Study of $\Upsilon(1,2S) \to \Lambda\phi + X$ decay at Belle

Group meeting

Wang Zhang, Shiming Zou

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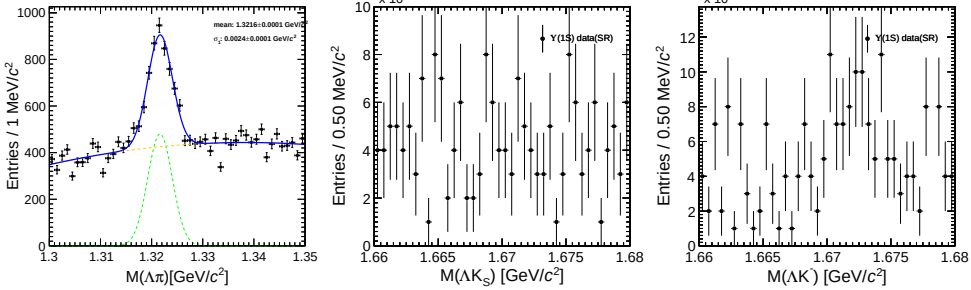
Veto

To remove the contribution from potential background processes of $\Xi \to \Lambda\pi, \Omega \to \Lambda K$ reconstruct all the pion(kaon) candidates with $\mathcal{L}_\pi(\mathcal{L}_\pi) > 0.6$



Selection Criteria

- PID selection
  - $\frac{\mathcal{L}(K^{\pm})}{\mathcal{L}(K^{\pm})+\mathcal{L}(\pi^{\pm})} > 0.9$ and $\frac{\mathcal{L}(K^{\pm})}{\mathcal{L}(K^{\pm})+\mathcal{L}(p)} > 0.9$
- Track selection
  - $dr < 0.5$ cm and $|dz| < 2.0$ cm
- Λ MVA selection
  - $\mathrm{ksnbNoLamv} < -0.4$ and $\mathrm{ksnbV0Like} > 0.5$
- Λ mass window
  - $|M(p\pi) - 1.1156| < 0.0016 \times 3.0\ \mathrm{GeV}/c^2$
- ϕ mass window
  - $|M(K^+K^-) - 1.02| < 0.02 \times 3.0\ \mathrm{GeV}/c^2$
- xp > 0.68

Preliminary results

No obvious P_s signal is observed in the invariant mass distribution of $\Lambda\phi$ system