

**$P_{c\bar{c}}(4380)^+$** 

$$I(J^P) = \frac{1}{2}(??) \quad \text{Status: } *$$

OMITTED FROM SUMMARY TABLE

Was  $P_c(4380)^+$ .

A resonance seen in  $\Lambda_b^0 \rightarrow P_c^+ K^-$ , then  $P_c \rightarrow J/\psi p$ , with a significance of 9 standard deviations. The  $J/\psi p$  quark content is  $uudc\bar{c}$ , a pentaquark. See also the  $P_c(4450)^+$ . In the best amplitude fit, the two states have opposite parity, one having  $J = 3/2$ , the other  $J = 5/2$ .

Extraction of the pentaquark signals requires some understanding of the dominant  $K^- p$  background. AAIJ 15P used a model-dependent approach. AAIJ 16AG reanalyzed the data making minimal assumptions about the  $K^- p$  background, and thus confirmed the strong significance of the pentaquark signals.

 **$P_{c\bar{c}}(4380)^+$  MASS**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>4380±8±29</b>	AAIJ	15P LHCb	$pp$ at 7, 8 TeV

 **$P_{c\bar{c}}(4380)^+$  WIDTH**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>205±18±86</b>	AAIJ	15P LHCb	$pp$ at 7, 8 TeV

 **$P_{c\bar{c}}(4380)^+$  DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad J/\psi p$	seen

 **$P_{c\bar{c}}(4380)^+$  BRANCHING RATIOS**

$\Gamma(J/\psi p)/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	$\Gamma_1/\Gamma$
<b>seen</b>	AAIJ	15P LHCb	$pp$ at 7, 8 TeV	

 **$P_{c\bar{c}}(4380)^+$  REFERENCES**

AAIJ	16AG PRL 117 082002	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	15P PRL 115 072001	R. Aaij <i>et al.</i>	(LHCb Collab.)