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Current working:

1. Due to the unreasonable shape and parameters of $\overbar{Λ}\left(1800\right)$ we got from the fit results, we think it’s difficult to use $\overbar{Λ}\left(1800\right)$ to describe the solution. There are 2 methods could be tried to solve this problem.

The first is to replace $\overbar{Λ}\left(1800\right)$ with a 4-body process. After this replacement, we will need to run several new rounds to check the significance and find potential new components.

Another method is to use another model to describe $\overbar{Λ}\left(1800\right)$. Now we use BWR model to describe all the resonances. It’s an energy-dependent Breit-Wigner model. However, it may not suitable enough to describe $\overbar{Λ}\left(1800\right)$, which is such a wide resonance. There is a list of models could be used, however which one is better is also a problem. I need to read more articles to find the answer.

2. In current analysis, we choose the first method to solve the problem with $\overbar{Λ}\left(1800\right)$.

We use 2 non-resonance particles to describe a 4-body process. Different $J^{P}$ combinations are tried to find the best one couple. The final result is still need to wait.

Next planning:

1. Read books about PWA and QFT to learn more knowledge.

2. Continue to renew pwa results.

3. Generate toy mc after the final solution is got.

4. Estimate other kinds of systematic uncertainties in the analysis.