

## Intercomparison of Condensation Particle Counter

Project No.: CPC-2016-4-20

### Basic information:

<b>Principal Investigator:</b>	Alfred Wiedensohler
<b>Home Institution:</b>	Leibniz-Institut für Troposphärenforschung Permoserstraße 15 04318 Leipzig GERMANY
<b>Participant:</b>	-
<b>Instrument No.1:</b>	DE-TROPOS RR CPC Model 3772, SN: 71011008
<b>Location of the quality assurance:</b>	TROPOS Leipzig, lab 130
<b>Comparison period:</b>	June 24, 2016
<b>Last Intercomparison (with Project No.):</b>	
<b>TROPOS Reference Instrument:</b>	Electrometer: TSI model 3068B #70838596, Last calibration in April 2016
<b>Additional Equipment:</b>	Bubble flow meter 'Gilibrator', Gilian (Sensidyne)

### Summary of Intercomparison:

#### **Final status:**

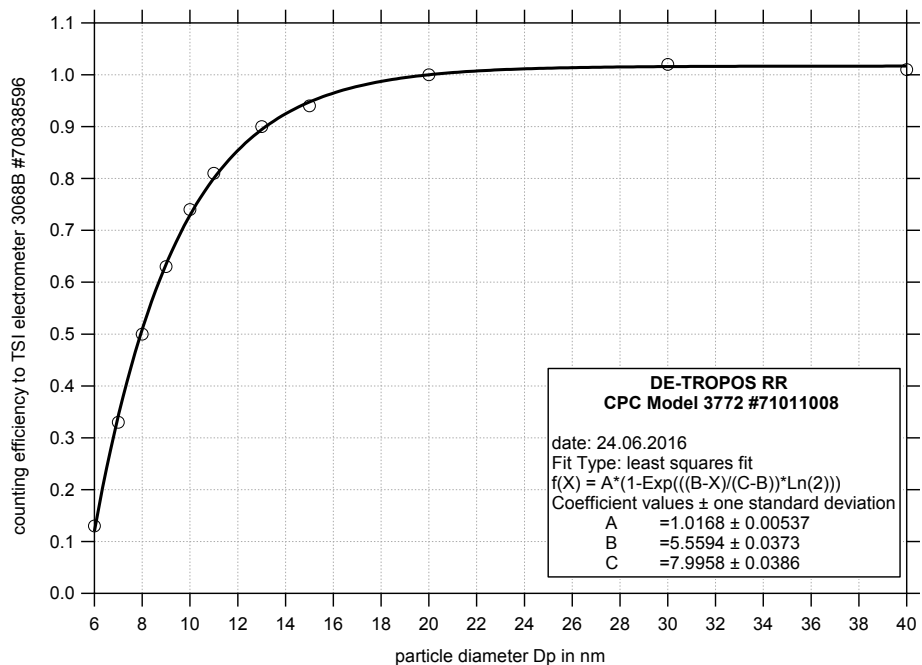
The TSI CPC Model 3772 passed the quality standards of ACTRIS and GAW.

**final-status: 24.06.2016**

1. Status of the wick: The wick was clean.
2. Status of the optics: Laser current was fine, optics did not need to be cleaned.
3. General status of the CPC: The CPC was working properly.
4. Final CPC-Workshop: The TSI CPC Model 3772 reached 100% efficiency at 40 nm. The Dp50 is at 7.9 nm. The CPC efficiency curve corresponds to the standard.

CPC Variable	Status
Saturator Temp	39,0
Condenser Temp	22,0
Optics Temp	40,0
Cabinet Temp	33,8
Ambient Press.	100,9
Orifice Press.	80,5
Nozzle Press.	2,5
Laser	52
Liquid level	full

Dp in nm	counting efficiency
40	1.01
30	1.02
20	1
15	0.94
13	0.9
11	0.81
10	0.74
9	0.63
8	0.5
7	0.33
6	0.13



**Figure 01:** CPC efficiency curve. Based on Electrometer TSI 3068B. Serial number: 70838596



**Kalibrierschein**  
Calibration Certificate

Gegenstand:  
*Object:* Aerosol Elektrometer  
ID-Nummer: TSI\_3068B\_70838596

Hersteller:  
*Manufacturer:* TSI Incorporated

Typ:  
*Type:* 3068B

Kennnummer:  
*Serial No.:* 70838596

Auftraggeber:  
*Applicant:* AG 3.23 - Herr Nowak, Tel.: 3228

Anzahl der Seiten:  
*Number of pages:* 4

Geschäftszeichen:  
*Reference No.:* PTB AG 2.11-1461323527-0327

Kalibrierzeichen:  
*Calibration mark:* 20790 PTB 16

Datum der Kalibrierung:  
*Date of calibration:* 22.04.2016

Im Auftrag:  
*On behalf of PTB:* Braunschweig, 04. Mai. 2016

Im Auftrag:  
*On behalf of PTB:*

391 00B n

Dr. B. Schumacher

Siegel  
*Seal*



C. Rohrig

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