Figure 1.1 - 1.6 show the main screen and 6 sub displays:

- individual particle information
- rain rate vs. time
- drop size distribution
- vertical velocity vs. equivolumetric diameter
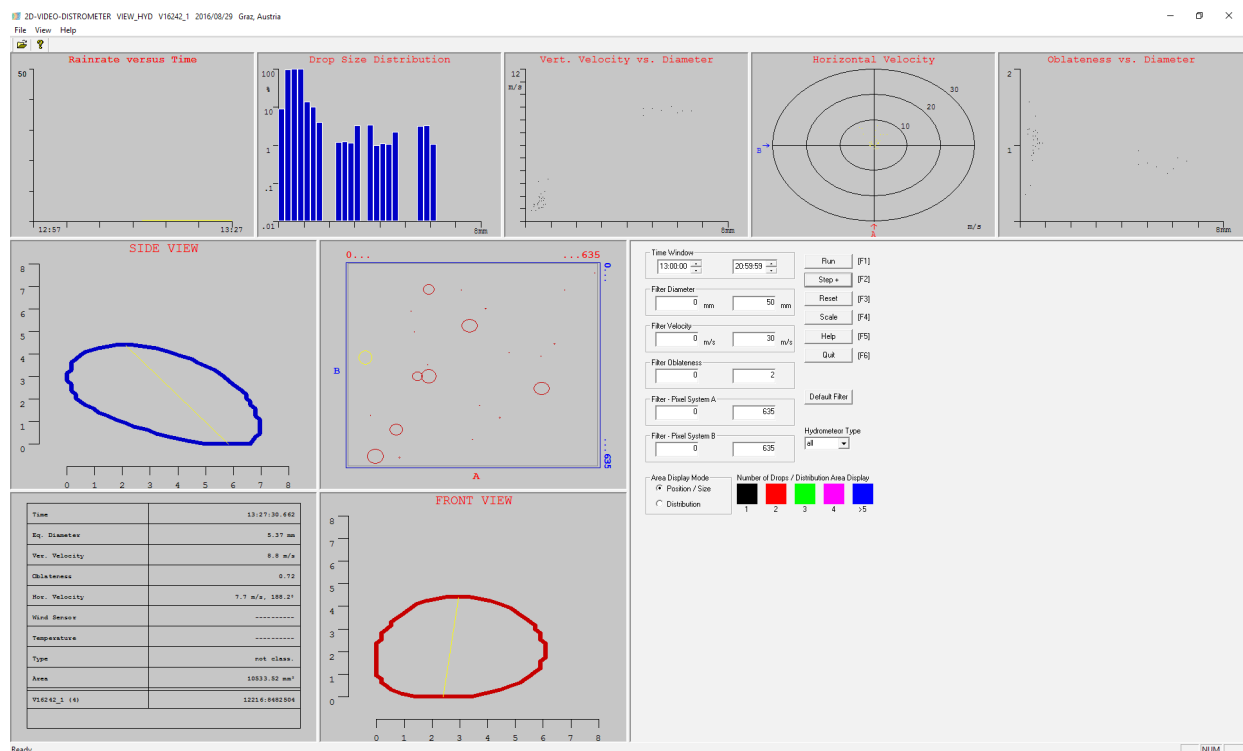- oblateness vs. equivolumetric diameter

FIGURE 1.1: 2DVD DATA VIEWER: MAIN SCREEN

Each of these sub-displays can be enlarged and has its own menu-buttons, as is seen in Figure 2 to Figure 7. Also the drop front- and side view along with the relevant numeric information can be displayed full-screen.

Due to the measurement principle, which is based on line scan cameras, distortions of front and side view are introduced by horizontal velocities of hydrometeors (lines being shifted against each others). Assuming these views to have axes of symmetries and (approximately) zero canting allows to simply redirect the mid-bottom to mid-top line to the vertical.

Assuming non-zero canting angles but axes of symmetries, still allows to restore the true shape via recovering isogonality. Results for the zero-canting approximation method are given alphanumerically within the figure as well.

Only fully visible hydrometeors are counted. Hydrometeors hitting the „edge" of the virtual measuring area are discarded. This results in a decrease of the effective measuring area at an increase of hydrometeors. Example: For 10 mm diameter spheres, the effective measuring area is not around 100 * 100 mm^2 any longer but only around 90 * 90 mm^2.

In extreme precipitation situations (extreme high rain rates combined with extreme fast wind speeds) short term outages due to data transfer overflow may occur.
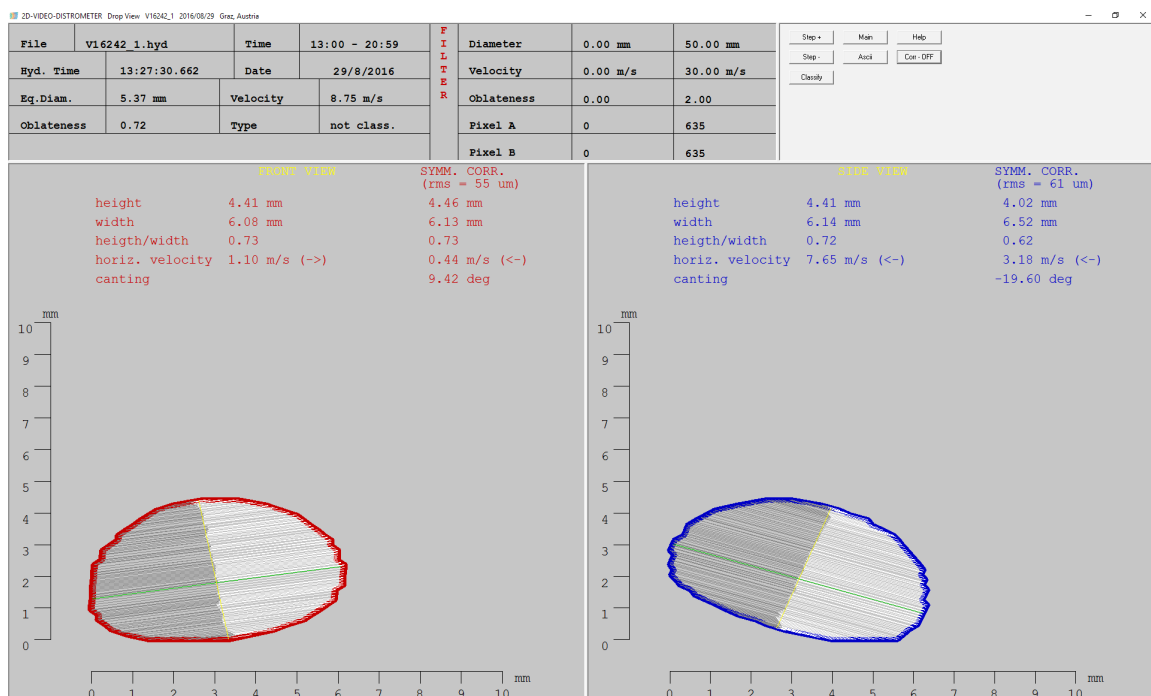These outages are documented in the log file.

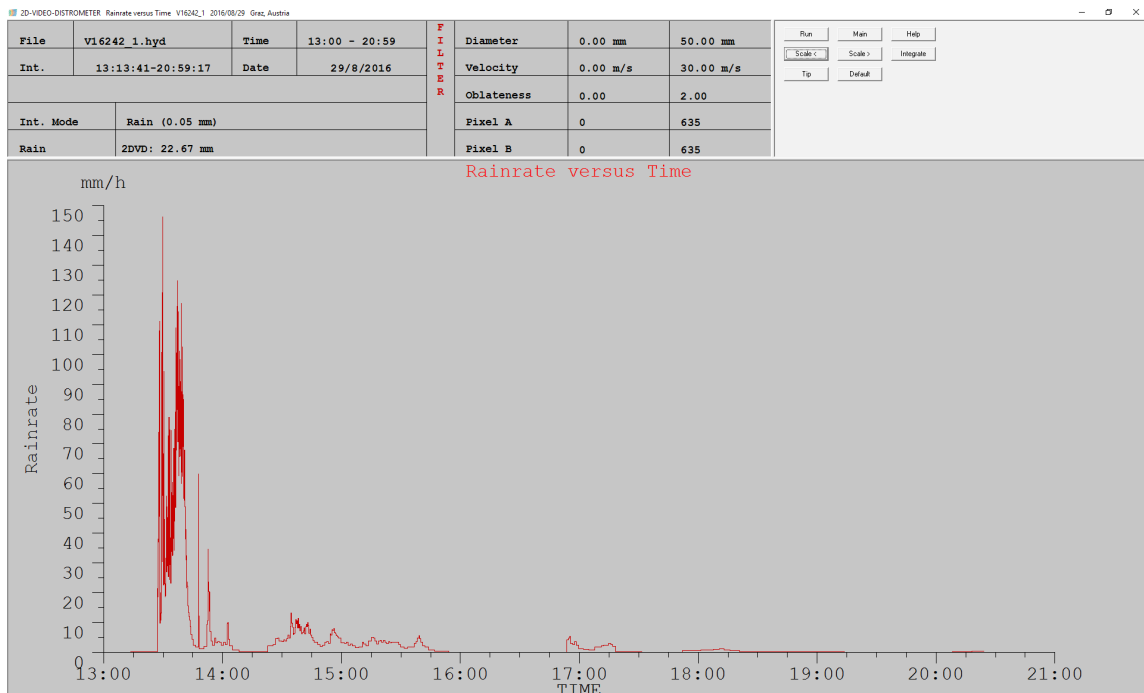FIGURE 1.2: 2DVD DATA VIEWER: INDIVIDUAL PARTICLE FULL SCREEN DISPLAY
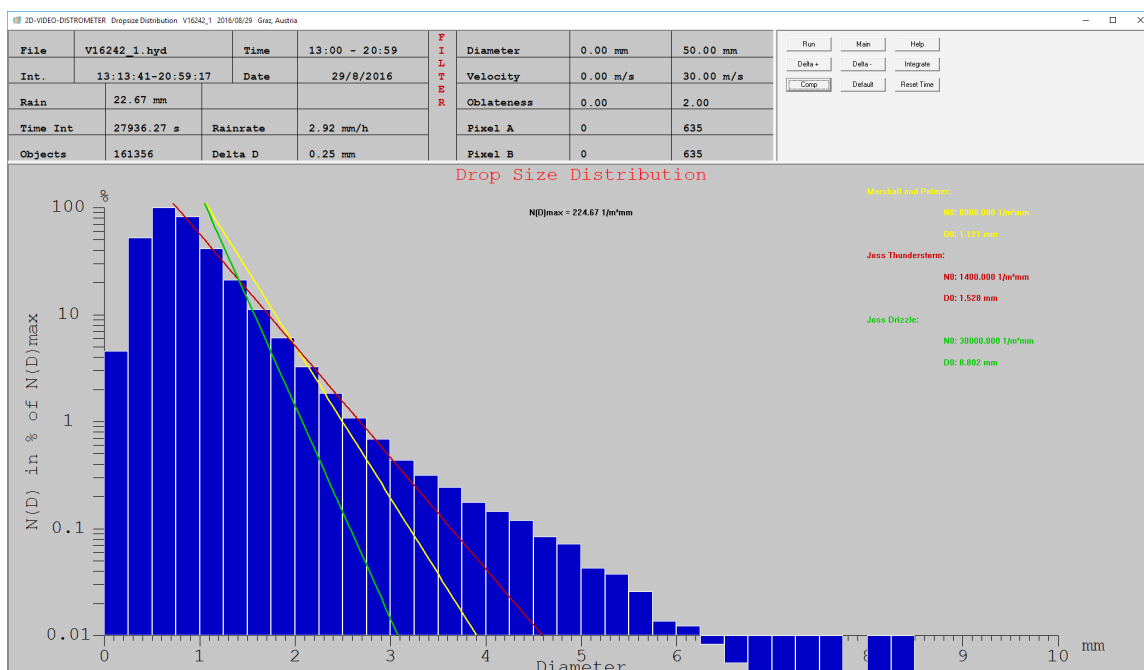
FIGURE 1.3: 2DVD DATA VIEWER: RAINRATE VS. TIME

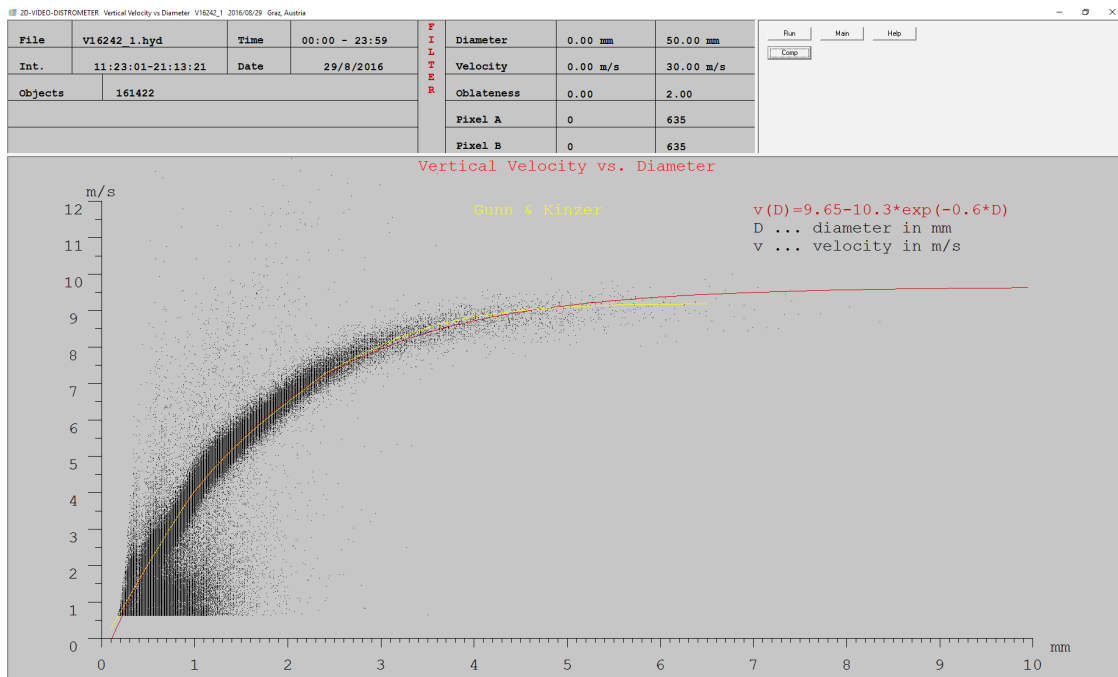FIGURE 1.4: 2DVD DATA VIEWER: FALL VELOCITY VS. EQUIVOLUMETRIC DIAMETER

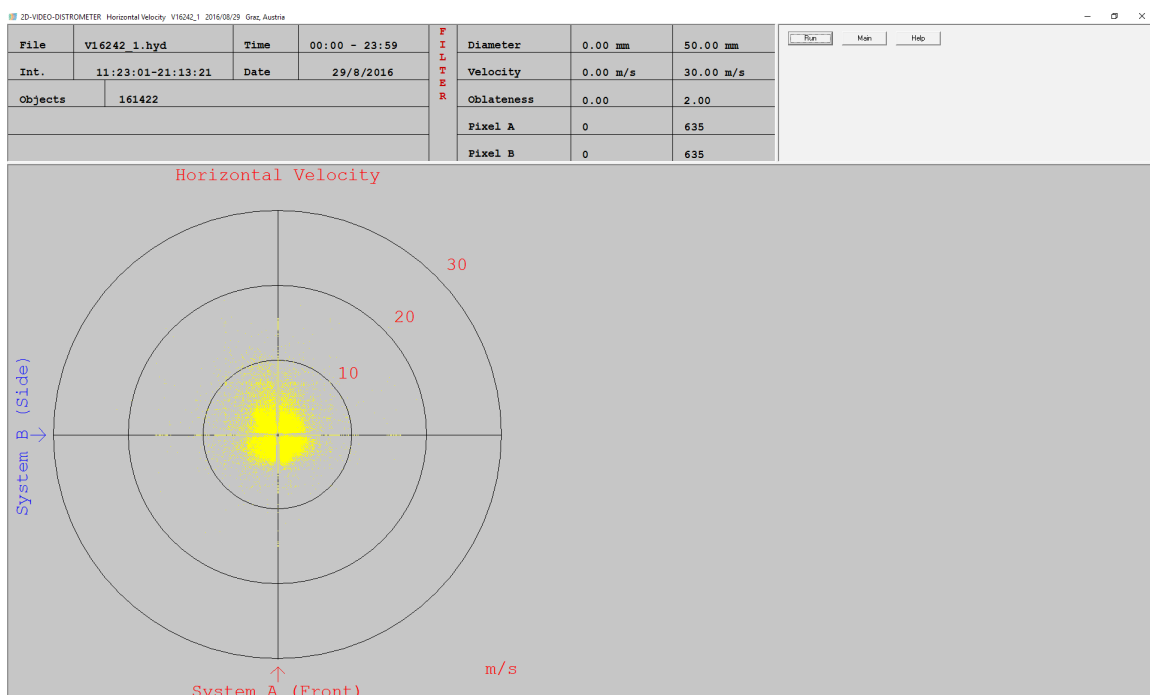FIGURE 1.5: 2DVD DATA VIEWER: FALL VELOCITY VS. EQUIVOLUMETRIC DIAMETER

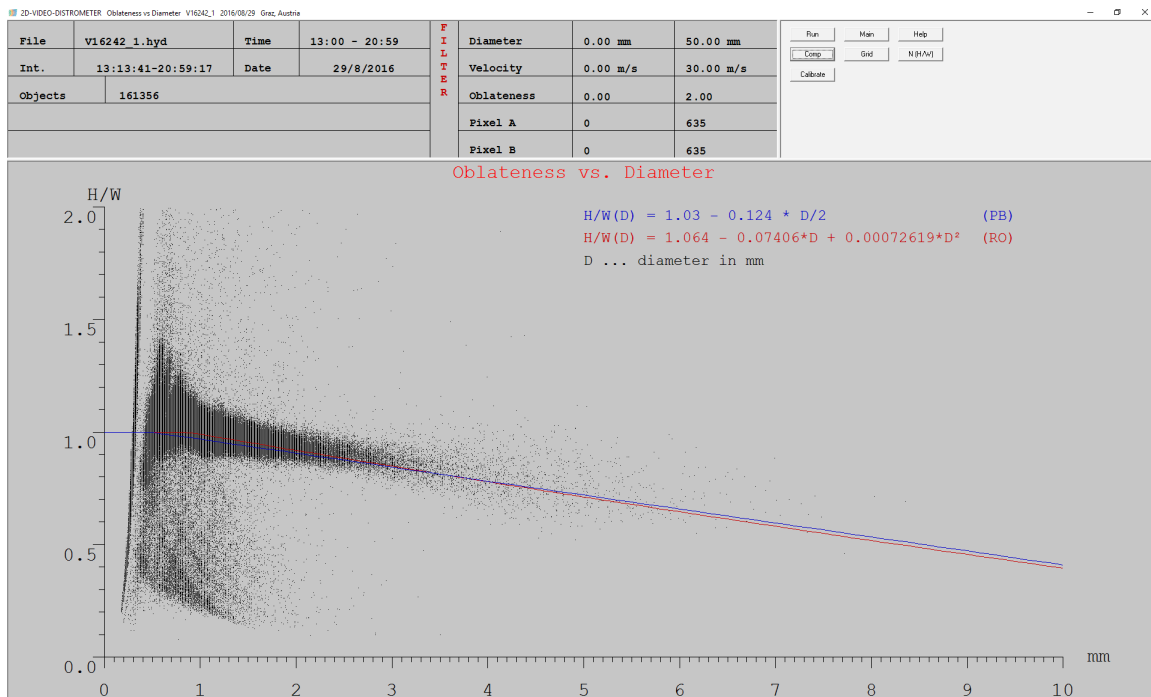FIGURE 1.6 : 2DVD DATA VIEWER: ESTIMATE FOR HORIZONTAL VELOCITY

FIGURE 1.7: 2DVD DATA VIEWER: HEIGHT/WIDTH RATIO VS. EQUIVOLUMTRIC DIAMETER