

Intercomparison of Mobility Particle Size Spectrometers

Project No.: MPSS-2020-3-5

Principal Investigator: TROPOS

Home Institution: TROPOS

Participant: -

Candidate: TROPOS MPSS Haenger

Made by: TROPOS

Counter (SN): TSI CPC 3772 SN: 70835059

Location of the quality assurance: TROPOS Leipzig, lab 118

Comparison period: May 15, 2020 – May 18, 2020

Last Intercomparison (with Project No.):

Intercomparison between TROPOS Reference Instrument No. 1 and MPSS Haenger
15.05.2020 18:00PM – 18.05.2020 06:00AM

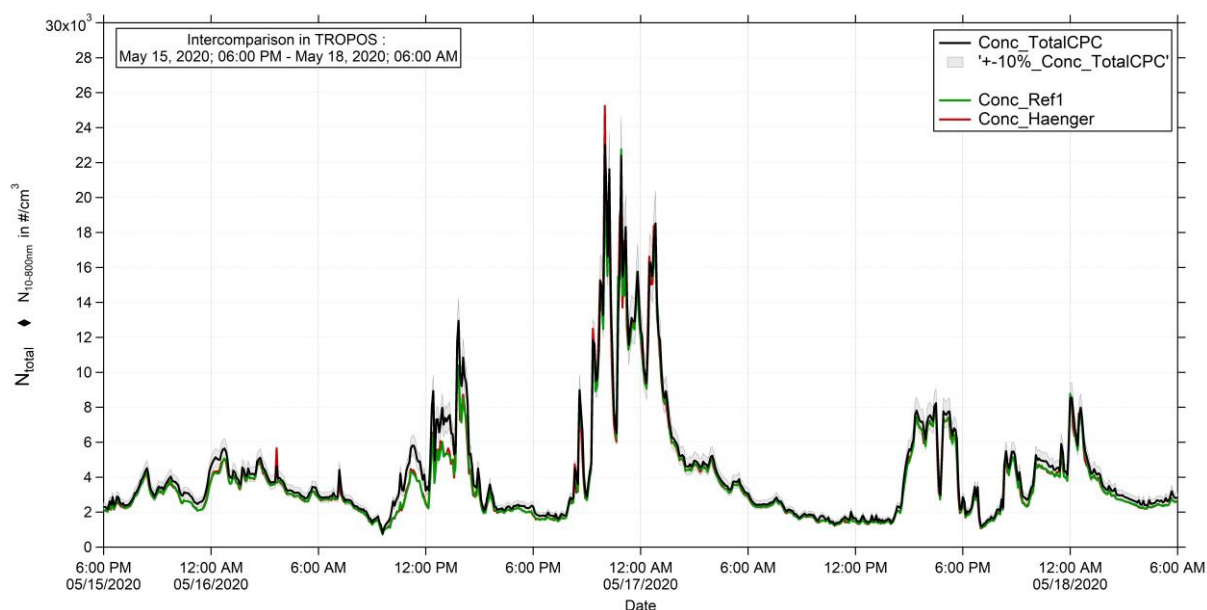


Figure 01: Time series (May 15, 2020 6 PM – May 18, 2020 6 AM) of the integrated particle number concentration ($N_{10-800nm}$) of the MPSS and total number concentration (N_{total}) of the Reference TSI-CPC Model 3772. Multiple charge correction, internal diffusion losses, CPC flow corrections. The candidate is running with the TSI Kr.85 source.

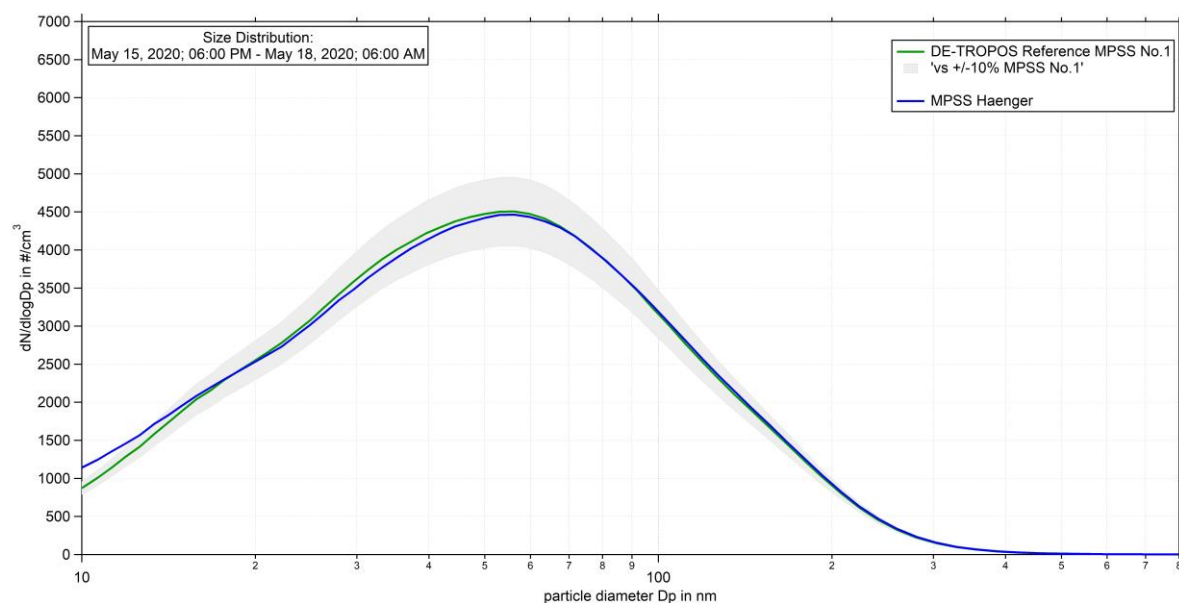


Figure 02: Particle size distribution for TROPOS Reference MPSS No.1 and DE-TROPOS MPSS Haenger, flow corrections, multiple charge correction and diffusion loss corrections are included.

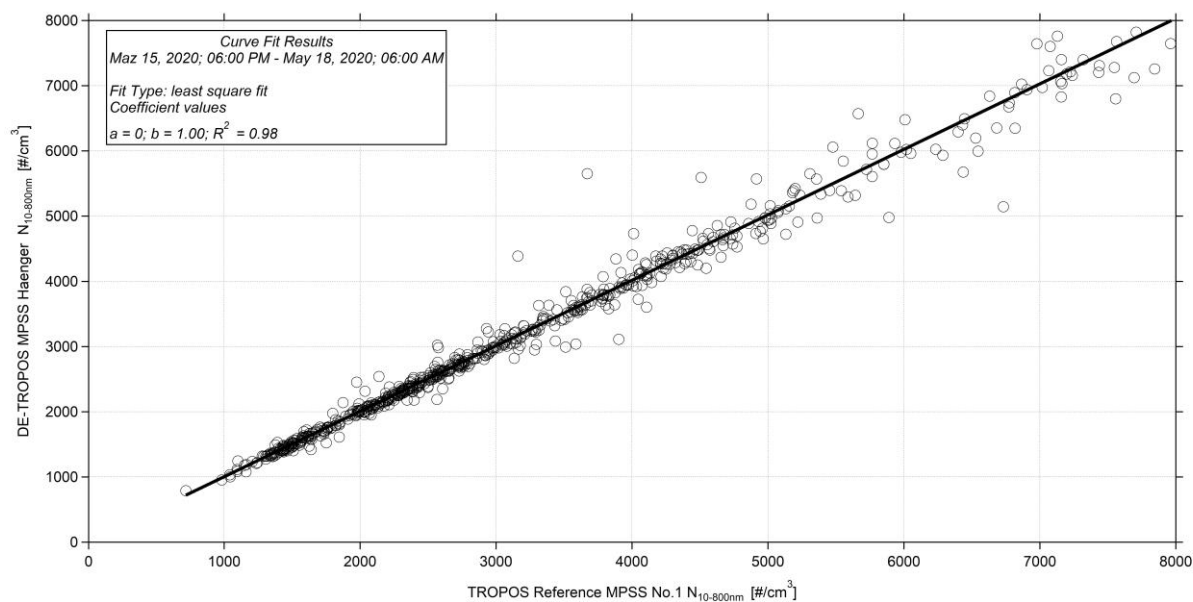


Figure 03: Linear regression between the number concentration of the TROPOS Reference MPSS No. 1 and DE-TROPOS MPSS Haenger.

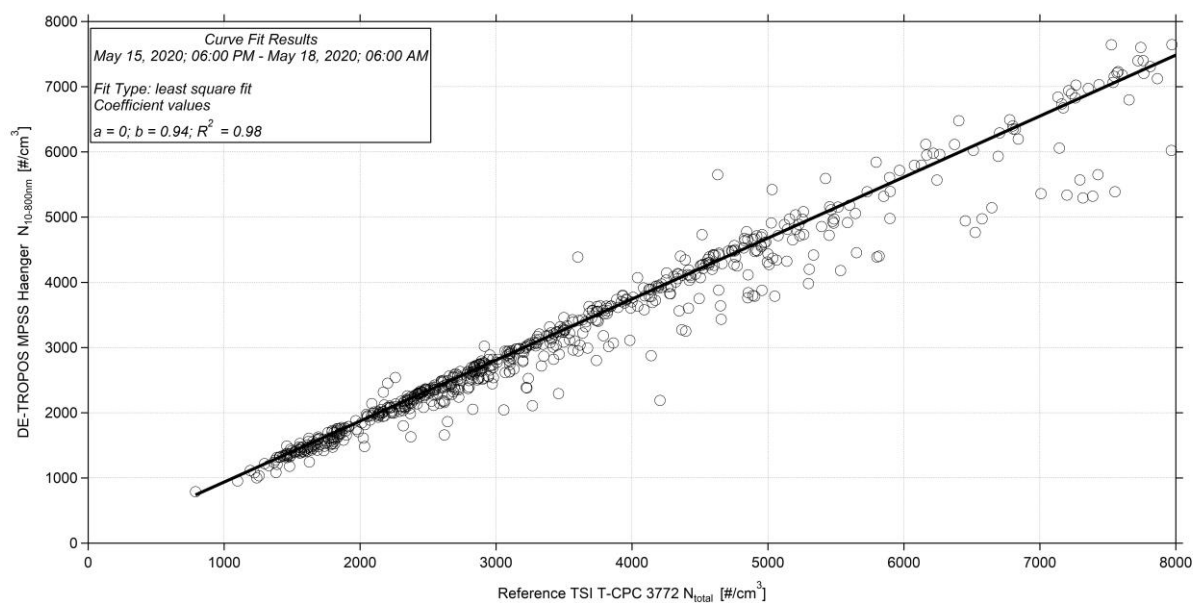


Figure 04: Linear regression between the number concentration of the TROPOS Reference Total-CPC Model 3772 and DE-TROPOS MPSS Haenger.

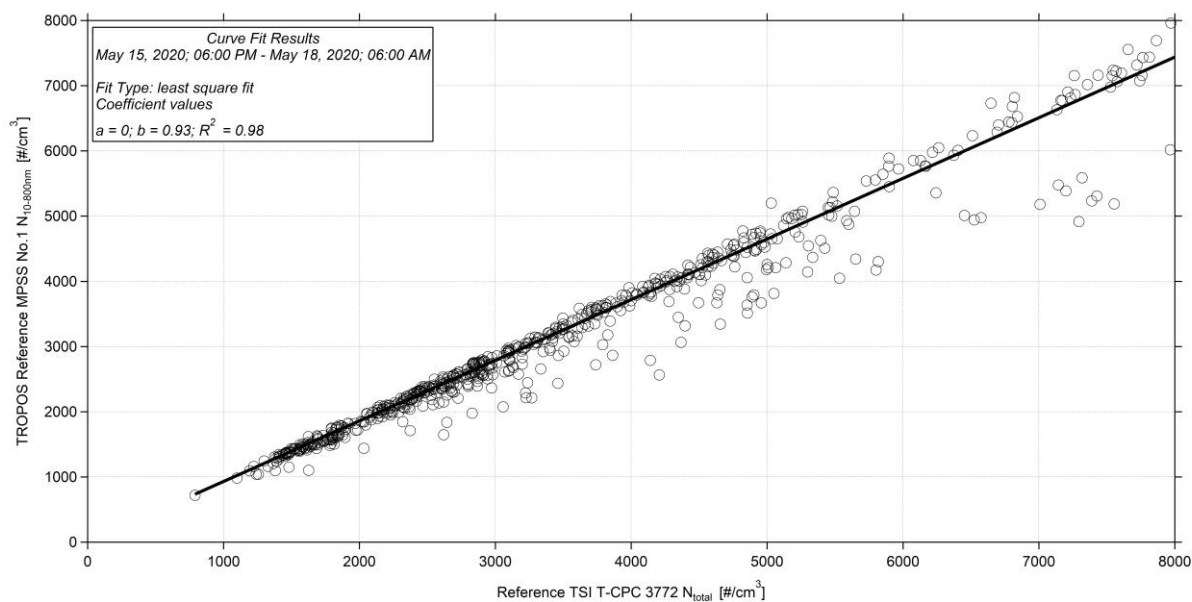


Figure 05: Linear regression between the number concentration of the TROPOS Reference Total-CPC Model 3772 and TROPOS Reference Instrument No. 1.

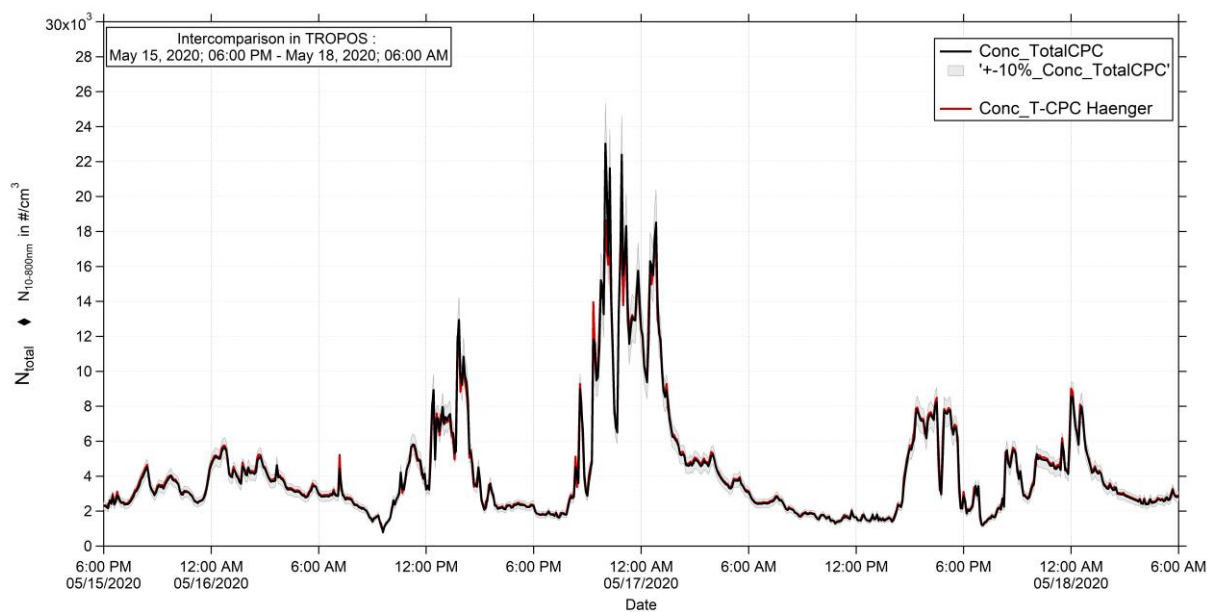


Figure 06: Time series (May 15, 2020 6 PM – May 18, 2020 6 AM) of the DE-TROPOS Reference T-CPC No.1 and the DE-TROPOS T-CPC Haenger.

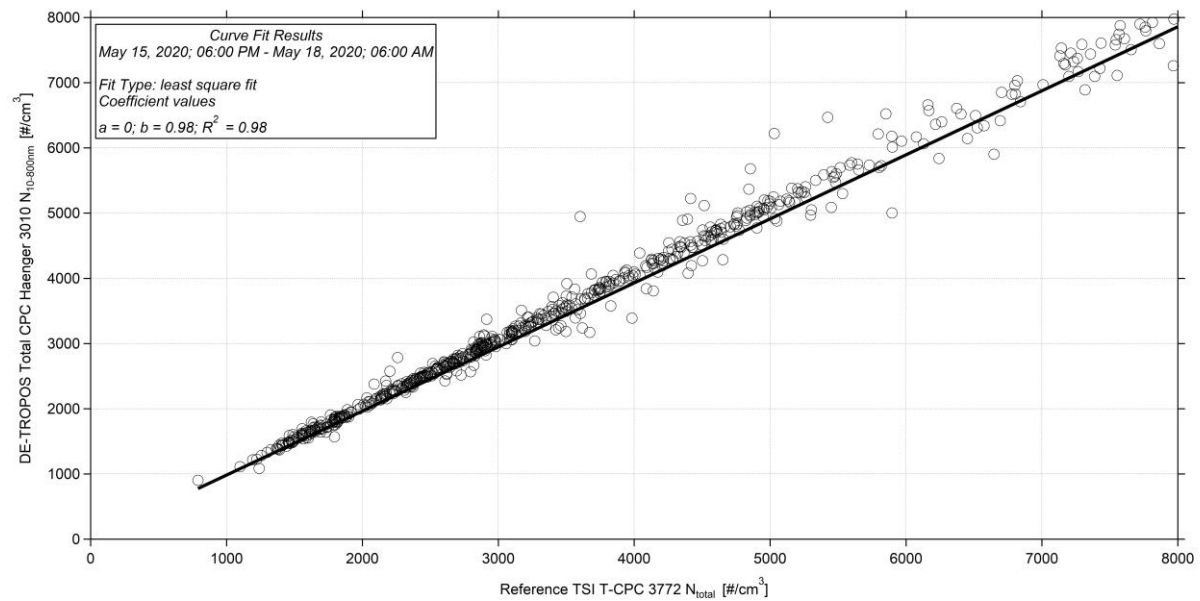


Figure 07: Linear regression between the number concentration of the DE-TROPOS Reference Total-CPC Model 3772 and DE-TROPOS Haenger T-CPC Model 3010.