World Calibration Centre
for Aerosol Physics

Leibniz Institute for
Tropospheric Research

Project No	**CPC-2022-WCCAP-133**
CPC Model:	TSI CPC 3756
CPC Serial Number:	SN3756214301
Customer:	Lund University, Adam Kristensson
Description:	Calibration of a Condensation Particle Counter
Date of Calibration:	February 10, 2022

Summary of Intercomparison:

The candidate reached 111% efficiency at 40 nm and 117.5% at 5 nm. This is within the uncertainty of the flow of the UCPC.

Certificate / Reference: WCCAP

Date of issue:	February 10, 2022	Signature	
Reviewed by:	TROPOS	Name:	Dr. Thomas Tuch

Leibniz-Institut für Troposphärenforschung e.V.
Telefon: +49 341 2717-7060
Telefax: +49 341 2717-99-7060
info@tropos.de
http://www.tropos.de

Commerzbank Leipzig
KTO 102 14 50
BLZ 860 400 00
IBAN: DE77 8604 0000 0102 1450 00
SWIFT CODE: COBADEFF 860

Mitglied der Leibniz-Gemeinschaft

World Calibration Centre for Aerosol Physics

TROPOS

Leibniz Institute for Tropospheric Research

	Unit	Status
Participant		TSMPS Lund
CPC Model		TSI 3756 SN3756214301
Firmware		2.1.5
Manufacture date		2021
Last service date		n/a
Arrival date		
Software Version		Labcount 2021
Saturator Temperature	°C	39.0
Condenser Temperature	°C	10.0
Optics Temperature	°C	40.0
Cabinet Temperature	°C	27.3
Ambient Pressure	mbar	1025
Vaccuum Pressure	kPa	54.8
Inlet Pressure	kPa	-0.3
Critical Orifice Pressure	kPa	55.7
Aerosol Nozzle Pressure	kPa	3.34
Laser Current	mA	44
Liquid Level		full
Aerosol Flow	L/min	1.5/0.052 (indicated)
Zero	avg 10 min	0
Physical inspection		ok
Functional test		ok

Bitte nochmal alle Werte in der Tabelle überprüfen. Danke.

Table 1. Diagnostic information of candidate

Leibniz-Institut für Troposphärenforschung e.V.
Telefon: +49 341 2717-7060
Telefax: +49 341 2717-99-7060
info@tropos.de
http://www.tropos.de

Commerzbank Leipzig
KTO 102 14 50
BLZ 860 400 00
IBAN: DE77 8604 0000 0102 1450 00
SWIFT CODE: COBADEFF 860

Mitglied der Leibniz-Gemeinschaft

Aerosol electrometer	TSI Electrometer Model 3068, SN 70838596
Particles and gases used for calibration	silver particles and nitrogen
Method of particle generation	tube furnace generator
Electrometer calibration certificate	September, 2021, calibrated at PTB Braunschweig
Corrections of electrometer (i.e. differing flow rate)	Within tolerance range (+/-2%); reference: 4.0 l/min, measured: 4.0 l/min
Logging software	LabView 2021; National Instruments; Program „LabCount.vi“
Uncertainty in measured flow rate	3%
Flowmeter used	Gilian Gilibrator 3; SN 21181001005, 2021
Lab Temperature and Pressure	23.0°C, 1025 mbar

Table 2. Calibration and laboratory conditions

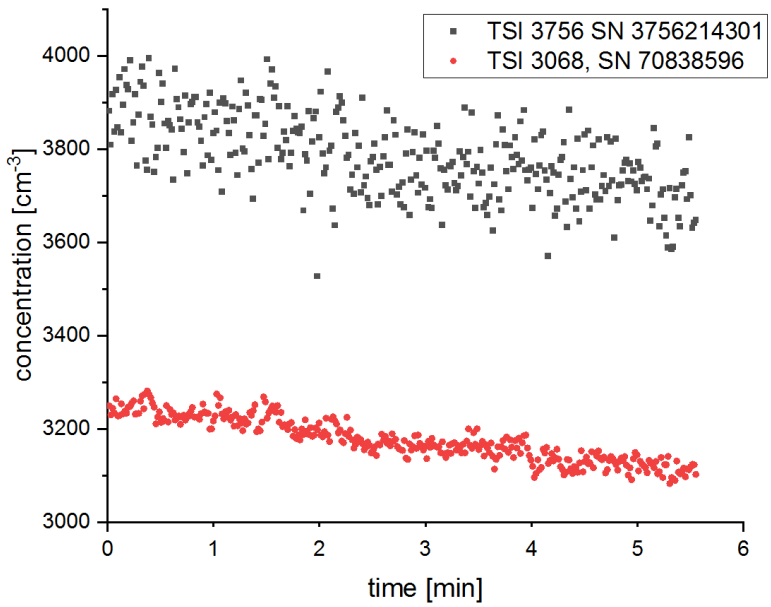

Fig. 1. Time series of the Lund UCPC TSI 3756 SN3756214301 and the electrometer 3068, SN 70838596 for 40 nm silver particles.

World Calibration Centre
for Aerosol Physics

Leibniz Institute for
Tropospheric Research

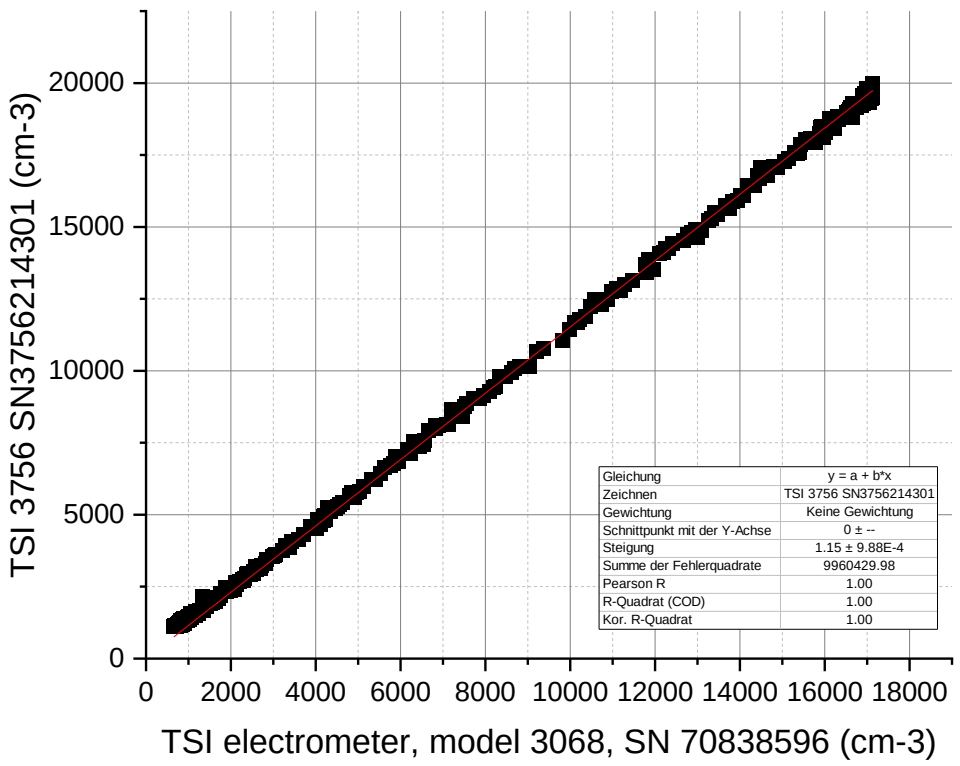

Fig. 2. Linearity of candidate UCPC versus TSI electrometer Model 3068, SN 70838596 Silver 30nm.

Date of issue:	*February 10, 2022*
Reference:	TSI electrometer, model 3068, SN 70838596
Reviewed:	TROPOS/Dr. Thomas Tuch

Leibniz-Institut für Troposphärenforschung e.V.
Telefon: +49 341 2717-7060
Telefax: +49 341 2717-99-7060
info@tropos.de
http://www.tropos.de

Commerzbank Leipzig
KTO 102 14 50
BLZ 860 400 00
IBAN: DE77 8604 0000 0102 1450 00
SWIFT CODE: COBADEFF 860

Mitglied der Leibniz-Gemeinschaft