

Intercomparison of Condensation Particle Counter

Project No.: CPC-2016-1-3

Basic information:

Location of the quality assurance: TROPOS, lab: 130

Delivery date: -

Setup in the laboratory: January 25, 2016

Comparison period: January 26, 2016

Principal Investigator	Home Institution	Participant	Instrument
Jean-Philippe Putaud	JRC Via E. Fermi 2749 21027 Ispra Italy	Sebastiao Martins dos Santos	IT-JRC Ispra TSI CPC Model 3772 # 70847419

TROPOS Reference Instrument: Electrometer: TSI model 3068B
70838596

Additional Equipment:

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

Summary of Intercomparison:

Pre-status:

The TSI CPC Model 3772 was not in good condition. It was necessary to clean the CPC and change the laser.

Final status:

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

On January 26, 2016, the IT-JRC Ispra 3772 #70847419 participated in the TROPOS ACTRIS-2 CPC-Workshop.

1. Status of the wick: The wick was not clean. It was necessary to clean the whole saturator.
2. Status of the CPC: The CPC was not working properly. The TSI CPC Model 3772 reached only 85% efficiency at 30 nm. The Dp50 was at 7.7 nm. It was necessary to clean the optics. The power of the laser was out of the range. It was necessary to replace.
3. Final CPC-Workshop: The TSI CPC Model 3772 reached 98% efficiency at 40 nm. The Dp50 is at 7.9 nm. The CPC efficiency curve corresponds to the standard.

Pre-status: 26.01.2016, Tuesday

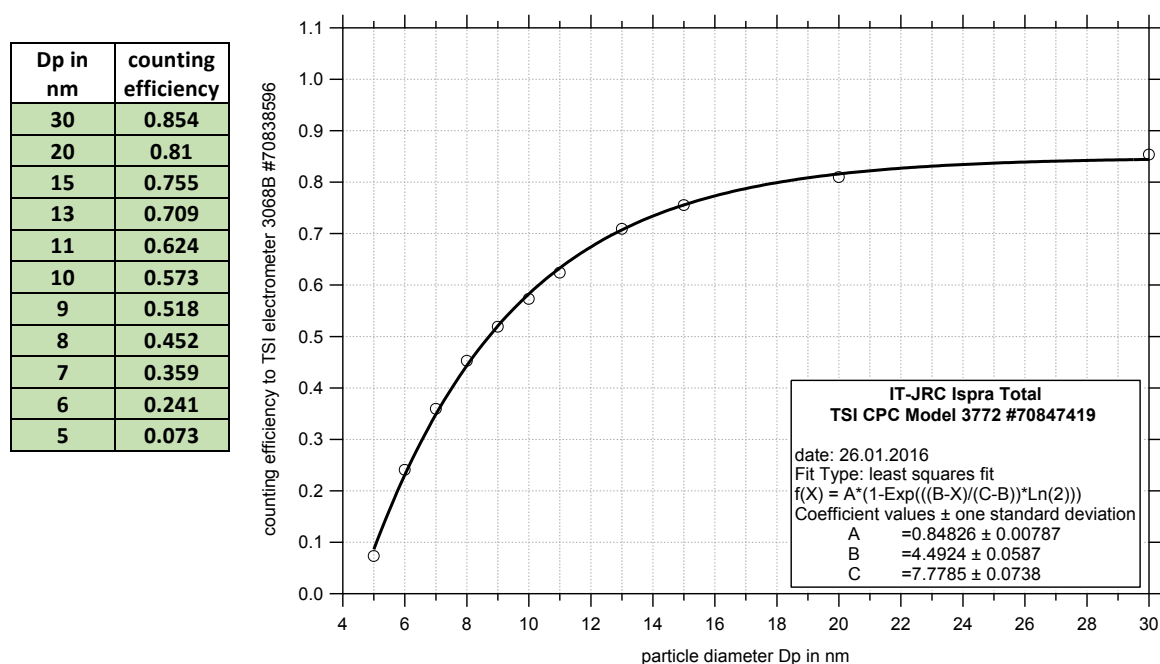


Figure 01: CPC efficiency curve. Based on Electrometer TSI 3068B. Serial number: 70838596

final-status: 17.02.2016, Wednesday

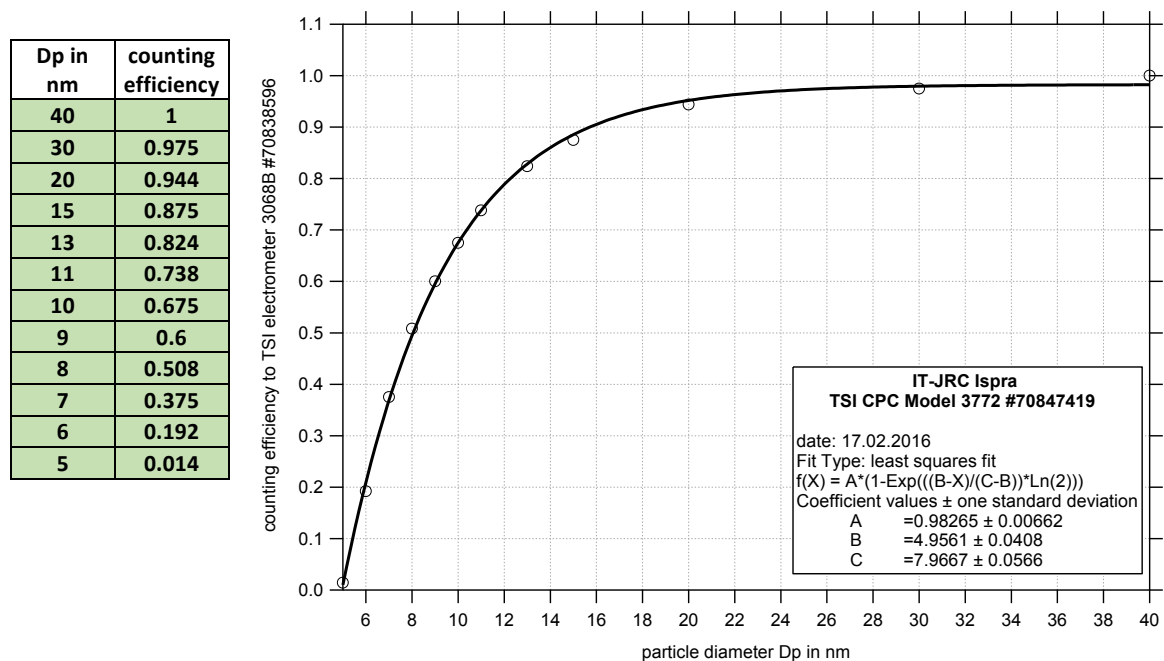


Figure 02: CPC efficiency curve. Based on Electrometer TSI 3068B. Serial number: 70838596