1. Both succeed (Case 1)

**JPDAF Succeeds:**

Time to run algorithm was 4.212 sec.

Numerical simulations complete. There were a total of 0 errors recorded.

The percent of correct associations was 92.4%.

The percent of incorrect associations was 7.6%.

The percent of measurements without associations was 0%.

The RMS error of the measurement residuals is 0.20409 km.

Defining a window from 49.6 to 69.6 seconds, we consider the RMS errors between the filtered result and the true trajectories.

The radial RMS error is 1.2946e-05 km.

The radial rate RMS error is 2.6375 km/s.

The angular RMS error is 0.0029847 rad.

The angular velocity RMS error is 0.36035 km/s.

There were 64 incorrect measurements within 10 seconds of crossing.

In this window, 68.1592 % of measurements were correctly assigned.

Incorrect associations occurred over 43.3 seconds.

**KMMJPDAF Succeeds:**

Time to run algorithm was 6.8952 sec.

Numerical simulations complete. There were a total of 0 errors recorded.

The percent of correct associations was 92.9%.

The percent of incorrect associations was 7.1%.

The percent of measurements without associations was 0%.

The RMS error of the measurement residuals is 0.20822 km.

Defining a window from 49.6 to 69.6 seconds, we consider the RMS errors between the filtered result and the true trajectories.

The radial RMS error is 1.6077e-05 km.

The radial rate RMS error is 3.4643 km/s.

The angular RMS error is 0.0039303 rad.

The angular velocity RMS error is 0.70561 km/s.

There were 58 incorrect measurements within 10 seconds of crossing.

In this window, 71.1443 % of measurements were correctly assigned.

Incorrect associations occurred over 43.3 seconds.

1. KMMJPDAF succeeds only (Case 2)

**KMMJPDAF Succeeds:**

Time to run algorithm was 6.8016 sec.

The percent of correct associations was 89.6%.

The percent of incorrect associations was 10.4%.

The percent of measurements without associations was 0%.

The RMS error of the measurement residuals is 0.26293 km.

Defining a window from 49.6 to 69.6 seconds, we consider the RMS errors between the filtered result and the true trajectories.

The radial RMS error is 2.3988e-05 km.

The radial rate RMS error is 4.4266 km/s.

The angular RMS error is 0.0053409 rad.

The angular velocity RMS error is 0.76982 km/s.

There were 73 incorrect measurements within 10 seconds of crossing.

In this window, 63.6816 % of measurements were correctly assigned.

Incorrect associations occurred over 57.6 seconds.

**JPDAF Fails:**

Time to run algorithm was 4.1964 sec.

The percent of correct associations was 59.2%.

The percent of incorrect associations was 40.8%.

The percent of measurements without associations was 0%.

The RMS error of the measurement residuals is 0.27488 km.

Defining a window from 49.6 to 69.6 seconds, we consider the RMS errors between the filtered result and the true trajectories.

The radial RMS error is 2.3014e-05 km.

The radial rate RMS error is 2.6109 km/s.

The angular RMS error is 0.0029373 rad.

The angular velocity RMS error is 0.28274 km/s.

There were 92 incorrect measurements within 10 seconds of crossing.

In this window, 54.2289 % of measurements were correctly assigned.

Incorrect associations occurred over 79.4 seconds.