

# ρ(1570)

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

OMITTED FROM SUMMARY TABLE

May be an OZI-violating decay mode of ρ(1700). See our review in ρ(1700) section.

## ρ(1570) MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>1570±36±62</b>	54	<sup>1</sup> AUBERT	08S BABR	10.6 e <sup>+</sup> e <sup>-</sup> → φπ <sup>0</sup> γ
1480±40		<sup>2</sup> BITYUKOV	87 SPEC	32.5 π <sup>-</sup> p → φπ <sup>0</sup> n

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

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

<sup>2</sup> Systematic errors not estimated.

## ρ(1570) WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>144±75±43</b>	54	<sup>3</sup> AUBERT	08S BABR	10.6 e <sup>+</sup> e <sup>-</sup> → φπ <sup>0</sup> γ
130±60		<sup>4</sup> BITYUKOV	87 SPEC	32.5 π <sup>-</sup> p → φπ <sup>0</sup> n

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

<sup>3</sup> From the fit with two resonances.

<sup>4</sup> Systematic errors not estimated.

## ρ(1570) DECAY MODES

Mode	Fraction (Γ <sub>i</sub> /Γ)
Γ <sub>1</sub> e <sup>+</sup> e <sup>-</sup>	
Γ <sub>2</sub> φπ	not seen
Γ <sub>3</sub> ωπ	

## ρ(1570) Γ(i)Γ(e<sup>+</sup>e<sup>-</sup>)/Γ(total)

Γ(φπ) × Γ(e <sup>+</sup> e <sup>-</sup> )/Γ <sub>total</sub>					Γ <sub>2</sub> Γ <sub>1</sub> /Γ
VALUE (eV)	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<b>3.5±0.9±0.3</b>		54	<sup>5</sup> AUBERT	08S BABR	10.6 e <sup>+</sup> e <sup>-</sup> → φπ <sup>0</sup> γ
<70	90		<sup>6</sup> AULCHENKO	87B ND	e <sup>+</sup> e <sup>-</sup> → K <sub>S</sub> <sup>0</sup> K <sub>L</sub> <sup>0</sup> π <sup>0</sup>

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

<sup>5</sup> From the fit with two resonances.

<sup>6</sup> Using mass and width of BITYUKOV 87.

## $\rho(1570)$ BRANCHING RATIOS

$\Gamma(\phi\pi)/\Gamma_{\text{total}}$	$\Gamma_2/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>

<b>not seen</b>	ABELE	97H	CBAR	$\bar{p}p \rightarrow K_L^0 K_S^0 \pi^0 \pi^0$
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• • • We do not use the following data for averages, fits, limits, etc. • • •

$<0.01$	<sup>7</sup> DONNACHIE	91	RVUE	
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<sup>7</sup> Using data from BISELLO 91B, DOLINSKY 86, and ALBRECHT 87L.

$\Gamma(\phi\pi)/\Gamma(\omega\pi)$	$\Gamma_2/\Gamma_3$
<u>VALUE</u> <u>CL%</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>

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

$>0.5$	95	BITYUKOV	87	SPEC	$32.5 \pi^- p \rightarrow \phi \pi^0 n$
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## $\rho(1570)$ REFERENCES

AUBERT	08S	PR D77 092002	B. Aubert <i>et al.</i>	(BABAR Collab.)
ABELE	97H	PL B415 280	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
BISELLO	91B	NPBPS B21 111	D. Bisello	(DM2 Collab.)
DONNACHIE	91	ZPHY C51 689	A. Donnachie, A.B. Clegg	(MCHS, LANC)
ALBRECHT	87L	PL B185 223	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
AULCHENKO	87B	JETPL 45 145	V.M. Aulchenko <i>et al.</i>	(NOVO)
		Translated from ZETFP 45 118.		
BITYUKOV	87	PL B188 383	S.I. Bityukov <i>et al.</i>	(SERP)
DOLINSKY	86	PL B174 453	S.I. Dolinsky <i>et al.</i>	(NOVO)