$X(4020)^{\pm}$

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

OMITTED FROM SUMMARY TABLE
Seen by ABLIKIM 13X in $e^+ e^- \to \pi^+ \pi^- h_c$ at c.m. energy from 3.90 to 4.42 GeV as a peak in the invariant mass distribution of the $h_c \pi^{\pm}$ system. Needs confirmation.

$X(4020)^{\pm}$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
4023.9±2.4 OUR AVERAGE					
4026.3±2.6±3.7	0.4k	[1] ABLIKIM	14B	BES3	$e^+ e^- \to (D^* \overline{D}^*)^{\pm} \pi^{\mp}$
4022.9±0.8±2.7	253	ABLIKIM	13X	BES3	$e^+ e^- \to \pi^+ \pi^- h_c$

[1] Neglecting interference between the $X(4020)$ and non-resonant continuum. Assuming the same origin of the $(D^* \overline{D}^*)^+$ and $h_c \pi^+$ decay modes.

$X(4020)^{\pm}$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
10 ±6 OUR AVERAGE Error includes scale factor of 1.7.					
24.8±5.6±7.7	0.4k	[1] ABLIKIM	14B	BES3	$e^+ e^- \to (D^* \overline{D}^*)^{\pm} \pi^{\mp}$
7.9±2.7±2.6	253	ABLIKIM	13X	BES3	$e^+ e^- \to \pi^+ \pi^- h_c$

[1] Neglecting interference between the $X(4020)$ and non-resonant continuum. Assuming the same origin of the $(D^* \overline{D}^*)^+$ and $h_c \pi^+$ decay modes.

$X(4020)^{\pm}$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$h_c \pi^{\pm}$	seen
Γ_2	$D^* \overline{D}^*$	seen

$X(4020)^{\pm}$ BRANCHING RATIOS

$\Gamma(h_c \pi^{\pm})/\Gamma_{total}$ Γ_1/Γ

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	253	ABLIKIM	13X	BES3	$e^+ e^- \to \pi^+ \pi^- h_c$

$\Gamma(D^* \overline{D}^*)/\Gamma_{total}$ Γ_2/Γ

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	0.4k	[1] ABLIKIM	14B	BES3	$e^+ e^- \to (D^* \overline{D}^*)^{\pm} \pi^{\mp}$

[1] Neglecting interference between the $X(4020)$ and non-resonant continuum.

$X(4020)^{\pm}$ REFERENCES

ABLIKIM	14B	PRL 112 132001	M. Ablikim et al.	(BES III Collab.)
ABLIKIM	13X	PRL 111 242001	M. Ablikim et al.	(BES III Collab.)