

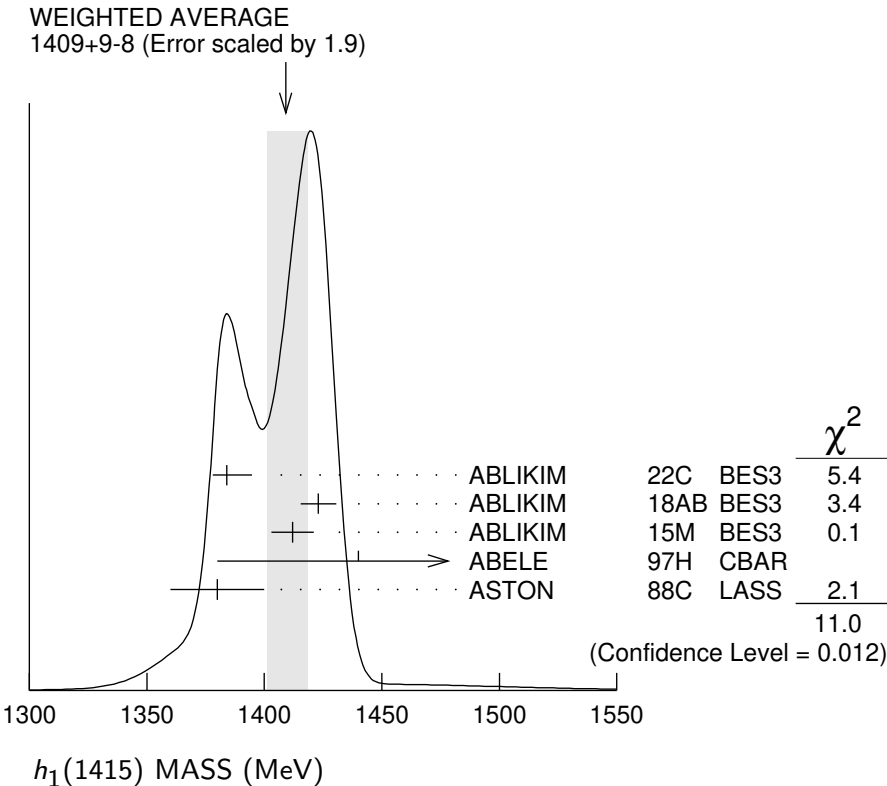
$h_1(1415)$

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

$h_1(1415)$ 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	$J/\psi \rightarrow \gamma \eta' \eta' \rightarrow 4/5 \gamma 2(\pi^+ \pi^-)$
1423 ± 2.1 ± 7.3	2.2k	² ABLIKIM	18AB BES3	$J/\psi \rightarrow \eta' h_1 \rightarrow \eta' K^* \bar{K}$
1412 ± 4	± 8	² ABLIKIM	15M BES3	$\psi(2S) \rightarrow \gamma \chi_{c1,2} \rightarrow \gamma \phi(h_1 \rightarrow K^* \bar{K})$
1440 ± 60		ABELE	97H CBAR	$\bar{p} p \rightarrow K_L^0 K_S^0 \pi^0 \pi^0$
1380 ± 20		ASTON	88C LASS	11 $K^- p \rightarrow K_S^0 K^\pm \pi^\mp \Lambda$

¹From 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.
²Final states $K^+ K^- \pi^0$ and $K_S^0 K^\pm \pi^\mp$.



$h_1(1415)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
78 ±11 OUR AVERAGE				
66 ±10 ⁺¹² ₋₁₀		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 $K^- p \rightarrow K_S^0 K^\pm \pi^\mp \Lambda$

¹From 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.

²Final 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)