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## Activity size distribution of radioactive Be-7 aerosols at different environments in Northern Italy

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The activity size distributions of the natural radionuclide tracer  $^7\text{Be}$  were determined in different site places in Northern Italy in order to define any differences due to the different environments. In the frame of this work, three different environments were chosen, in an urban area (University of Milano), in a rural residential area (Ispra) and in Maqugnaga village at 1300 m height in Monte Rosa Mountain. Each sampling at three sampling stations was carried out simultaneously with a sampling at a reference station in an suburban-industrialised area (Segrate). For this case, two compatible aerosol cascade impactors were used. The aerodynamic size distributions were obtained by using two compatible 1-ACFM cascade impactors with efficient cutoff diameters (ECD) of 0.4, 0.7, 1.1, 2.1, 3.3, 4.7, 5.8, and 9 and acetate cellulose filters as collection substrates. The length of each collection period was 1 week. In order to study the influence of the meteorological conditions to the activity size distribution of  $^7\text{Be}$  aerosols, the three sampling campaigns at different environments were done during each season of the year.

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