

Intercomparison of Condensation Particle Counter

Project No.: CPC-2016-3-1

Basic information:

Location of the quality assurance: TROPOS, lab: 130

Delivery date: -

Setup in the laboratory: April 26, 2016

Comparison period: April 26, 2016

Principal Investigator	Home Institution	Participant	Instrument
Markus Wallasch	UBA Wörlitzer Platz1 06844 Dessau-Roßlau GERMANY	-	DE-UBA TROPOS MPSS Neuglobsow TSI CPC Model 3772 # 70944032

TROPOS Reference Instrument: Electrometer: TSI model 3068B
#3068133002
Last calibration in April 2016

Additional Equipment:

- Bubble flow meter 'Gilibibrator', Gilian (Sensidyne)

Summary of Intercomparison:

Pre-status:

The TSI CPC Model 3772 was in good condition.

Final status:

The TSI CPC Model 3772 passed the quality standards of ACTRIS and GAW.

On April 26, 2016, the DE-UBA TROPOS MPSS Neuglobsow 3772 #70944032 participated in the TROPOS ACTRIS-2 CPC-Workshop.

1. Status of the wick: The wick was not clean. It was necessary to clean it.
2. Status of the optics: Laser current was fine, optics needed to be cleaned.
3. General status of the CPC: The CPC was working properly.
4. Final CPC-Workshop: The TSI CPC Model 3772 reached 96% efficiency at 40 nm. The D_{p50} is at 8.9 nm. The CPC efficiency curve corresponds to the standard.

pre-status: 26.04.2016

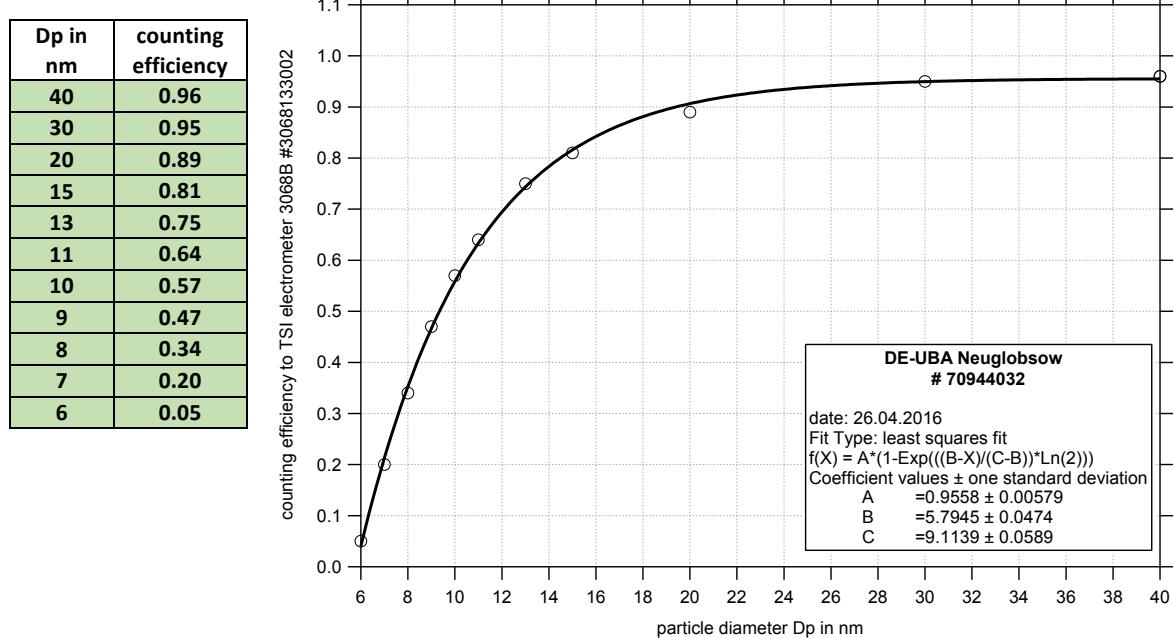


Figure 01: CPC efficiency curve (pre-status). Based on Electrometer TSI 3068B. Serial number: 3068133002

final-status: 26.04.2016

D _p in nm	counting efficiency
40	0.96
30	0.92
20	0.86
15	0.78
13	0.73
11	0.64
10	0.58
9	0.49
8	0.39
7	0.25
6	0.11

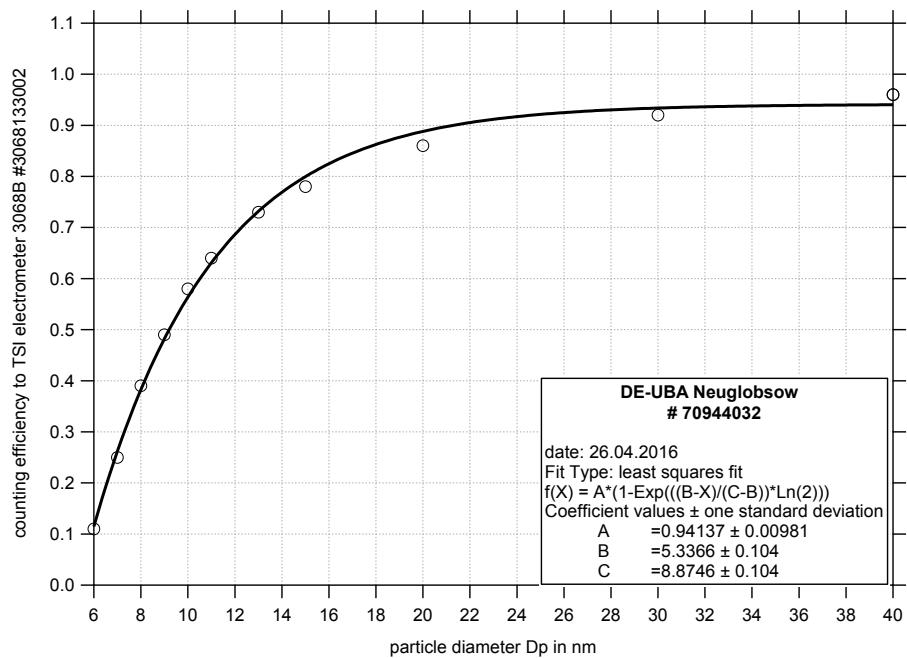


Figure 02: CPC efficiency curve. Based on Electrometer TSI 3068B. Serial number: 3068133002