

$\rho(1570)$

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

OMITTED FROM SUMMARY TABLE

May be an OZI-violating decay mode of $\rho(1700)$. See our mini-review under the $\rho(1700)$. **$\rho(1570)$ MASS**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1570±36±62	54	¹ AUBERT	08S BABR	10.6 $e^+e^- \rightarrow \phi\pi^0\gamma$
1480±40		² BITYUKOV	87 SPEC	32.5 $\pi^-p \rightarrow \phi\pi^0n$

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

¹ From the fit with two resonances.² Systematic errors not estimated. **$\rho(1570)$ WIDTH**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
144±75±43	54	³ AUBERT	08S BABR	10.6 $e^+e^- \rightarrow \phi\pi^0\gamma$
130±60		⁴ BITYUKOV	87 SPEC	32.5 $\pi^-p \rightarrow \phi\pi^0n$

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

³ From the fit with two resonances.⁴ Systematic errors not estimated. **$\rho(1570)$ DECAY MODES**

Mode	Fraction (Γ_i/Γ)
Γ_1 e^+e^-	
Γ_2 $\phi\pi$	not seen
Γ_3 $\omega\pi$	

 $\rho(1570)$ $\Gamma(i)\Gamma(e^+e^-)/\Gamma(\text{total})$

VALUE (eV)	CL%	EVTS	DOCUMENT ID	TECN	COMMENT	$\Gamma_2\Gamma_1/\Gamma$
3.5±0.9±0.3		54	⁵ AUBERT	08S BABR	10.6 $e^+e^- \rightarrow \phi\pi^0\gamma$	
<70	90		⁶ AULCHENKO	87B ND	$e^+e^- \rightarrow K_S^0 K_L^0 \pi^0$	

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

⁵ From the fit with two resonances.⁶ Using mass and width of BITYUKOV 87.

$\rho(1570)$ BRANCHING RATIOS

$\Gamma(\phi\pi)/\Gamma_{\text{total}}$ Γ_2/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
not seen	ABELE	97H CBAR	$\bar{p}p \rightarrow K_L^0 K_S^0 \pi^0 \pi^0$

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

<0.01 ⁷ DONNACHIE 91 RVUE

⁷ Using data from BISELLO 91B, DOLINSKY 86, and ALBRECHT 87L.

$\Gamma(\phi\pi)/\Gamma(\omega\pi)$ Γ_2/Γ_3

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
>0.5	95	BITYUKOV 87	SPEC	$32.5 \pi^- p \rightarrow \phi \pi^0 n$

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

>0.5 95 BITYUKOV 87 SPEC $32.5 \pi^- p \rightarrow \phi \pi^0 n$

$\rho(1570)$ 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)