

$\rho(1900)$

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

OMITTED FROM SUMMARY TABLE

See the review on "Spectroscopy of Light Meson Resonances."

 $\rho(1900)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
1909 ± 17 ± 25	54	¹ AUBERT	08S BABR	10.6 e ⁺ e ⁻ → φπ ⁰ γ
1880 ± 30		AUBERT	06D BABR	10.6 e ⁺ e ⁻ → 3π ⁺ 3π ⁻ γ
1860 ± 20		AUBERT	06D BABR	10.6 e ⁺ e ⁻ → 2(π ⁺ π ⁻ π ⁰)γ
1910 ± 10		^{2,3} FRABETTI	04 E687	γp → 3π ⁺ 3π ⁻ p
1870 ± 10		ANTONELLI	96 SPEC	e ⁺ e ⁻ → hadrons

¹ From the fit with two resonances.² From a fit with two resonances with the JACOB 72 continuum.³ Supersedes FRABETTI 01. **$\rho(1900)$ WIDTH**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
48 ± 17 ± 2	54	⁴ AUBERT	08S BABR	10.6 e ⁺ e ⁻ → φπ ⁰ γ
130 ± 30		AUBERT	06D BABR	10.6 e ⁺ e ⁻ → 3π ⁺ 3π ⁻ γ
160 ± 20		AUBERT	06D BABR	10.6 e ⁺ e ⁻ → 2(π ⁺ π ⁻ π ⁰)γ
37 ± 13		^{5,6} FRABETTI	04 E687	γp → 3π ⁺ 3π ⁻ p
10 ± 5		ANTONELLI	96 SPEC	e ⁺ e ⁻ → hadrons

⁴ From the fit with two resonances.⁵ From a fit with two resonances with the JACOB 72 continuum.⁶ Supersedes FRABETTI 01. **$\rho(1900)$ $\Gamma(i)\Gamma(e^+e^-)/\Gamma^2(\text{total})$** **$\Gamma(\phi\pi)/\Gamma_{\text{total}} \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$ $\Gamma_4/\Gamma \times \Gamma_6/\Gamma$**

VALUE (units 10 ⁻⁸)	EVTS	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
4.2 ± 1.2 ± 0.8	54	⁷ AUBERT	08S BABR	10.6 e ⁺ e ⁻ → φπ ⁰ γ

⁷ From the fit with two resonances. **$\rho(1900)$ DECAY MODES**

Mode	Fraction (Γ_i/Γ)
Γ_1 6π	seen
Γ_2 3π ⁺ 3π ⁻	seen
Γ_3 2π ⁺ 2π ⁻ 2π ⁰	

Γ_4	$\phi\pi$	
Γ_5	hadrons	seen
Γ_6	e^+e^-	seen
Γ_7	$\overline{N}N$	not seen

$\rho(1900)$ BRANCHING RATIOS

$\Gamma(6\pi)/\Gamma_{\text{total}}$					Γ_1/Γ
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
seen	8k	AKHMETSHIN 13	CMD3	$e^+e^- \rightarrow 3\pi^+3\pi^-$	
not seen		AGNELLO 02	OBLX	$\overline{n}p \rightarrow 3\pi^+2\pi^-\pi^0$	
seen		FRABETTI 01	E687	$\gamma p \rightarrow 3\pi^+3\pi^-p$	
seen		ANTONELLI 96	SPEC	$e^+e^- \rightarrow \text{hadrons}$	

$\rho(1900)$ REFERENCES

AKHMETSHIN 13	PL B723 82	R.R. Akhmetshin <i>et al.</i>	(CMD-3 Collab.)
AUBERT 08S	PR D77 092002	B. Aubert <i>et al.</i>	(BABAR Collab.)
AUBERT 06D	PR D73 052003	B. Aubert <i>et al.</i>	(BABAR Collab.)
FRABETTI 04	PL B578 290	P.L. Frabetti <i>et al.</i>	(FNAL E687 Collab.)
AGNELLO 02	PL B527 39	M. Agnello <i>et al.</i>	(OBELIX Collab.)
FRABETTI 01	PL B514 240	P.L. Frabetti <i>et al.</i>	(FNAL E687 Collab.)
ANTONELLI 96	PL B365 427	A. Antonelli <i>et al.</i>	(FENICE Collab.)
JACOB 72	PR D5 1847	M. Jacob, R. Slansky	
