

The \Processed directory

This directory contains processed data files. The processed data has been extracted from the raw data files and organized uniformly for easy use. The data is stored as Excel files without using Excel-specific formats such as date-and-time format. The first row in each of the data files is a heading row with column titles.

The following abbreviations are used in the column titles:

Abbr.	Full	Description
utm-e	UTM east	4-digit UTM coordinate. See also maps-positions.pdf .
utm-n	UTM north	4-digit UTM coordinate. See also maps-positions.pdf .
uXX	wind speed	The wind speed (in m s^{-1}) measured at XX metres.
dXX	wind direction	The wind direction (in degrees) measured at XX metres. Note: This bearing indicates the direction where the wind is coming from.
tempXX	temperature	The temperature (in celcius) at XX metres.
cps	count rate	Counts per second.

Each of the Excel files contains a number of individual worksheets. The title of each worksheet indicates when the time series data were obtained. Note: **Wed Oct 3 (1)** and **Wed Oct 3 (2)** refer to measurements conducted in the morning and in the afternoon, respectively, of Wednesday October 3rd 2001.

All time entries are start-times except for the Lidar measurements, where both the start- and end-times of the time intervals are provided.

The files in this subdirectory are:

File	Description
DK-NaI.xls	⁴¹ Ar fluence rate measurements (1-minute binned data) from the four Danish NaI(Tl) detectors, A-D.
HPGe.xls	⁴¹ Ar fluence rate measurements ⁽¹⁾ obtained using the DTU HPGe and SCK•CEN HPGe-detector, respectively.
lidar.xls	Smoke plume measurements ⁽²⁾ using Lidar scanning.
maps-positions.pdf	Maps and positions of all the detectors for all four setups.
meteorology-10min.xls	10-minute meteorological data ^(3,4) obtained from the Mol meteorological tower. The atmospheric stability indicated was inferred using a local SCK•CEN scheme. 1 is Pasquill A, 6 is Pasquill F.

meteorology-1min.xls	1-minute meteorological data ^(3,4) obtained from the Mol meteorological tower.
source.xls	⁴¹ Ar source term data extracted from the internal monitoring system of the Mol BR1 research reactor.

Notes:

1. These measurements were recorded over different periods of time. For the DTU-HPGe detector, the measurements shown for Wednesday are recorded over periods of 5 minutes, while for Thursday it is 2 minutes. For the SCK•CEN detector, the integration time is always 10 minutes.
2. The columns labelled $\langle y \rangle$ and $\langle z \rangle$, respectively, indicate the mean horizontal and mean vertical position of the plume in the scanning direction (*bearing*), which is approx. perpendicular to the main advection direction. *sigmay* and *sigmaz* are the dispersion “width” of the plume profile in the horizontal and vertical direction at the distance and angle given by the scanning direction. *sigmay-corr* is the corrected (“perpendicular”) *sigmay*, taking into account the angle of the scanning. (*x_p*,*y_p*) are the estimated UTM-coordinates of the plume center position in the Lidar scanning plane.
3. The wind directions in these files are *instantaneous* measurements, recorded at the end of the 10-minute, respectively, 1-minute time interval.
4. The wind speeds are *averages* over the time interval.