

$\rho(1900)$

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

OMITTED FROM SUMMARY TABLE

See our mini-review under the $\rho(1700)$. **$\rho(1900)$ MASS**

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

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. ● ● ●				
$48 \pm 17 \pm 2$	54	⁴ AUBERT	08S BABR	$10.6 e^+ e^- \rightarrow \phi \pi^0 \gamma$
130 ± 30		AUBERT	06D BABR	$10.6 e^+ e^- \rightarrow 3\pi^+ 3\pi^- \gamma$
160 ± 20		AUBERT	06D BABR	$10.6 e^+ e^- \rightarrow 2(\pi^+ \pi^- \pi^0) \gamma$
37 ± 13		^{5,6} FRABETTI	04 E687	$\gamma p \rightarrow 3\pi^+ 3\pi^- p$
10 ± 5		ANTONELLI	96 SPEC	$e^+ e^- \rightarrow \text{hadrons}$

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

$$\frac{\Gamma(\phi\pi)}{\Gamma_{\text{total}}} \times \frac{\Gamma(e^+ e^-)}{\Gamma_{\text{total}}} \qquad \Gamma_4/\Gamma \times \Gamma_6/\Gamma$$

VALUE (units 10^{-8})	EVTS	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
$4.2 \pm 1.2 \pm 0.8$	54	⁷ AUBERT	08S BABR	$10.6 e^+ e^- \rightarrow \phi \pi^0 \gamma$

⁷ From the fit with two resonances.

$\rho(1900)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 6π	seen
Γ_2 $3\pi^+ 3\pi^-$	seen
Γ_3 $2\pi^+ 2\pi^- 2\pi^0$	
Γ_4 $\phi\pi$	
Γ_5 hadrons	seen
Γ_6 $e^+ e^-$	seen
Γ_7 $\bar{N} N$	not seen

 $\rho(1900)$ BRANCHING RATIOS

$\Gamma(6\pi)/\Gamma_{\text{total}}$					Γ_1/Γ
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	
seen	8k	AKHMETSHIN 13	CMD3	$e^+ e^- \rightarrow 3\pi^+ 3\pi^-$	
not seen		AGNELLO 02	OBLX	$\bar{n} p \rightarrow 3\pi^+ 2\pi^- \pi^0$	
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	