Therefore, in some approximations to the exact solution are necessary in order to prevent dramatically increasing costs on numerical power. In an evaluation on a data set of a real radar system, this approximation was shown to have at most marginal effect on the results. This is supposed to hold whenever the observed targets are in a non- or moderate maneuvering state during the track extraction phase.

Then we numerically proved that the intensity of the process noise can have severe impact on the estimation error when using approximations. The results clearly show that an ASD filter processes Out-of-Sequence measurements optimally in terms of a mean squared error, i.e. equivalent to a Kalman Filter reprocessing outdated data.

Last but not least, we applied the combination of a DPA and an ASD on data of a real radar sensor system. As no ground-truth is available, we cannot derive