

**X(4430)<sup>±</sup>**

$$I(J^P) = ?(??)$$

## OMITTED FROM SUMMARY TABLE

Seen by CHOI 08 in  $B \rightarrow K\pi^+\psi(2S)$  decays and confirmed by reanalysis of the same data sample in MIZUK 09. Not seen by AUBERT 09AA.

**X(4430)<sup>±</sup> MASS**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>4443<sup>+15+19</sup><sub>-12-13</sub></b>	<sup>1</sup> MIZUK	09	BELL $B \rightarrow K\pi^+\psi(2S)$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
4433 ± 4 ± 2	<sup>2</sup> CHOI	08	BELL $B \rightarrow K\pi^+\psi(2S)$
<sup>1</sup> From a Dalitz plot analysis.			
<sup>2</sup> Superseded by MIZUK 09.			

**X(4430)<sup>±</sup> WIDTH**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>107<sup>+86+74</sup><sub>-43-56</sub></b>	<sup>3</sup> MIZUK	09	BELL $B \rightarrow K\pi^+\psi(2S)$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
45 <sup>+18+30</sup> <sub>-13-13</sub>	<sup>4</sup> CHOI	08	BELL $B \rightarrow K\pi^+\psi(2S)$
<sup>3</sup> From a Dalitz plot analysis.			
<sup>4</sup> Superseded by MIZUK 09.			

**X(4430)<sup>±</sup> DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $\pi^+\psi(2S)$	seen
$\Gamma_2$ $\pi^+J/\psi$	not seen

**X(4430)<sup>±</sup> BRANCHING RATIOS**

$\Gamma(\pi^+\psi(2S))/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	$\Gamma_1/\Gamma$
<b>seen</b>	<sup>5</sup> MIZUK	09	BELL $B \rightarrow K\pi^+\psi(2S)$	
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
not seen	<sup>6</sup> AUBERT	09AA	BABR $B \rightarrow K\pi^+\psi(2S)$	
<sup>5</sup> Measured a product of branching fractions $B(\bar{B}^0 \rightarrow K^- X(4430)^+) \times B(X(4430)^+ \rightarrow \pi^+\psi(2S)) = (3.2^{+1.8+5.3}_{-0.9-1.6}) \times 10^{-5}$ .				
<sup>6</sup> AUBERT 09AA quotes $B(B^+ \rightarrow \bar{K}^0 X(4430)^+) \times B(X(4430)^+ \rightarrow \pi^+\psi(2S)) < 4.7 \times 10^{-5}$ and $B(\bar{B}^0 \rightarrow K^- X(4430)^+) \times B(X(4430)^+ \rightarrow \pi^+\psi(2S)) < 3.1 \times 10^{-5}$ at 95% CL.				

$\Gamma(\pi^+ J/\psi)/\Gamma_{\text{total}}$			$\Gamma_2/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>not seen</b>	<sup>7</sup> AUBERT	09AA BABR	$B \rightarrow K \pi^+ J/\psi$
<sup>7</sup> AUBERT 09AA quotes $B(B^+ \rightarrow \bar{K}^0 X(4430)^+) \times B(X(4430)^+ \rightarrow \pi^+ J/\psi) < 1.5 \times 10^{-5}$ and $B(\bar{B}^0 \rightarrow K^- X(4430)^+) \times B(X(4430)^+ \rightarrow \pi^+ J/\psi) < 0.4 \times 10^{-5}$ at 95% CL.			

### $X(4430)^\pm$ REFERENCES

AUBERT	09AA PR D79 112001	B. Aubert <i>et al.</i>	(BABAR Collab.)
MIZUK	09 PR D80 031104R	R. Mizuk <i>et al.</i>	(BELLE Collab.)
CHOI	08 PRL 100 142001	S.-K. Choi <i>et al.</i>	(BELLE Collab.)