

Processing Airborne Data

Some of the options presented here works with most airborne data; of course there are exceptions.

1. Process once with the default options.

2. Plot the Combined Separation plot and the RMS C/A Code plot.

The Combined Separation plot shows the difference between the forward and the reverse solution. Ideally the plot should be around zero, meaning the forward and the reverse agrees. This plot also gives us an idea of the accuracy. The RMS C/A Code plot like its name is the plot of the C/A code. Look at where the most the plots fall under; this value will be used in the next step. Depending on the receiver, some CA code can be as low as 2.0 m.

3. Change Standard Deviations and Process.

We want to reprocess again, but with different options. We will start off by changing the Standard Deviation under the Standard Deviation tab.

- C/A code standard deviation = the value that we observed from Step 2
- For most airborne data we can set the following
 - i. L1 Phase standard deviation = 0.0400 m
 - ii. L1 Phase rejection tolerance = 0.1500 – 0.2000 m

Reprocess and plot the Combined Separation plot and see if things improve.

4. Try Ionospheric Free model and Process.

If the previous option from Step 3 did not improve change it back to default. Now we will try using the Ionospheric Free model under the Dual Frequency tab. This option will not work well if there are a lot of L2 cycle slips. Try with and without and see how things turn out. Again reprocess and plot the Combined Separation plot and see if things improve.

5. Try Auto Reduce and Process.

The next option to try is the Auto Reduce under the KAR tab. Under Search Region, select Auto-reduce and set the scale factor to 3. Reprocess and plot the Combined Separation plot and see if things improve.

6. Try L1/L2 Refine Search and Process.

Another option that we can try is L1/L2 Refine Search found under the Advanced KAR tab.

7. Try Stricter Reliability Tolerance (found under Advanced KAR).

Note: It is better to change one option at a time and reprocess, so you'll know which option will improve your result. The Combined Separation plot is a good plot to look at after each process. If the majority of your data is around the zero mark it usually means you have finish processing.