$\psi(4040)$

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

$\psi(4040)$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
4040±10	BRANDELIK	78C	DASP	e^+e^-

$\psi(4040)$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
52±10	BRANDELIK	78C	DASP	e^+e^-

$\psi(4040)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	e^+e^-	$(1.4\pm0.4)\times10^{-5}$
Γ_2	$D^0\overline{D}^0$	seen
Γ_3	$D^*(2007)^0\overline{D}^0$ + c.c.	seen
Γ_4	$D^*(2007)^0\overline{D}^*(2007)^0$	seen
Γ_5	$J/\psi(1S)$hadrons	
Γ_6	$\mu^+\mu^-$	

$\psi(4040)$ PARTIAL WIDTHS

$\Gamma(e^+e^-)$ Γ_1

VALUE (keV)	*DOCUMENT ID*		*TECN*	*COMMENT*
0.75±0.15	BRANDELIK	78C	DASP	e^+e^-

$\psi(4040)$ BRANCHING RATIOS

$\Gamma(e^+e^-)/\Gamma_{total}$ Γ_1/Γ

VALUE (units 10^{-5})	*DOCUMENT ID*		*TECN*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •				
~ 1.0	FELDMAN	77	MRK1	e^+e^-

$\Gamma(D^0\overline{D}^0)/\Gamma(D^*(2007)^0\overline{D}^0 + \text{c.c.})$ Γ_2/Γ_3

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.05 ±0.03	[1] GOLDHABER	77	MRK1	e^+e^-

[1] Phase-space factor (p^3) explicitly removed.

$\Gamma(D^*(2007)^0\overline{D}^*(2007)^0)/\Gamma(D^*(2007)^0\overline{D}^0 + \text{c.c.})$ Γ_4/Γ_3

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
32.0±12.0	[2] GOLDHABER	77	MRK1	e^+e^-

[2] Phase-space factor (p^3) explicitly removed.

ψ(4040) REFERENCES

BRANDELIK	78C	PL 76B 361	+Cords+	(DASP Collab.)
Also	79C	ZPHY C1 233	Brandelik, Cords+	(DASP Collab.)
FELDMAN	77	PRPL 33C 285	+Perl	(LBL, SLAC)
GOLDHABER	77	PL 69B 503	+Wiss, Abrams, Alam+	(Mark I Collab.)

OTHER RELATED PAPERS

HEIKKILA	84	PR D29 110	+Tornqvist, Ono	(HELS, AACHT)
ONO	84	ZPHY C26 307		(ORSAY)
SIEGRIST	82	PR D26 969	+Schwitters, Alam, Chinowsky+	(SLAC, LBL)
AUGUSTIN	75	PRL 34 764	+Boyarski, Abrams, Briggs+	(SLAC, LBL)
BACCI	75	PL 58B 481	+Bidoli, Penso, Stella+	(ROMA, FRAS)
BOYARSKI	75B	PRL 34 762	+Breidenbach, Abrams, Briggs+	(SLAC, LBL)
ESPOSITO	75	PL 58B 478	+Felicetti, Peruzzi+	(FRAS, NAPL, PADO, ROMA)