

**$Z_c(4200)$** 

$$I^G(J^{PC}) = 1^+(1^{+-})$$

$I, G, C$  need confirmation.

OMITTED FROM SUMMARY TABLE

was  $X(4200)^\pm$ 

This state shows properties different from a conventional  $q\bar{q}$  state.  
A candidate for an exotic structure. See the review on non- $q\bar{q}$  states.

Reported by CHILIKIN 14 in  $J/\psi\pi^+$  at a significance of  $6.2\sigma$ . Assignments of  $0^-, 1^-, 2^-$ , and  $2^+$  excluded at  $6.1\sigma, 7.4\sigma, 4.4\sigma$ , and  $7.0\sigma$  level, respectively. Needs confirmation.

 **$Z_c(4200)$  MASS**

| VALUE (MeV)              | DOCUMENT ID | TECN | COMMENT                                  |
|--------------------------|-------------|------|--|
| $4196^{+31+17}_{-29-13}$ | CHILIKIN 14 | BELL | $\bar{B}^0 \rightarrow J/\psi K^- \pi^+$ |

 **$Z_c(4200)$  WIDTH**

| VALUE (MeV)               | DOCUMENT ID | TECN | COMMENT                                  |
|---------------------------|-------------|------|--|
| $370 \pm 70^{+70}_{-132}$ | CHILIKIN 14 | BELL | $\bar{B}^0 \rightarrow J/\psi K^- \pi^+$ |

 **$Z_c(4200)$  DECAY MODES**

| Mode                         | Fraction ( $\Gamma_i/\Gamma$ ) |
|------------------------------|--------------------------------|
| $\Gamma_1 \quad J/\psi\pi^+$ | seen                           |

 **$Z_c(4200)$  BRANCHING RATIOS**

| $\Gamma(J/\psi\pi^+)/\Gamma_{\text{total}}$                                   |                       |      |  | $\Gamma_1/\Gamma$ |
|---|-----------------------|------|--|-------------------|
| VALUE   | DOCUMENT ID           | TECN | COMMENT  |                   |
| <b>seen</b>   | CHILIKIN 14           | BELL | $\bar{B}^0 \rightarrow J/\psi K^- \pi^+$         |                   |
| • • • We do not use the following data for averages, fits, limits, etc. • • • |                       |      |  |                   |
| possibly seen   | <sup>1</sup> AAIJ 19R | LHCB | $B^0 \rightarrow K^+ \pi^- J/\psi + \text{c.c.}$ |                   |

<sup>1</sup> From a model-independent analysis. **$Z_c(4200)$  REFERENCES**

|             |                |                           |                 |
|-------------|----------------|---------------------------|-----------------|
| AAIJ 19R    | PRL 122 152002 | R. Aaij <i>et al.</i>     | (LHCb Collab.)  |
| CHILIKIN 14 | PR D90 112009  | K. Chilikin <i>et al.</i> | (BELLE Collab.) |