

Supplementary information for: “Concentrations and size distributions of particle lung-deposited surface area (LDSA) in an underground mine” by Salo et al.

Table S 1: The calibration-determined d_{50} values corresponding to the shorthand values used in the article.

LDSA sizebin short hands ($< x$ nm)	Actual d_{50} values (nm)
30	30.5
100	155
300	257
1000	950
2500	2480

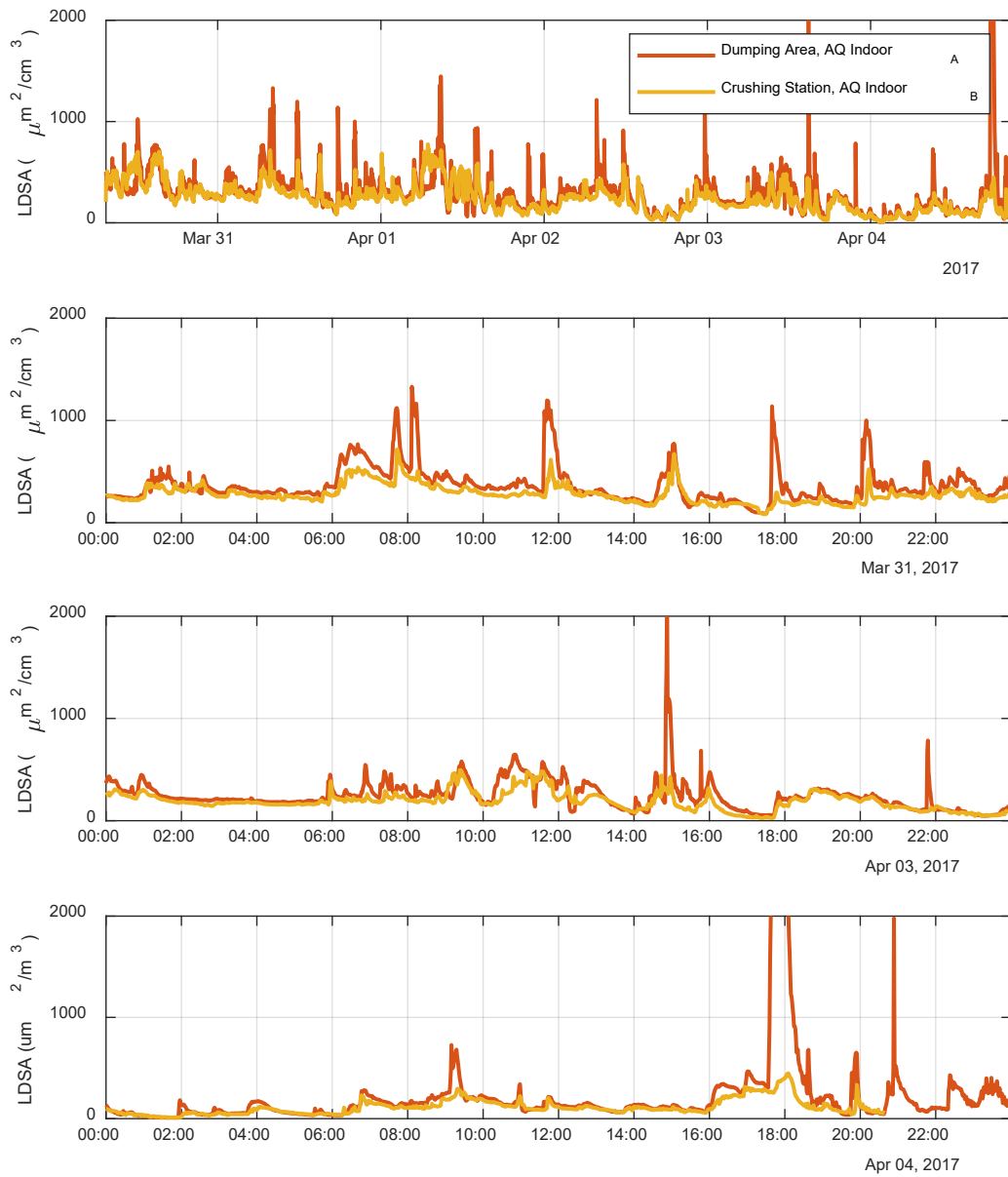


Fig. S1: Time series of LDSA measured simultaneously in two locations after the main measurement campaign. The top panel shows the full time series, and lower three show a portion of the top panel, one full working day each.

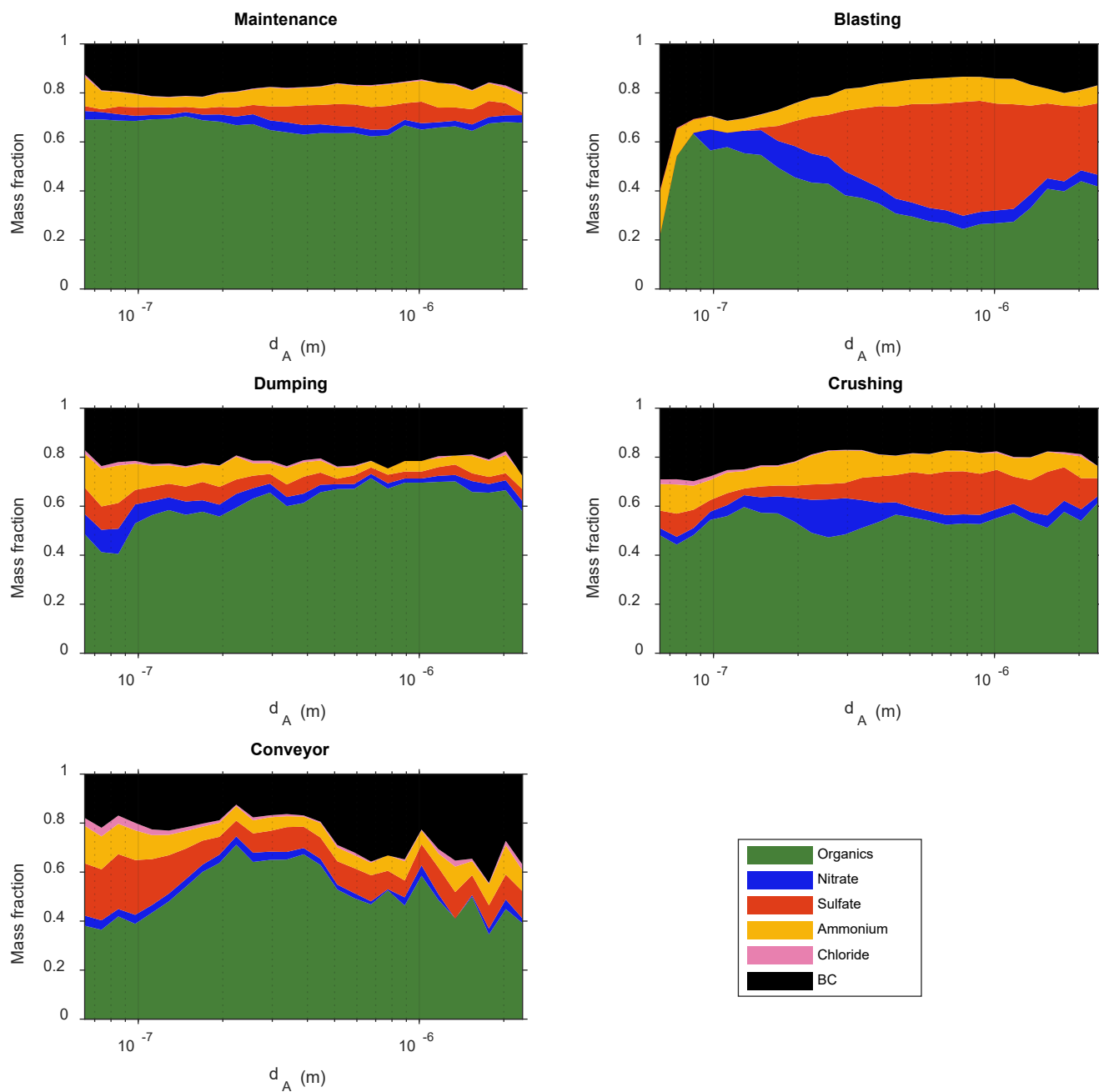


Fig. S2: Chemical composition of particles by mass fraction, plotted against vacuum aerodynamic particle size.

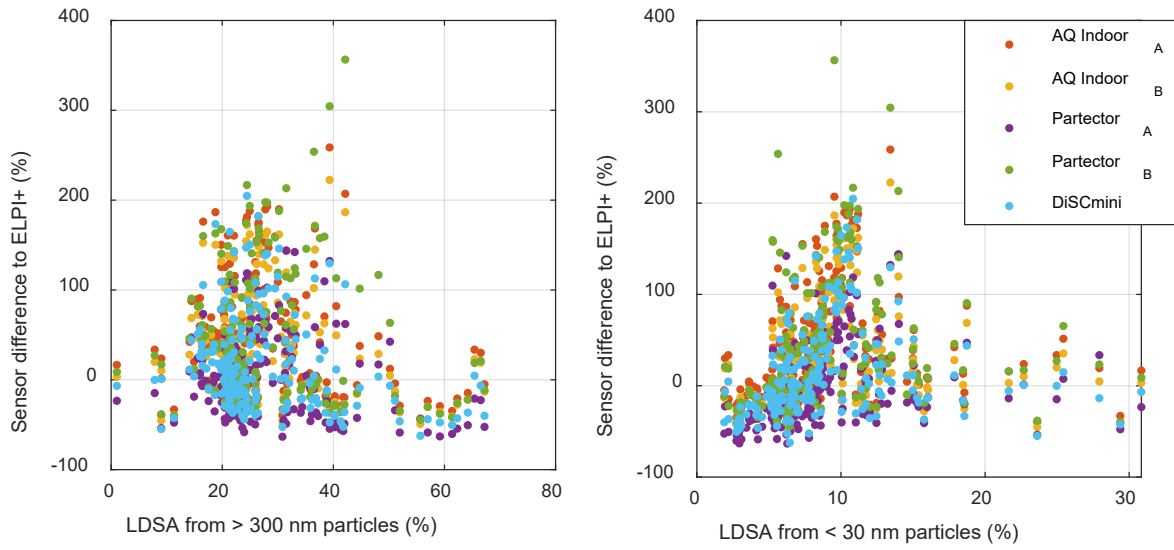


Fig. S3: The difference of sensor measurements to ELPI+ measurements, plotted against the percentage of LDSA contribution from large particles.

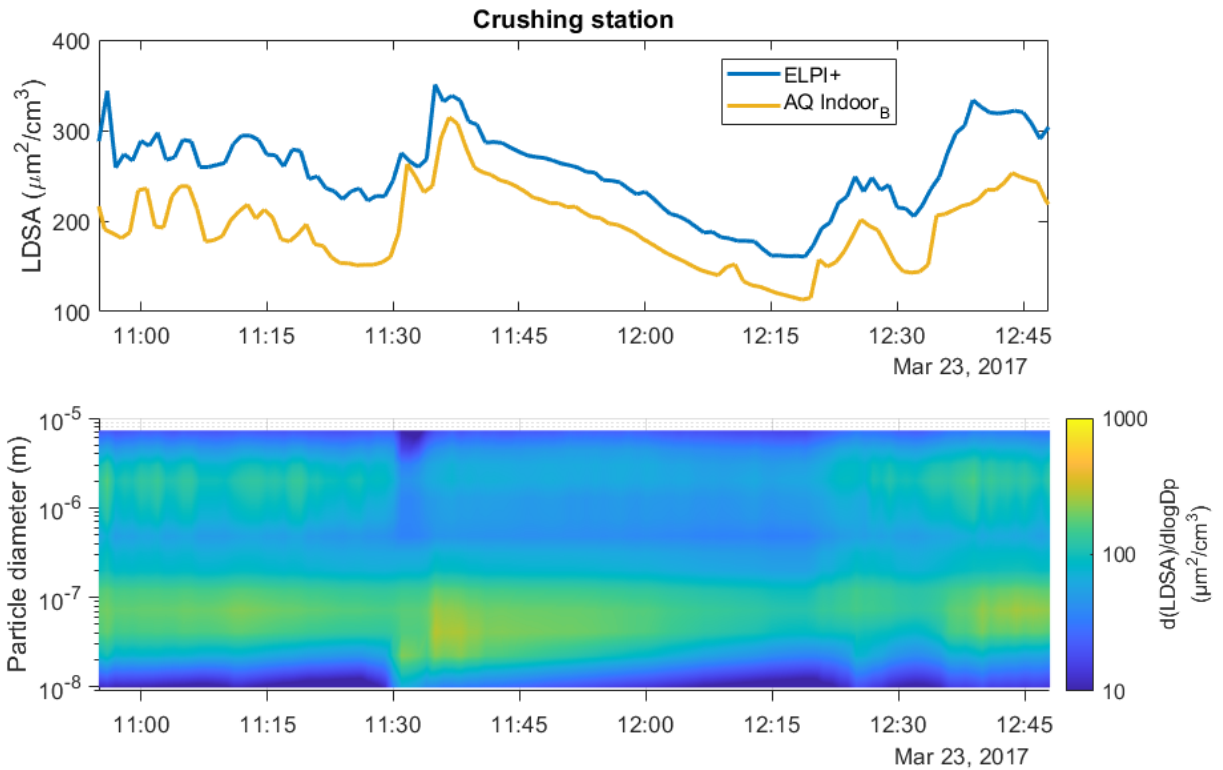


Fig. S4: Additional crushing station measurement. Top panel shows total LDSA measured with ELPI+ and AQ Indoor_B. The lower panel shows the LDSA particle size distribution time series.

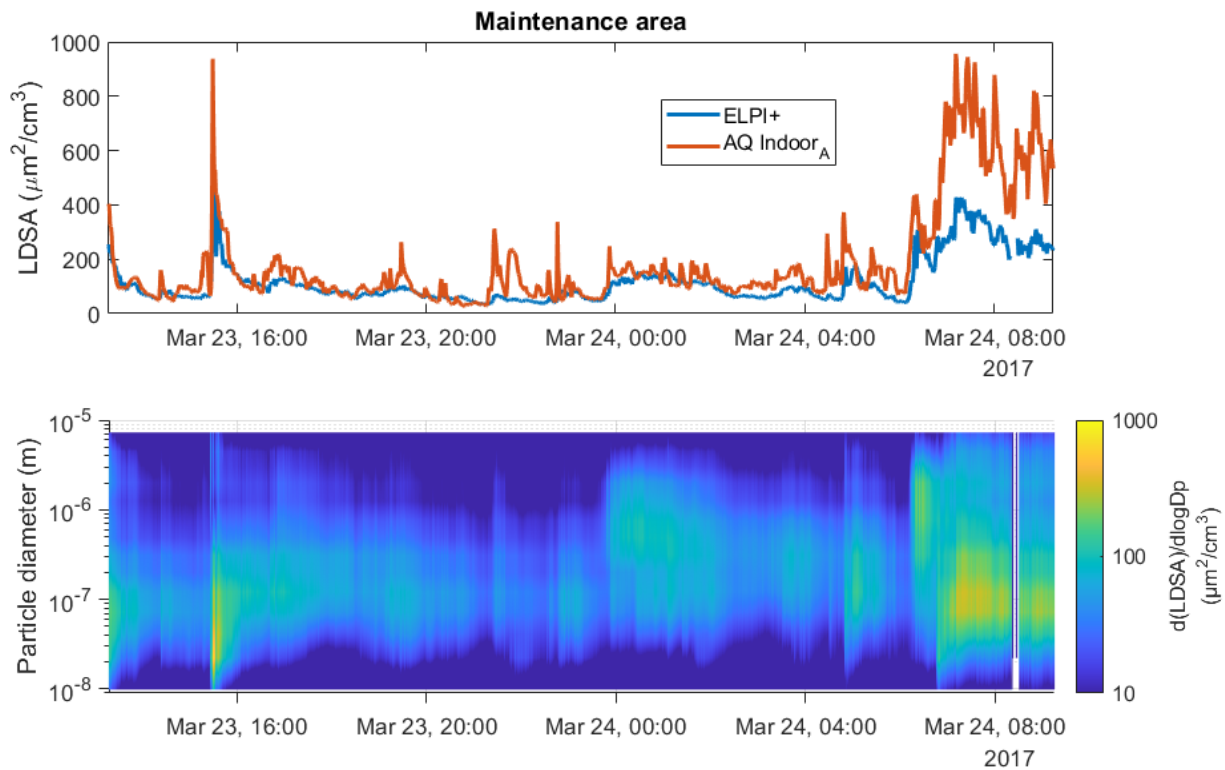


Fig. S5: Additional maintenance area measurement. Top panel shows total LDSA measured with ELPI+ and AQ Indoor_A. The lower panel shows the LDSA particle size distribution time series.

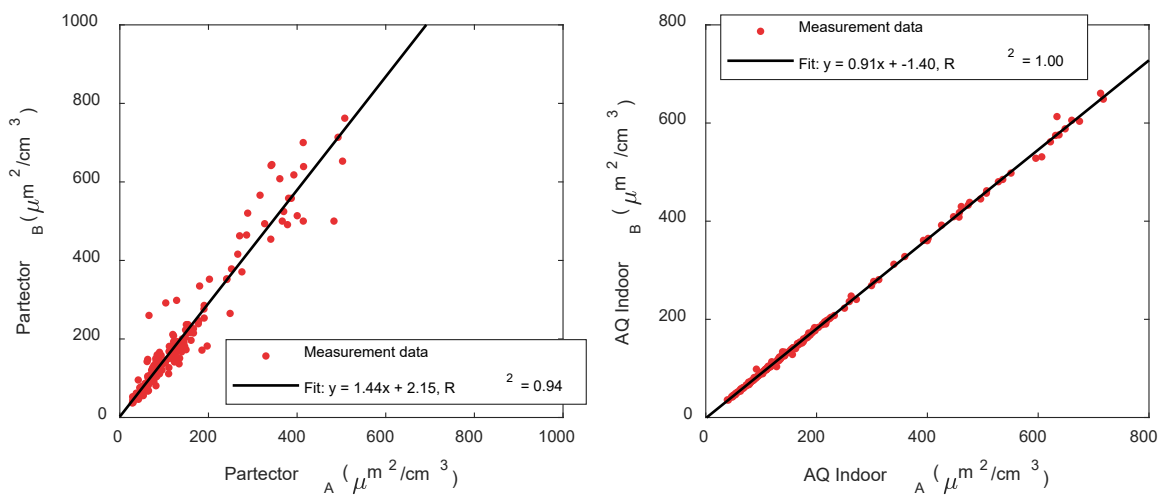


Fig. S6: Inter-comparison of identical sensors. Left panel shows comparison between two Partectors and the right panel between two AQ Indoors.

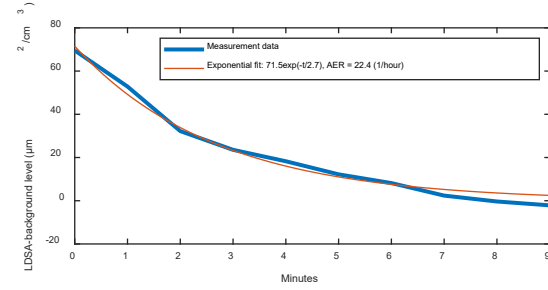
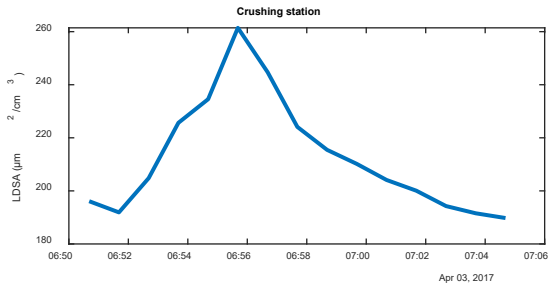
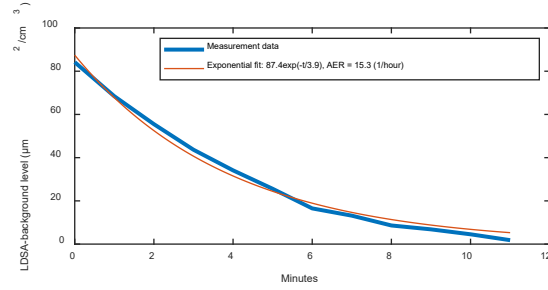
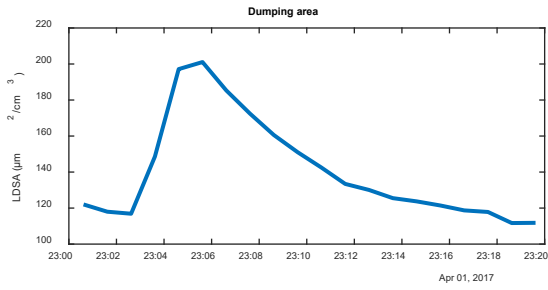


Fig. S7: Examination of the LDSA decay rate to estimate the air-exchange rate (AER) in the Dumping area and Crushing station.