+00, 1.340e+00]

#### Correlation 38 - **RH** - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_3f18c330 sensor type **DHT22**:

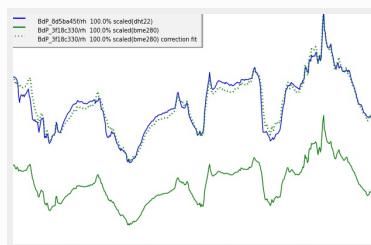


nr samples 480, min=30.02, max=53.51  
avg=39.29, std dev= 4.22

**R-squared:**  
**0.9635**

Best fit polynomial coefficients:  
[ 5.910e+00, 1.165e+00]

## Correlation 39 - **RH** - kit BdP\_8d5ba45f sensor type **DHT22** with kit BdP\_3f18c330 sensor type **BME280**:

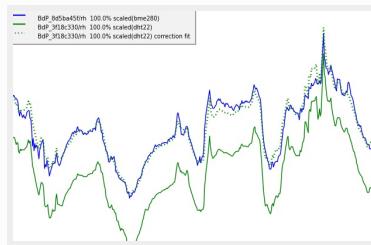


nr samples 480, min=29.35, max=49.46  
avg=37.10, std dev= 3.56

**R-squared:**  
**0.9557**

Best fit polynomial coefficients:  
[ 5.815e-01, 1.378e+00]

## Correlation 40 - **RH** - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **DHT22**:

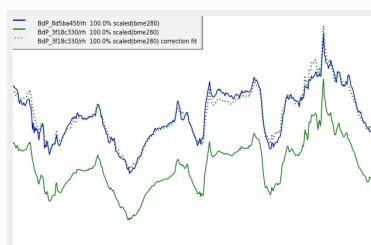


nr samples 480, min=30.02, max=53.51  
avg=39.29, std dev= 4.22

**R-squared:**  
**0.9625**

Best fit polynomial coefficients:  
[ 1.077e+01, 8.583e-01]

## Correlation 41 - **RH** - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **BME280**:

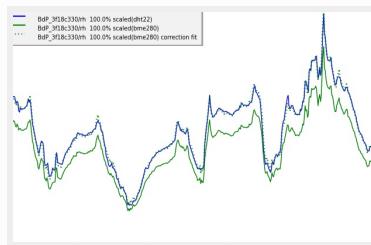


nr samples 480, min=29.35, max=49.46  
avg=37.10, std dev= 3.56

**R-squared:**  
**0.9604**

Best fit polynomial coefficients:  
[ 6.731e+00, 1.018e+00]

## Correlation 42 - **RH** - kit BdP\_3f18c330 sensor type **DHT22** with kit BdP\_3f18c330 sensor type **BME280**:



nr samples 480, min=29.35, max=49.46  
avg=37.10, std dev= 3.56

**R-squared:**  
**0.9958**

Best fit polynomial coefficients:  
[ -4.661e+00, 1.185e+00]

## Correlation key values for measurement PHA

### Correlation 43 - **PHA** - kit BdP\_8d5ba45f sensor type **BME280** with kit BdP\_3f18c330 sensor type **BME280**:

nr samples 480, min=100219.41, max=101508.96  
avg=100962.40, std dev=333.91

**R-squared:**  
**0.9999**

Best fit polynomial coefficients:  
[ 4.684e+01, 9.999e-01]