$\psi(4415)$

$I^G(J^{PC}) = 0^-(1^{--})$

$\psi(4415)$ MASS

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
4421 ± 4 OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
4425 ± 6	[1] SETH	05A	RVUE	$e^+e^- \to$ hadrons
4429 ± 9	[2] SETH	05A	RVUE	$e^+e^- \to$ hadrons
4417 ± 10	BRANDELIK	78C	DASP	e^+e^-
4414 ± 7	SIEGRIST	76	MRK1	e^+e^-

[1] From a fit to Crystal Ball (OSTERHELD 86) data.
[2] From a fit to BES (BAI 02C) data.

$\psi(4415)$ WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
62 ± 20 OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
119 ± 16	[3] SETH	05A	RVUE	$e^+e^- \to$ hadrons
118 ± 35	[4] SETH	05A	RVUE	$e^+e^- \to$ hadrons
66 ± 15	BRANDELIK	78C	DASP	e^+e^-
33 ± 10	SIEGRIST	76	MRK1	e^+e^-

[3] From a fit to Crystal Ball (OSTERHELD 86) data.
[4] From a fit to BES (BAI 02C) data.

$\psi(4415)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	hadrons	dominant
Γ_2	e^+e^-	$(9.4 \pm 3.2) \times 10^{-6}$

$\psi(4415)$ PARTIAL WIDTHS

$\Gamma(e^+e^-)$ Γ_2

VALUE (keV)	DOCUMENT ID		TECN	COMMENT
0.58 ± 0.07 OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.72 ± 0.11	[5] SETH	05A	RVUE	$e^+e^- \to$ hadrons
0.64 ± 0.23	[6] SETH	05A	RVUE	$e^+e^- \to$ hadrons
0.49 ± 0.13	BRANDELIK	78C	DASP	e^+e^-
0.44 ± 0.14	SIEGRIST	76	MRK1	e^+e^-

[5] From a fit to Crystal Ball (OSTERHELD 86) data.
[6] From a fit to BES (BAI 02C) data.

$\psi(4415)$ BRANCHING RATIOS

$\Gamma(\text{hadrons})/\Gamma_{\text{total}}$ **Γ_1/Γ**

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
dominant	SIEGRIST	76	MRK1	e^+e^-

$\psi(4415)$ REFERENCES

SETH	05A	PR D72 017501	K.K. Seth	
BAI	02C	PRL 88 101802	J.Z. Bai *et al.*	(BES Collab.)
OSTERHELD	86	SLAC-PUB-4160	A. Osterheld *et al.*	(SLAC Crystal Ball Collab.)
BRANDELIK	78C	PL 76B 361	R. Brandelik *et al.*	(DASP Collab.)
SIEGRIST	76	PRL 36 700	J.L. Siegrist *et al.*	(LBL, SLAC)

OTHER RELATED PAPERS

BURMESTER	77	PL 66B 395	J. Burmester *et al.*	(DESY, HAMB, SIEG+)
LUTH	77	PL 70B 120	V. Luth *et al.*	(LBL, SLAC)