Panel Discussion on the Z(4430)

- How inconsistent are the BaBar and *new* Belle results?
  - The $M(\pi\psi(2S))$ data samples are statistically indistinguishable!
  - <u>Branching Fraction:</u>
    - **Belle:** $B(B^0 \to Z^- K^+; \ Z^- \to \pi^- \psi(2S)) = (3.2 \ ^{+1.8}_{-0.9} \ ^{+5.3}_{-1.6}) \times 10^{-5}$
    - **BaBar:** $B(B^0 \to Z^- K^+; \ Z^- \to \pi^- \psi(2S)) < 3.1 \times 10^{-5}$
      (without K* veto and using Belle's *old* mass and width)
  - <u>Mass:</u>
    - **Belle:** $M = 4443 \ ^{+15}_{-12} \ ^{+19}_{-13}$ **MeV**
    - **BaBar:** $M = 4439 \pm 8$ **MeV** (with K* veto, 1.9σ significance)
  - <u>Width:</u>
    - **Belle:** $\Gamma = 107 \ ^{+86}_{-43} \ ^{+74}_{-56}$ **MeV**
    - **BaBar:** $\Gamma = 41 \pm 33$ **MeV** (with K* veto, 1.9σ significance)
  - <u>Significance:</u>
    - **Belle: 6.4σ**
    - **BaBar: 1.9σ** (with K* veto, floating M,Γ); **3.1σ** (with K* veto, fixed M,Γ)
- Are there crucial differences in formalism?
  - Has BaBar made bad assumptions to artificially *decrease* significance?
  - Has Belle made bad assumptions to artificially *increase* significance?
- How could these analyses be extended to resolve their inconsistencies?