

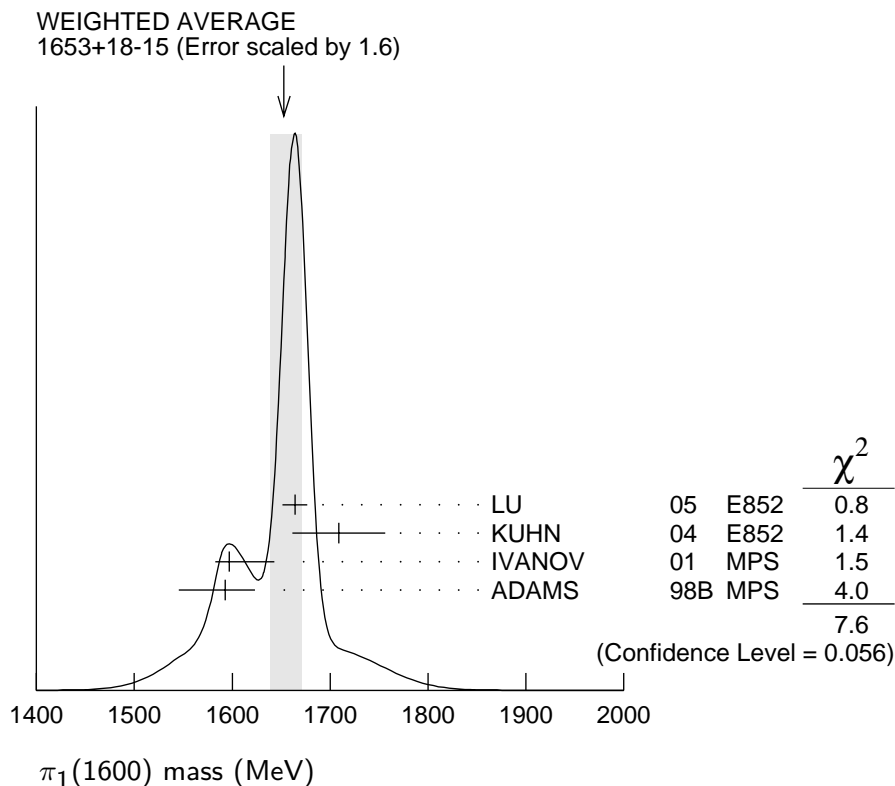
$\pi_1(1600)$

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

$\pi_1(1600)$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1653⁺¹⁸₋₁₅ OUR AVERAGE		Error includes scale factor of 1.6. See the ideogram below.		
1664 ± 8 ± 10	145k	¹ LU	05 E852	18 $\pi^- p \rightarrow \omega \pi^- \pi^0 p$
1709 ± 24 ± 41	69k	KUHN	04 E852	18 $\pi^- p \rightarrow \eta \pi^+ \pi^- \pi^- p$
1597 ± 10 ⁺⁴⁵ ₋₁₀		IVANOV	01 E852	18 $\pi^- p \rightarrow \eta' \pi^- p$
1593 ± 8 ⁺²⁹ ₋₄₇		² ADAMS	98B E852	18.3 $\pi^- p \rightarrow \pi^+ \pi^- \pi^- p$

¹ May be a different state.
² Natural parity exchange.



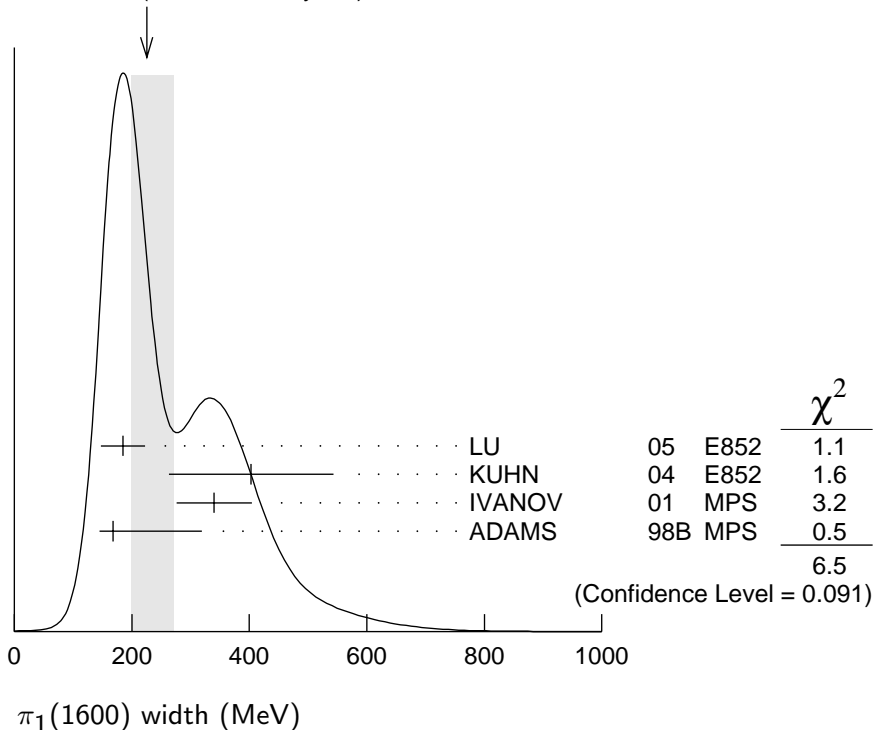
$\pi_1(1600)$ WIDTH

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
225⁺⁴⁵₋₂₈ OUR AVERAGE		Error includes scale factor of 1.5. See the ideogram below.		
185 ± 25 ± 28	145k	³ LU	05 E852	18 $\pi^- p \rightarrow \omega \pi^- \pi^0 p$
403 ± 80 ± 115	69k	KUHN	04 E852	18 $\pi^- p \rightarrow \eta \pi^+ \pi^- \pi^- p$
340 ± 40 ± 50		IVANOV	01 E852	18 $\pi^- p \rightarrow \eta' \pi^- p$
168 ± 20 ⁺¹⁵⁰ ₋₁₂		⁴ ADAMS	98B E852	18.3 $\pi^- p \rightarrow \pi^+ \pi^- \pi^- p$

³ May be a different state.

⁴ Natural parity exchange.

WEIGHTED AVERAGE
225+45-28 (Error scaled by 1.5)



$\pi_1(1600)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $\pi\pi\pi$	seen
Γ_2 $\rho^0\pi^-$	seen
Γ_3 $f_2(1270)\pi^-$	not seen
Γ_4 $b_1(1235)\pi$	seen
Γ_5 $\eta'(958)\pi^-$	seen
Γ_6 $f_1(1285)\pi$	seen

$\pi_1(1600)$ BRANCHING RATIOS

$\Gamma(\rho^0\pi^-)/\Gamma_{\text{total}}$	Γ_2/Γ		
VALUE	DOCUMENT ID	TECN	COMMENT
seen	⁵ ADAMS	98B E852	18.3 $\pi^- p \rightarrow \pi^+ \pi^- \pi^- p$

$\Gamma(\eta'(958)\pi^-)/\Gamma_{\text{total}}$	Γ_5/Γ		
VALUE	DOCUMENT ID	TECN	COMMENT
seen	IVANOV	01 E852	18 $\pi^- p \rightarrow \eta' \pi^- p$

$\Gamma(f_2(1270)\pi^-)/\Gamma_{\text{total}}$ Γ_3/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
not seen	CHUNG	02 E852	18.3 $\pi^- p \rightarrow \pi^+ \pi^- \pi^- p$

$\Gamma(b_1(1235)\pi)/\Gamma_{\text{total}}$ Γ_4/Γ

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
seen	35280	⁶ BAKER	03 SPEC	$\bar{p}p \rightarrow \omega \pi^+ \pi^- \pi^0$

• • • We do not use the following data for averages, fits, limits, etc. • • •

seen	145k	LU	05 E852	18 $\pi^- p \rightarrow \omega \pi^- \pi^0 p$
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$\Gamma(f_1(1285)\pi)/\Gamma(\eta'(958)\pi^-)$ Γ_6/Γ_5

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
3.80 ± 0.78	69k	⁷ KUHN	04 E852	18 $\pi^- p \rightarrow \eta \pi^+ \pi^- \pi^- p$

⁵ Natural parity exchange.

⁶ $B((b_1\pi)_{D\text{-wave}})/B((b_1\pi)_{S\text{-wave}})=0.3 \pm 0.1$.

⁷ Using $\eta'(958)\pi$ data from IVANOV 01.

$\pi_1(1600)$ REFERENCES

LU	05	PRL 94 032002	M. Lu <i>et al.</i>	(BNL E852 Collab.)
KUHN	04	PL B595 109	J. Kuhn <i>et al.</i>	(BNL E852 Collab.)
BAKER	03	PL B563 140	C.A. Baker <i>et al.</i>	
CHUNG	02	PR D65 072001	S.U. Chung <i>et al.</i>	(BNL E852 Collab.)
IVANOV	01	PRL 86 3977	E.I. Ivanov <i>et al.</i>	(BNL E852 Collab.)
ADAMS	98B	PRL 81 5760	G.S. Adams <i>et al.</i>	(BNL E852 Collab.)

OTHER RELATED PAPERS

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