

$\pi_2(2100)$

$$I^G(J^{PC}) = 1^-(2^{-+})$$

OMITTED FROM SUMMARY TABLE

Needs confirmation.

 $\pi_2(2100)$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2090 ± 29 OUR AVERAGE			
2090 ± 30	¹ AMELIN	95B VES	36 $\pi^- A \rightarrow \pi^+ \pi^- \pi^- A$
2100 ± 150	² DAUM	81B CNTR	63,94 $\pi^- p \rightarrow 3\pi X$

¹ From a fit to $J^{PC} = 2^{-+} f_2(1270)\pi, (\pi\pi)_S\pi$ waves.² From a two-resonance fit to four 2^{-0^+} waves. $\pi_2(2100)$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
620 ± 50 OUR AVERAGE	Error includes scale factor of 1.2.		
520 ± 100	³ AMELIN	95B VES	36 $\pi^- A \rightarrow \pi^+ \pi^- \pi^- A$
651 ± 50	⁴ DAUM	81B CNTR	63,94 $\pi^- p \rightarrow 3\pi X$

³ From a fit to $J^{PC} = 2^{-+} f_2(1270)\pi, (\pi\pi)_S\pi$ waves.⁴ From a two-resonance fit to four 2^{-0^+} waves. $\pi_2(2100)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 3π	seen
Γ_2 $\rho\pi$	seen
Γ_3 $f_2(1270)\pi$	seen
Γ_4 $(\pi\pi)_S\pi$	seen

 $\pi_2(2100)$ BRANCHING RATIOS

$\Gamma(\rho\pi)/\Gamma(3\pi)$				Γ_2/Γ_1
VALUE	DOCUMENT ID	TECN	COMMENT	
0.19 ± 0.05	⁵ DAUM	81B CNTR	63,94 $\pi^- p$	
$\Gamma(f_2(1270)\pi)/\Gamma(3\pi)$				Γ_3/Γ_1
VALUE	DOCUMENT ID	TECN	COMMENT	
0.36 ± 0.09	⁵ DAUM	81B CNTR	63,94 $\pi^- p$	
$\Gamma((\pi\pi)_S\pi)/\Gamma(3\pi)$				Γ_4/Γ_1
VALUE	DOCUMENT ID	TECN	COMMENT	
0.45 ± 0.07	⁵ DAUM	81B CNTR	63,94 $\pi^- p$	

D-wave/S-wave RATIO FOR $\pi_2(2100) \rightarrow f_2(1270)\pi$

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
0.39 ± 0.23	⁵ DAUM	81B CNTR	63,94 $\pi^- p$

⁵ From a two-resonance fit to four 2^-0^+ waves.

$\pi_2(2100)$ REFERENCES

AMELIN	95B PL B356 595	D.V. Amelin <i>et al.</i>	(SERP, TBIL)
DAUM	81B NP B182 269	C. Daum <i>et al.</i>	(AMST, CERN, CRAC, MPIM+)