

h₁(1415)

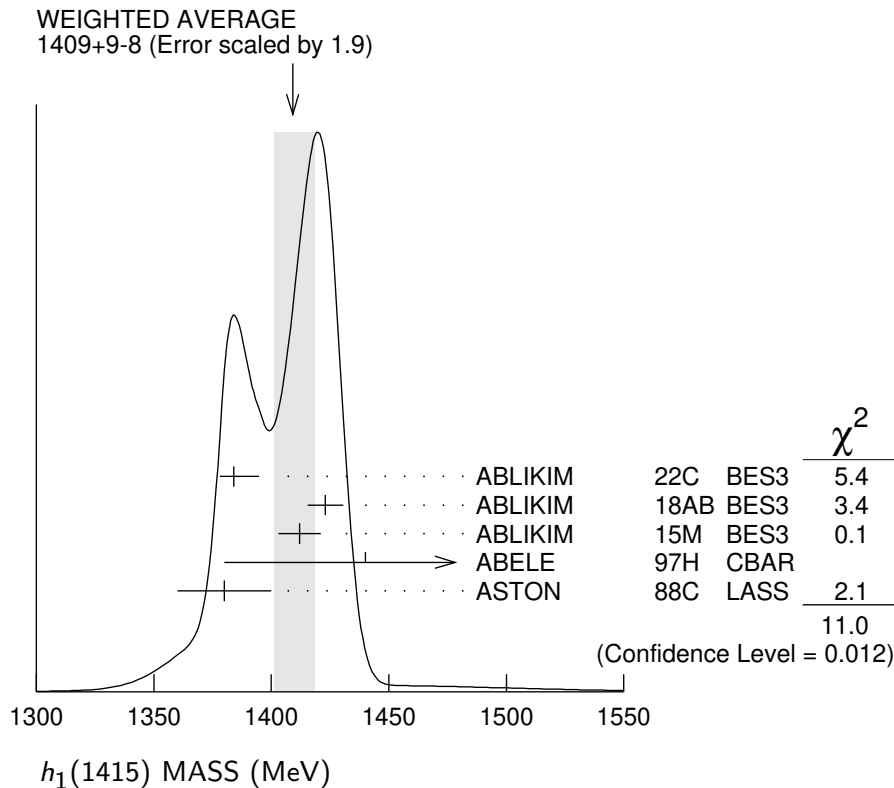
$$I^G(J^{PC}) = 0^-(1^{+-})$$

h₁(1415) MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1409⁺⁹₋₈	OUR AVERAGE	Error includes scale factor of 1.9. See the ideogram below.		
1384 ± 6	⁺⁹ ₋₀	¹ ABLIKIM	22C BES3	J/ψ → γη'η' → 4/5γ2(π ⁺ π ⁻)
1423 ± 2.1 ± 7.3	2.2k	² ABLIKIM	18AB BES3	J/ψ → η'h ₁ → η'K* \bar{K}
1412 ± 4 ± 8		² ABLIKIM	15M BES3	ψ(2S) → γχ _{c1,2} → γφ(h ₁ → K* \bar{K})
1440 ± 60		ABELE	97H CBAR	$\bar{p}p$ → K _L ⁰ K _S ⁰ π ⁰ π ⁰
1380 ± 20		ASTON	88C LASS	11 K ⁻ p → K _S ⁰ K [±] π [∓] Λ

¹ From a partial wave analysis of the systems (γX), with X → η'η', and (η'X), with X → γη' in the decay J/ψ → γη'η'. The intermediate resonance X is parametrized by a constant-width, relativistic Breit-Wigner.

² Final states K⁺K⁻π⁰ and K_S⁰K[±]π[∓].



$h_1(1415)$ WIDTH

VALUE (MeV)		EVTs	DOCUMENT ID	TECN	COMMENT
78 ±11	OUR AVERAGE				
66 ±10	$\begin{matrix} +12 \\ -10 \end{matrix}$		¹ ABLIKIM	22C BES3	$J/\psi \rightarrow \gamma \eta' \eta' \rightarrow$ $4/5 \gamma 2(\pi^+ \pi^-)$
90.3 ± 9.8	±17.5	2.2k	² ABLIKIM	18AB BES3	$J/\psi \rightarrow \eta' h_1 \rightarrow \eta' K^* \bar{K}$
84 ±12	±40		² ABLIKIM	15M BES3	$\psi(2S) \rightarrow \gamma \chi_{c1,2} \rightarrow$ $\gamma \phi(h_1 \rightarrow K^* \bar{K})$
170 ±80			ABELE	97H CBAR	$\bar{p} p \rightarrow K_L^0 K_S^0 \pi^0 \pi^0$
80 ±30			ASTON	88C LASS	11 $K^- p \rightarrow K_S^0 K^\pm \pi^\mp \Lambda$

¹ From a partial wave analysis of the systems (γX), with $X \rightarrow \eta' \eta'$, and ($\eta' X$), with $X \rightarrow \gamma \eta'$ in the decay $J/\psi \rightarrow \gamma \eta' \eta'$. The intermediate resonance X is parametrized by a constant-width, relativistic Breit-Wigner.

² Final states $K^+ K^- \pi^0$ and $K_S^0 K^\pm \pi^\mp$.

$h_1(1415)$ DECAY MODES

Mode
$\Gamma_1 \quad K \bar{K}^*(892) + \text{c.c.}$

$h_1(1415)$ REFERENCES

ABLIKIM	22C	PR D105 072002	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	18AB	PR D98 072005	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	15M	PR D91 112008	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABELE	97H	PL B415 280	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
ASTON	88C	PL B201 573	D. Aston <i>et al.</i>	(SLAC, NAGO, CINC, INUS)