

$\pi(1800)$

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

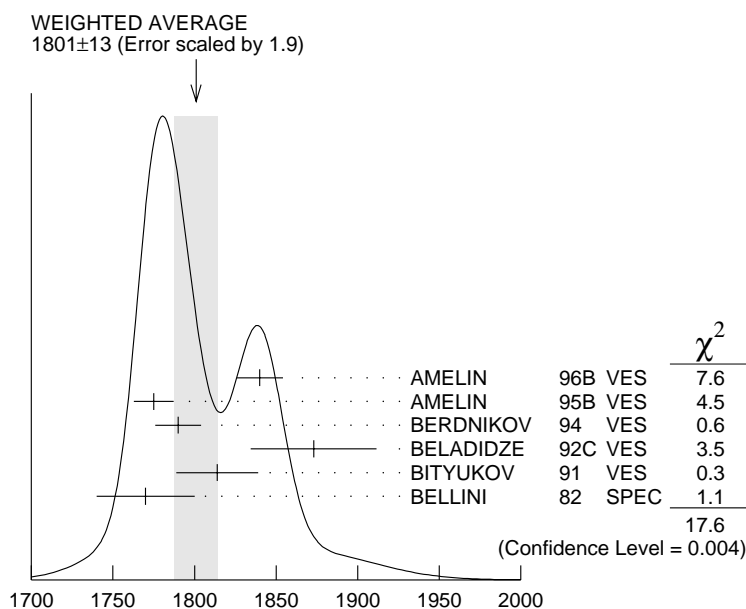
See also minireview under non- $q\bar{q}$ candidates. (See the index for the page number.)

$\pi(1800)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
1801±13 OUR AVERAGE					Error includes scale factor of 1.9. See the ideogram below.
1840±10±10	1200	AMELIN	96B VES	-	37 $\pi^- A \rightarrow \eta\eta\pi^- A$
1775± 7±10		¹ AMELIN	95B VES	-	36 $\pi^- A \rightarrow \pi^+\pi^-\pi^- A$
1790±14		² BERDNIKOV	94 VES	-	37 $\pi^- A \rightarrow K^+K^-\pi^- A$
1873±33±20		BELADIDZE	92C VES	-	36 $\pi^- Be \rightarrow \pi^-\eta'/\eta Be$
1814±10±23	426±57	BITYUKOV	91 VES	-	36 $\pi^- C \rightarrow \pi^-\eta\eta C$
1770±30	1100	BELLINI	82 SPEC	-	40 $\pi^- A \rightarrow 3\pi A$

¹ From a fit to $J^{PC} = 0^{-+} f_0(980)\pi, f_0(1370)\pi$ waves.

² From a fit to $J^{PC} = 0^{-+} K_0^*(1430)K^-, f_0(980)\pi^-$ waves.



$\pi(1800)$ mass (MeV)

$\pi(1800)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
210±15 OUR AVERAGE					
210±30±30	1200	AMELIN	96B	VES	— 37 $\pi^- A \rightarrow \eta\eta\pi^- A$
190±15±15		³ AMELIN	95B	VES	— 36 $\pi^- A \rightarrow \pi^+\pi^-\pi^- A$
210±70		⁴ BERDNIKOV	94	VES	— 37 $\pi^- A \rightarrow K^+K^-\pi^- A$
225±35±20		BELADIDZE	92C	VES	— 36 $\pi^- Be \rightarrow \pi^-\eta'\eta Be$
205±18±32	426±57	BITYUKOV	91	VES	— 36 $\pi^- C \rightarrow \pi^-\eta\eta C$
310±50	1100	BELLINI	82	SPEC	— 40 $\pi^- A \rightarrow 3\pi A$
³ From a fit to $J^{PC} = 0^{-+} f_0(980)\pi, f_0(1370)\pi$ waves.					
⁴ From a fit to $J^{PC} = 0^{-+} K_0^*(1430)K^-$ and $f_0(980)\pi^-$ waves.					

$\pi(1800)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $\pi^+\pi^-\pi^-$	seen
Γ_2 $f_0(980)\pi^-$	seen
Γ_3 $f_0(1370)\pi^-$	seen
Γ_4 $\rho\pi^-$	not seen
Γ_5 $\eta\eta\pi^-$	seen
Γ_6 $a_0(980)\eta$	seen
Γ_7 $f_0(1500)\pi^-$	seen
Γ_8 $\eta\eta'(958)\pi^-$	seen
Γ_9 $K_0^*(1430)K^-$	seen
Γ_{10} $K^*(892)K^-$	not seen

$\pi(1800)$ BRANCHING RATIOS

$\Gamma(f_0(980)\pi^-)/\Gamma(f_0(1370)\pi^-)$		Γ_2/Γ_3			
VALUE	DOCUMENT ID	TECN	CHG	COMMENT	
1.7±1.3	AMELIN	95B	VES	— 36 $\pi^- A \rightarrow \pi^+\pi^-\pi^- A$	
$\Gamma(f_0(1370)\pi^-)/\Gamma_{\text{total}}$		Γ_3/Γ			
VALUE	DOCUMENT ID	TECN	CHG	COMMENT	
seen	BELLINI	82	SPEC	— 40 $\pi^- A \rightarrow 3\pi A$	
$\Gamma(\eta\eta\pi^-)/\Gamma(\pi^+\pi^-\pi^-)$		Γ_5/Γ_1			
VALUE	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
0.5 ± 0.1	1200	AMELIN	96B	VES	— 37 $\pi^- A \rightarrow \eta\eta\pi^- A$

$\Gamma(f_0(1500)\pi^-)/\Gamma(a_0(980)\eta)$						Γ_7/Γ_6
<u>VALUE</u>	<u>EVTs</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>	
0.08 ± 0.03	1200	⁵ AMELIN	96B	VES	—	37 $\pi^- A \rightarrow \eta\eta\pi^- A$

⁵ Assuming that $f_0(1500)$ decays only to $\eta\eta$ and $a_0(980)$ decays only to $\eta\pi$.

$\Gamma(\eta\eta'(958)\pi^-)/\Gamma(\eta\eta\pi^-)$						Γ_8/Γ_5
<u>VALUE</u>	<u>EVTs</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>	
0.29 ± 0.06 OUR AVERAGE						
0.29 ± 0.07		BELADIDZE	92C	VES	—	36 $\pi^- Be \rightarrow \pi^- \eta' \eta Be$
0.3 ± 0.1	426 ± 57	BITYUKOV	91	VES	—	36 $\pi^- C \rightarrow \pi^- \eta\eta C$

$\Gamma(K_0^*(1430)K^-)/\Gamma_{total}$						Γ_9/Γ
<u>VALUE</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>	
seen		BERDNIKOV	94	VES	—	37 $\pi^- A \rightarrow K^+ K^- \pi^- A$

$\Gamma(K^*(892)K^-)/\Gamma_{total}$						Γ_{10}/Γ
<u>VALUE</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>	
• • • We do not use the following data for averages, fits, limits, etc. • • •						
not seen		BERDNIKOV	94	VES	—	37 $\pi^- A \rightarrow K^+ K^- \pi^- A$

$\Gamma(\rho\pi^-)/\Gamma(f_0(980)\pi^-)$						Γ_4/Γ_2
<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>	
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<0.14	90	AMELIN	95B	VES	—	36 $\pi^- A \rightarrow \pi^+ \pi^- \pi^- A$

$\Gamma(\rho\pi^-)/\Gamma_{total}$						Γ_4/Γ
<u>VALUE</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>	
not seen		BELLINI	82	SPEC	—	40 $\pi^- A \rightarrow 3\pi A$

$\pi(1800)$ REFERENCES

AMELIN	96B	PAN 59 976	+Berdnikov, Bityukov+	(SERP, TBIL)	IGJPC
		Translated from YAF 59 1021.			
AMELIN	95B	PL B356 595	+Berdnikov, Bityukov+	(SERP, TBIL)	
BERDNIKOV	94	PL B337 219	+Bityukov+	(SERP, TBIL)	
BELADIDZE	92C	SJNP 55 1535	+Bityukov, Borisov	(SERP, TBIL)	
		Translated from YAF 55 2748.			
BITYUKOV	91	PL B268 137	+Borisov+	(SERP, TBIL)	
BELLINI	82	PRL 48 1697	+Frabetti, Ivanshin, Litkin+	(MILA, BGNA, JINR)	

OTHER RELATED PAPERS

BORISOV	92	SJNP 55 1441	+Gershtein, Zaitsev	(SERP)	
		Translated from YAF 55 2583.			