

Statistical model for the analysis of the daily precipitation
at the stations in Croatia



Figure 1. represents a cumulative precipitation amount in mm (bold curve) from the beginning to the end of analysed month, for the given station. The theoretical percentiles (2nd, 10th., 25th., 50th, 75th, 90th and 98th) are presented with smooth lines. They constitute a frame that enables the estimation of the actual cumulative precipitation amount deviation from the normal i.e. median (50th percentile). The Square Root Normal Distribution is employed to obtain the theoretical percentiles using the average monthly precipitation amount from the 1961-2000 time period. The cumulative rainfall amount from the beginning of the month to a given date of the month, less than 25th percentile (the first quartile) indicates the dry conditions for the given period. Similarly, the cumulative precipitation amount greater than 75th percentile (the third quartile) indicates wet conditions. The excess of 2nd or 98th percentile can be expected once in 50 years, indicating extreme events.