

# ρ(1900)

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

OMITTED FROM SUMMARY TABLE

See our mini-review under the ρ(1700).

## ρ(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	<sup>1</sup> AUBERT	08S BABR	10.6 e <sup>+</sup> e <sup>-</sup> → φπ <sup>0</sup> γ
1880 ± 30		AUBERT	06D BABR	10.6 e <sup>+</sup> e <sup>-</sup> → 3π <sup>+</sup> 3π <sup>-</sup> γ
1860 ± 20		AUBERT	06D BABR	10.6 e <sup>+</sup> e <sup>-</sup> → 2(π <sup>+</sup> π <sup>-</sup> π <sup>0</sup> )γ
1910 ± 10		<sup>2,3</sup> FRABETTI	04 E687	γp → 3π <sup>+</sup> 3π <sup>-</sup> p
1870 ± 10		ANTONELLI	96 SPEC	e <sup>+</sup> e <sup>-</sup> → hadrons

<sup>1</sup> From the fit with two resonances.

<sup>2</sup> From a fit with two resonances with the JACOB 72 continuum.

<sup>3</sup> Supersedes FRABETTI 01.

## ρ(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	<sup>4</sup> AUBERT	08S BABR	10.6 e <sup>+</sup> e <sup>-</sup> → φπ <sup>0</sup> γ
130 ± 30		AUBERT	06D BABR	10.6 e <sup>+</sup> e <sup>-</sup> → 3π <sup>+</sup> 3π <sup>-</sup> γ
160 ± 20		AUBERT	06D BABR	10.6 e <sup>+</sup> e <sup>-</sup> → 2(π <sup>+</sup> π <sup>-</sup> π <sup>0</sup> )γ
37 ± 13		<sup>5,6</sup> FRABETTI	04 E687	γp → 3π <sup>+</sup> 3π <sup>-</sup> p
10 ± 5		ANTONELLI	96 SPEC	e <sup>+</sup> e <sup>-</sup> → hadrons

<sup>4</sup> From the fit with two resonances.

<sup>5</sup> From a fit with two resonances with the JACOB 72 continuum.

<sup>6</sup> Supersedes FRABETTI 01.

## ρ(1900) Γ(i)Γ(e<sup>+</sup>e<sup>-</sup>)/Γ<sup>2</sup>(total)

$\Gamma(\phi\pi)/\Gamma_{\text{total}} \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$	$\Gamma_4/\Gamma \times \Gamma_6/\Gamma$			
VALUE (units 10 <sup>-8</sup> )	EVTS	DOCUMENT ID	TECN	COMMENT

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

4.2 ± 1.2 ± 0.8	54	<sup>7</sup> AUBERT	08S BABR	10.6 e <sup>+</sup> e <sup>-</sup> → φπ <sup>0</sup> γ
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<sup>7</sup> From the fit with two resonances.

**$\rho(1900)$  DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $6\pi$	seen
$\Gamma_2$ $3\pi^+ 3\pi^-$	seen
$\Gamma_3$ $2\pi^+ 2\pi^- 2\pi^0$	
$\Gamma_4$ $\phi\pi$	
$\Gamma_5$ hadrons	seen
$\Gamma_6$ $e^+ e^-$	seen
$\Gamma_7$ $\bar{N} N$	not seen

 **$\rho(1900)$  BRANCHING RATIOS**

$\Gamma(6\pi)/\Gamma_{\text{total}}$					$\Gamma_1/\Gamma$
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	