Aerosols at Salzburg airport:
Long-term measurements of ultrafine particles at two locations along the runway

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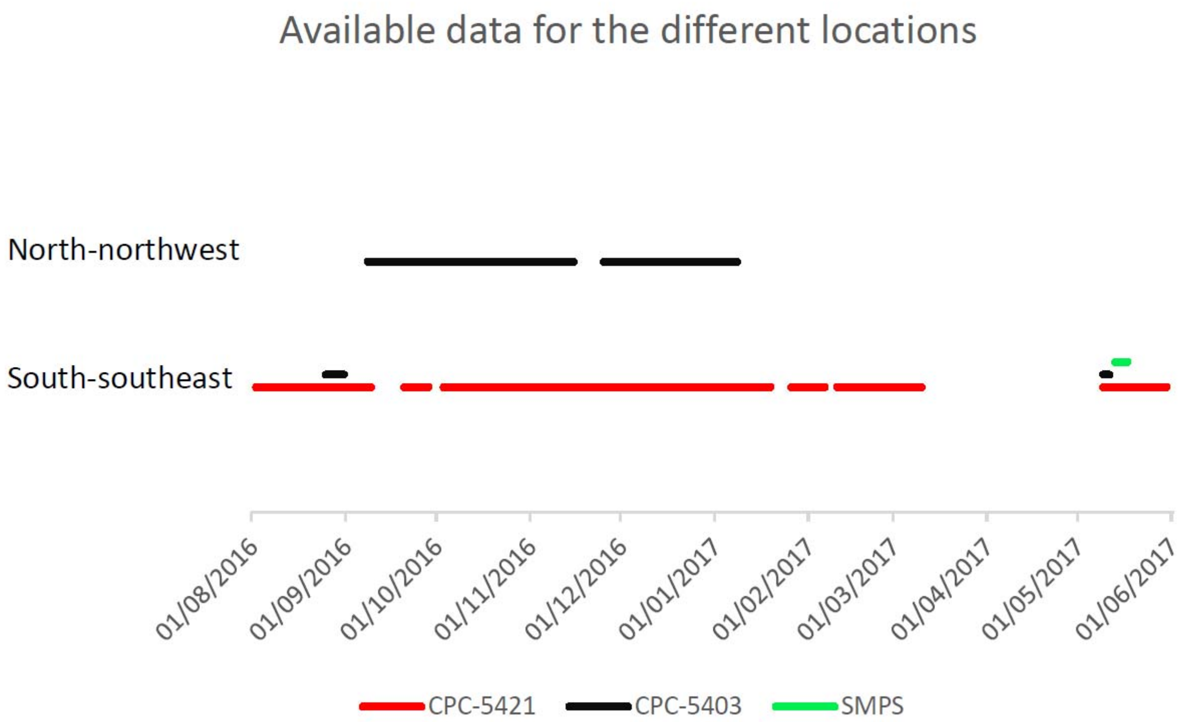
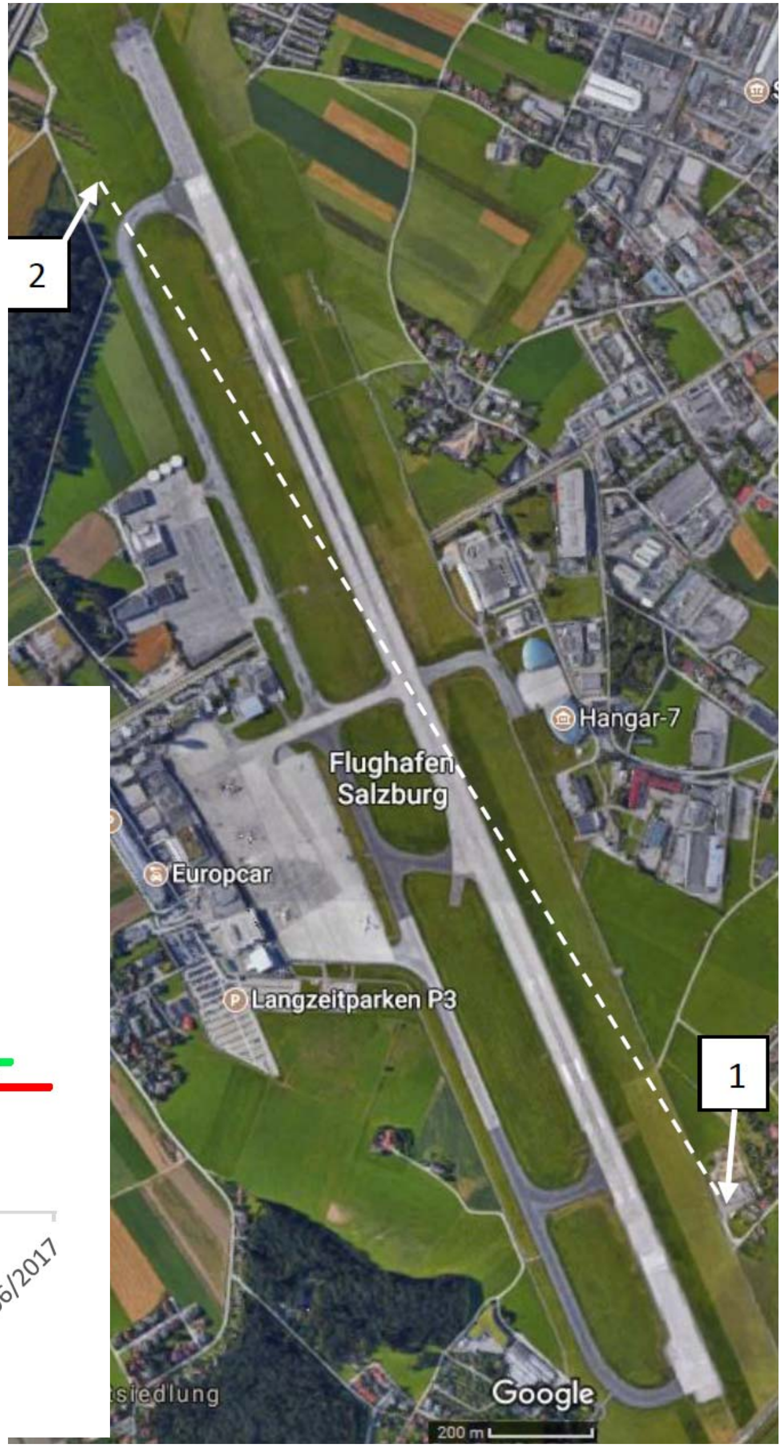
Standorte der Messstationen (rechts)

Übersicht der Messungen (unten)





Messstationen:
Standort 1 im Südosten (rechts)
Standort 2 im Nordwesten (unten)

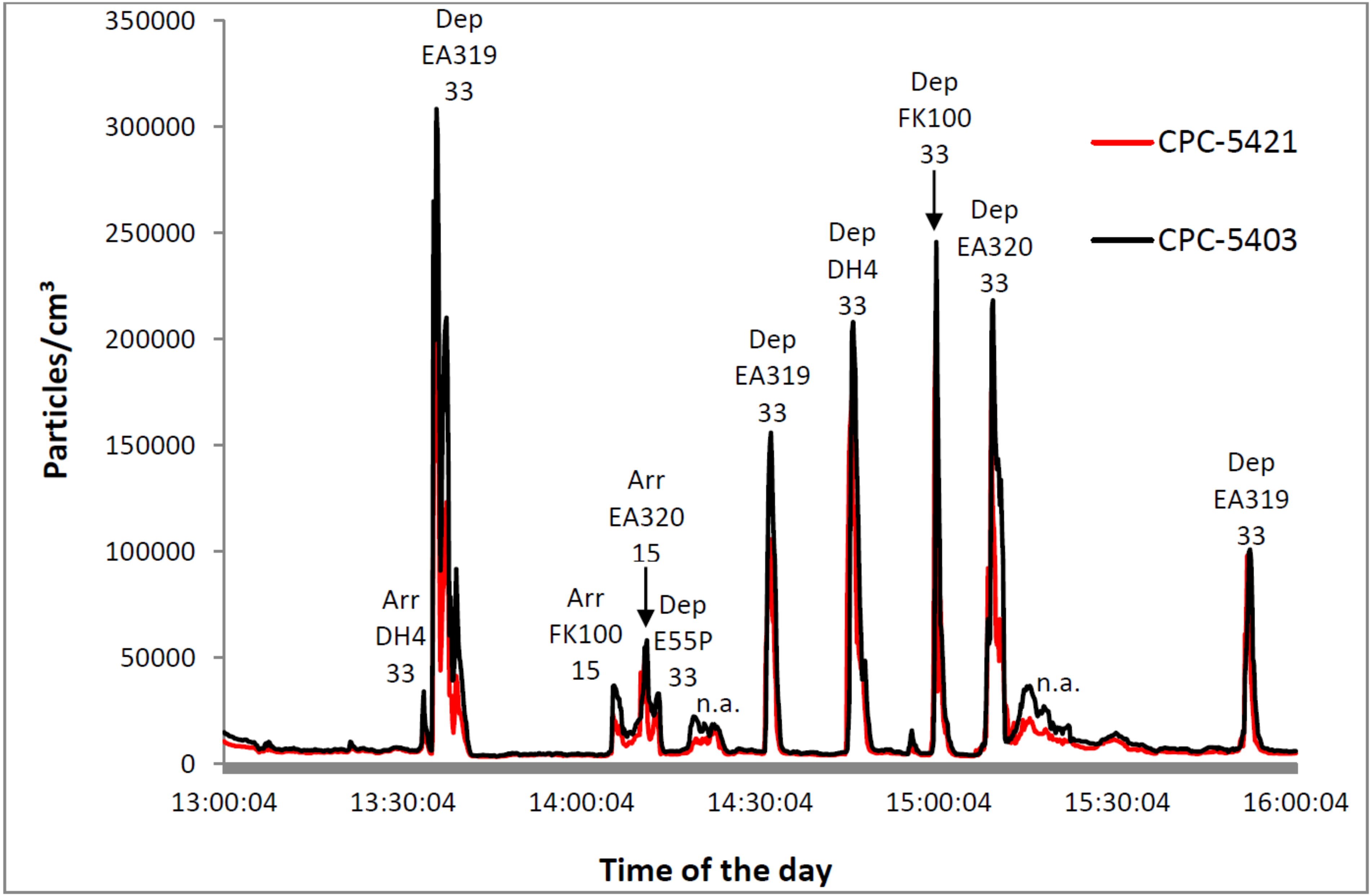


Figure 7: Emissions in the southeast by both CPCs on Mondayafternoon the 29th of August 2016

Arrival (Arr) & Departure (Dep), the type (see appendix III) and the direction of LTO activity (15 or 33)

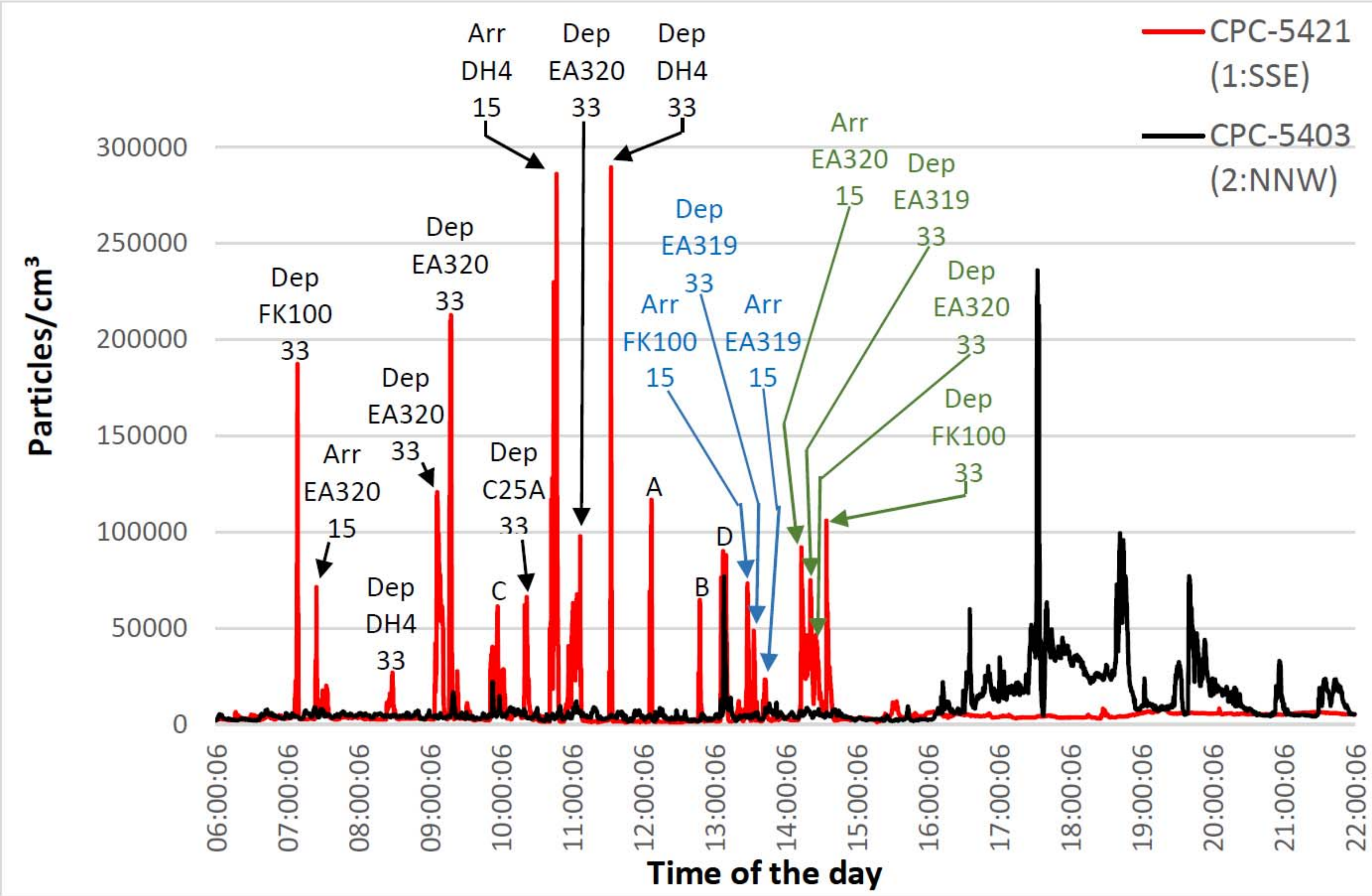


Figure 12: Particle numbers at both locations on Sunday 6th of November 2016 (6h00 - 22h00) Arrival (Arr) & Departure (Dep), the type (see appendix III) and the direction of LTO activity (15 or 33)

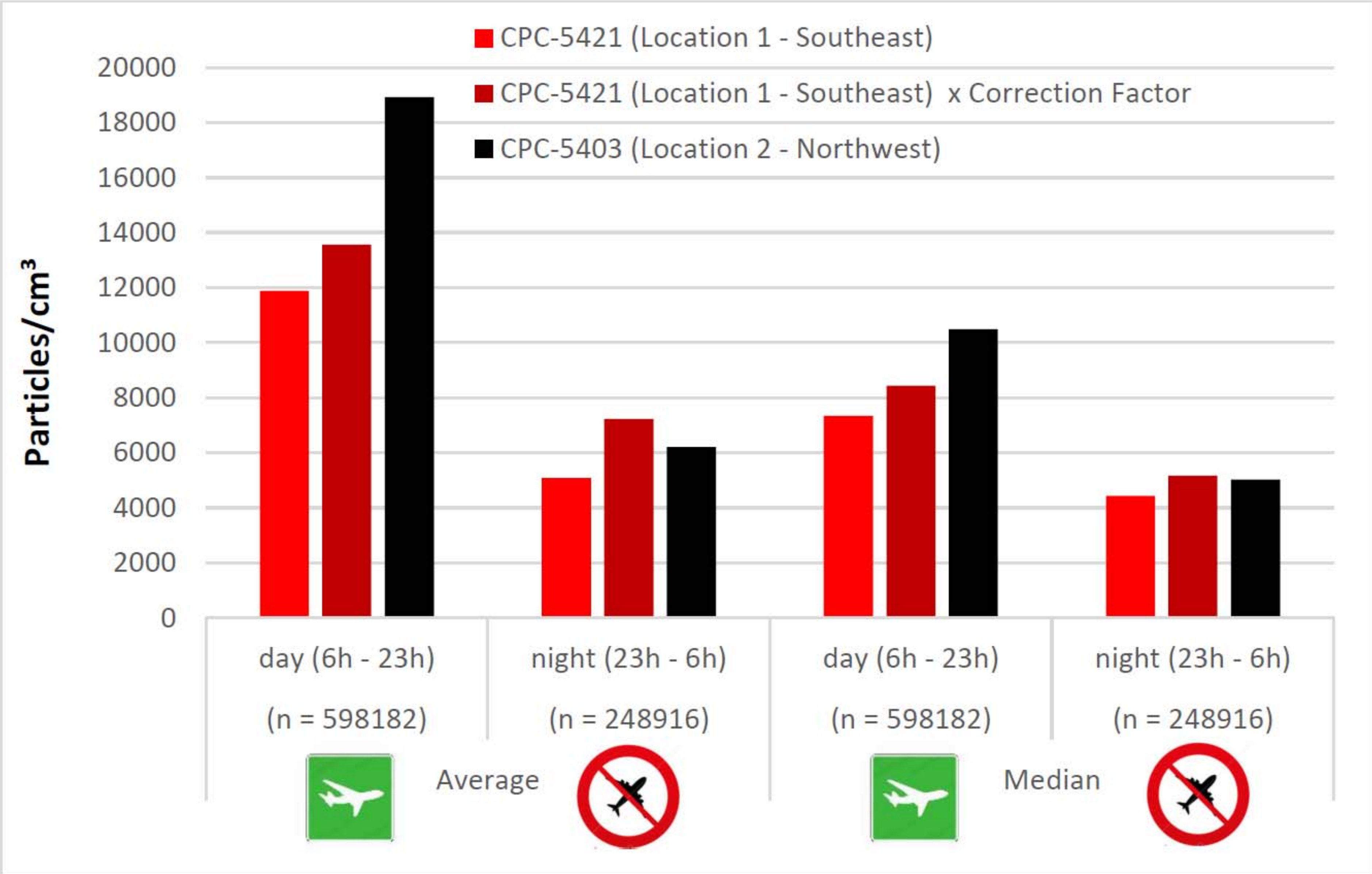


Figure 11: Particle numbers during the day and during the night at both locations

The Correction Factor was set at 1.165

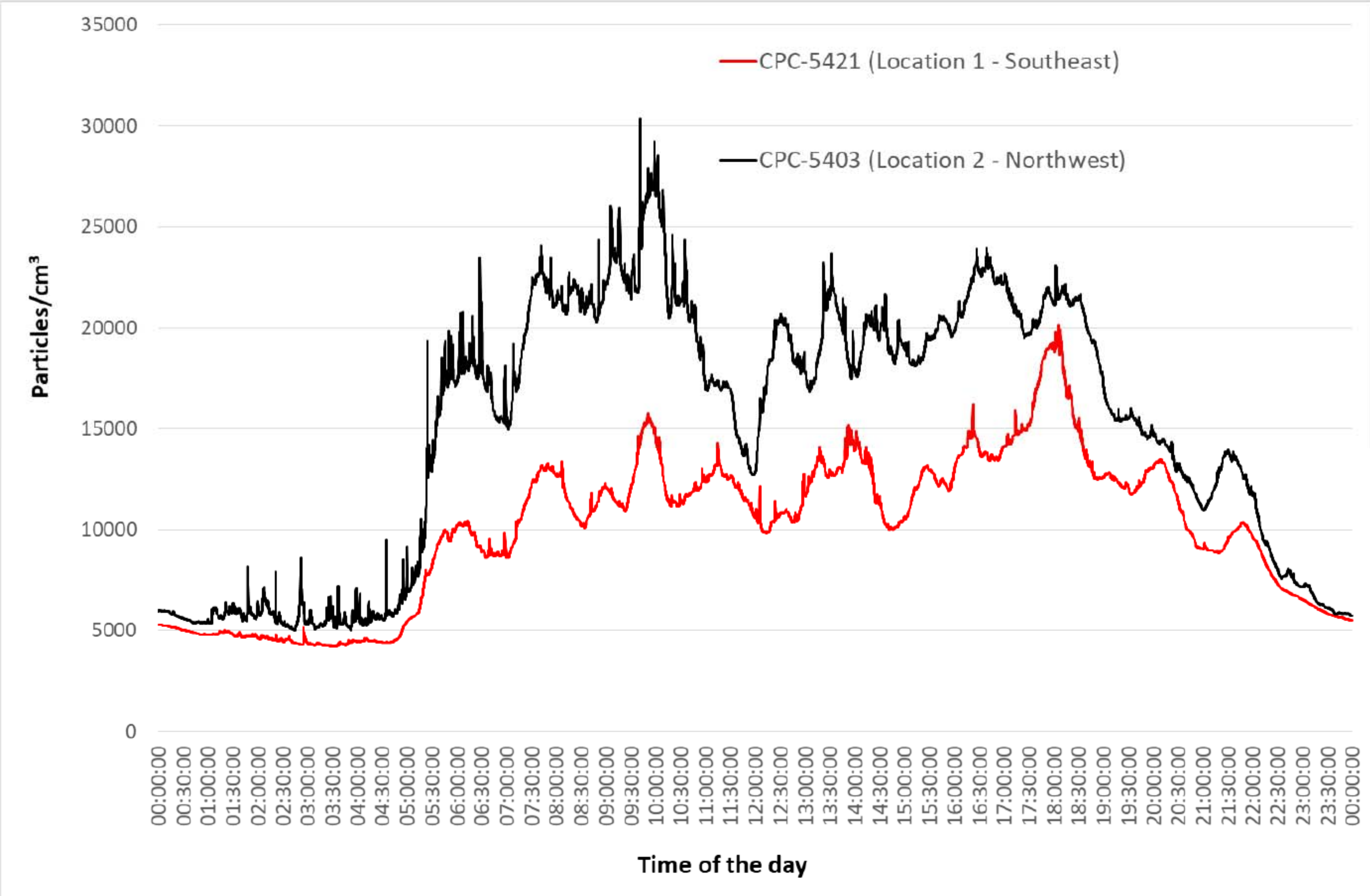


Figure 27: Half-hourly moving averages of particle numbers in ten-second intervals for 83 complete days at both measurement stations

Airport (reference)	**Measurement location**	**Estimated contribution of LTO activity**	**Peak number**
LAX (Westerdahl et al, 2008)	End of the runway	150,000 particles/cm^3 (median contrib.)	>7,100,000 particles/cm^3
AMS (Keuken et al, 2015)	Amsterdamse Bos, about 7km to the east of AMS	> 27,000 particles/cm^3 during wind from AMS 4,500 particles/cm^3 during all wind conditions (average contrib. 6h-23h)	not given
CIA (Stafoggia et al, 2016)	380m to the SW of the airport centroid (runway)	in the 5 min after take-off 59,900 particles/cm^3 during wind from CIA 3,500 particles/cm^3 during wind towards CIA	>398,100 particles/cm^3
TSN (Ren et al, 2016)	About 250m perpendicular to the middle of the runway	170,000 particles/cm^3 during wind from the runway at 3-4 m/s	not given
CPH (Press-Kristensen et al, 2012)	Different sites at the airport where employees work regularly	5,000-85,000 particles/cm^3 depending on measurement location	>450,000 particles/cm^3
SZG	150m SE of runway 150m NW of runway	2,000-4,000 particles/cm^3 5,000-9,000 particles/cm^3 (average-median 6h-23h, all wind conditions)	859,000 particles/cm^3 2,248,000 particles/cm^3

Table F: Estimated contribution of LTO activity to particle concentrations in different studies

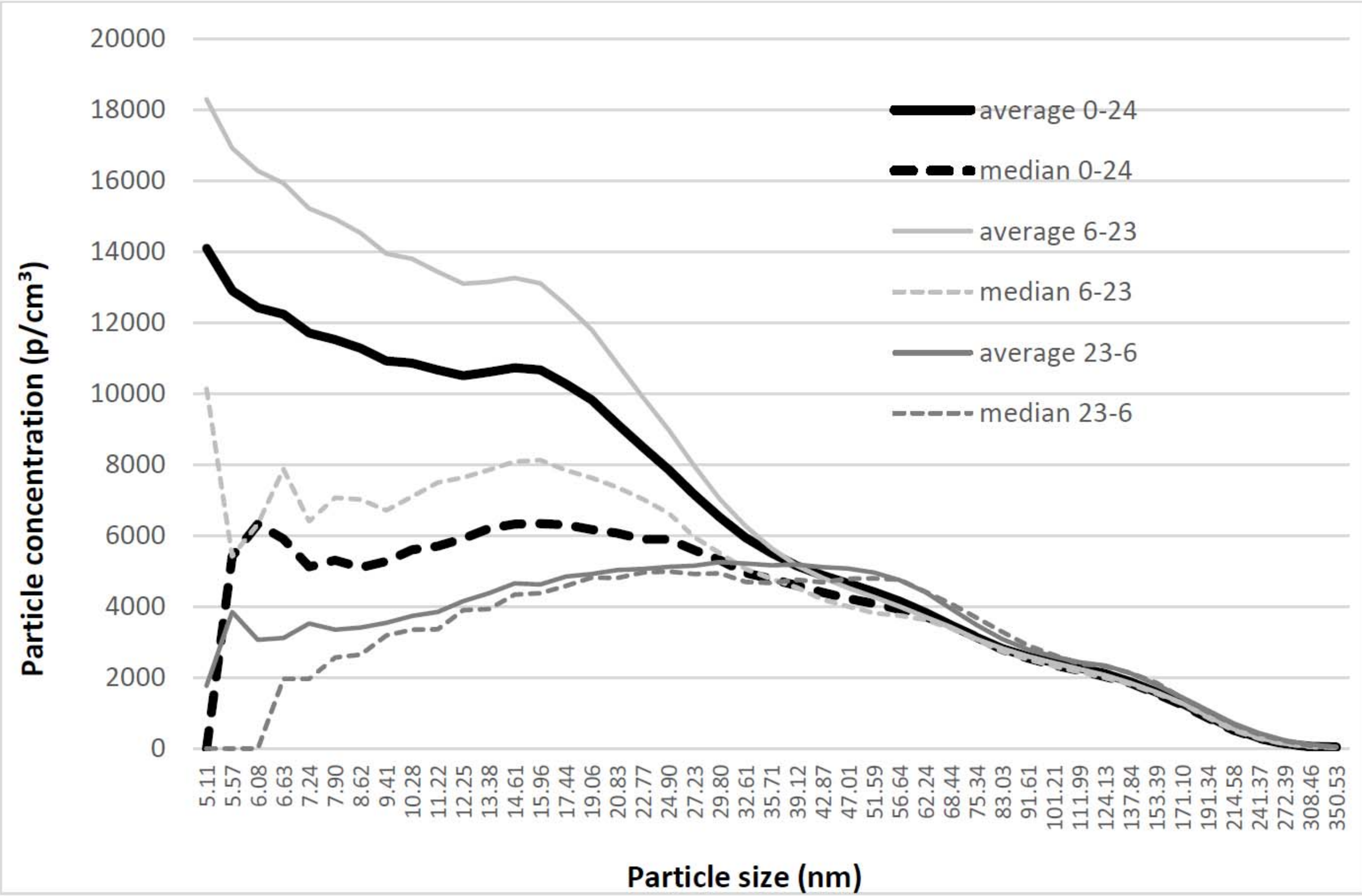


Figure 24: Average and median concentrations for given particle sizes over different part of the day from the 13th of May 2017 at 0h00 until the 17th of May 2017 at 24h00 at location 1

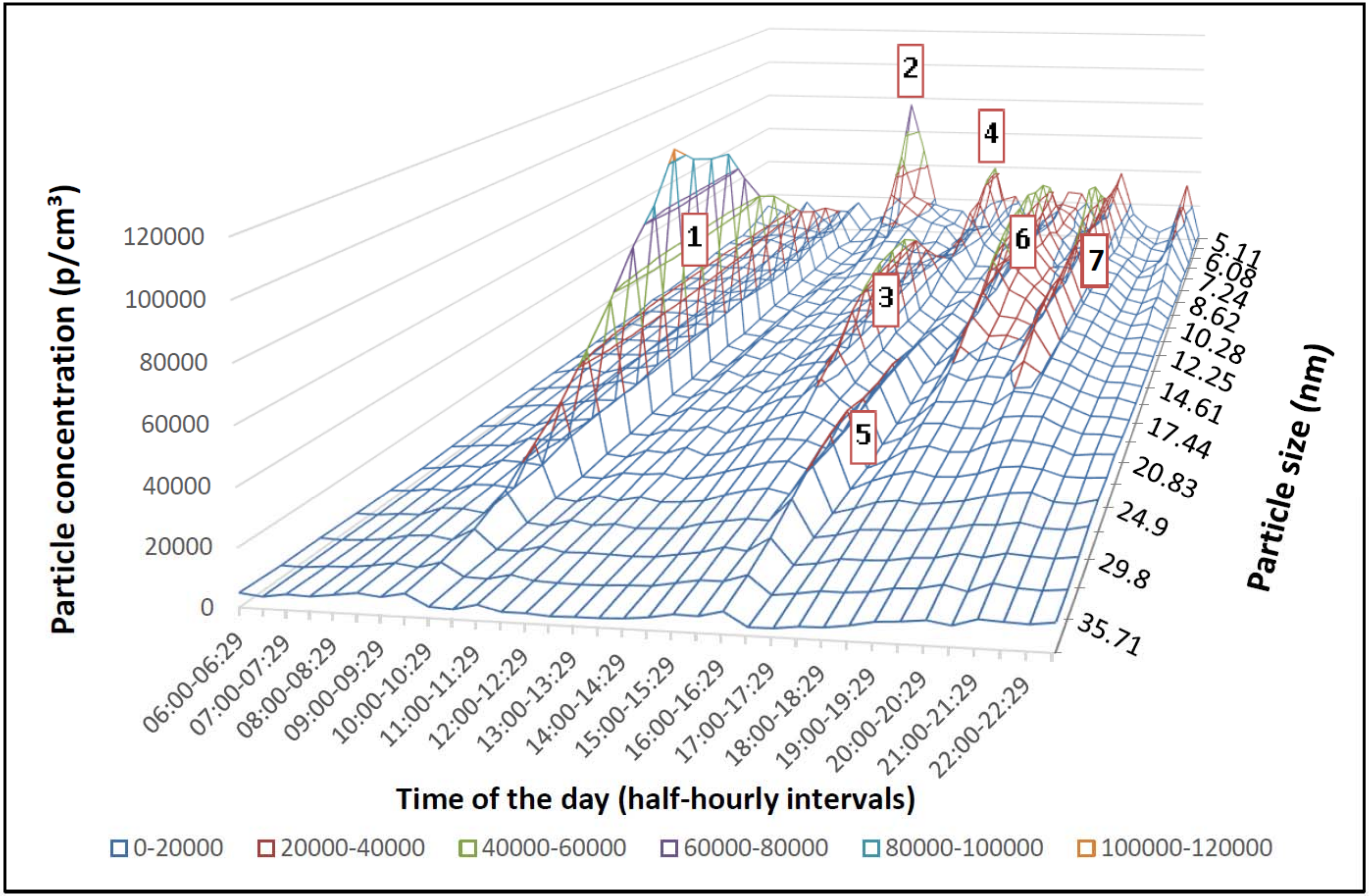


Figure 25: Particle concentrations for given particle size at location 1 on Saturday the 13th of May 2017, depicted in half-hourly averages