\( \rho(1570) \)

\[ i^G(J^{PC}) = 1^+(1^- -) \]

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

<table>
<thead>
<tr>
<th>VALUE (MeV)</th>
<th>EVTS</th>
<th>DOCUMENT ID</th>
<th>TECN</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1570 ± 36 ± 62</td>
<td>54</td>
<td>1 AUBERT</td>
<td>08S</td>
<td>BABR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.6 ( e^+ e^- \rightarrow \phi \pi^0 \gamma )</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• • • We do not use the following data for averages, fits, limits, etc. • • •</td>
</tr>
<tr>
<td>1480 ± 40</td>
<td>2</td>
<td>BITYUKOV</td>
<td>87</td>
<td>SPEC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32.5 ( \pi^- p \rightarrow \phi \pi^0 n )</td>
</tr>
</tbody>
</table>

1 From the fit with two resonances.
2 Systematic errors not estimated.

\( \rho(1570) \) WIDTH

<table>
<thead>
<tr>
<th>VALUE (MeV)</th>
<th>EVTS</th>
<th>DOCUMENT ID</th>
<th>TECN</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>144 ± 75 ± 43</td>
<td>54</td>
<td>3 AUBERT</td>
<td>08S</td>
<td>BABR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.6 ( e^+ e^- \rightarrow \phi \pi^0 \gamma )</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>• • • We do not use the following data for averages, fits, limits, etc. • • •</td>
</tr>
<tr>
<td>130 ± 60</td>
<td>4</td>
<td>BITYUKOV</td>
<td>87</td>
<td>SPEC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32.5 ( \pi^- p \rightarrow \phi \pi^0 n )</td>
</tr>
</tbody>
</table>

3 From the fit with two resonances.
4 Systematic errors not estimated.

\( \rho(1570) \) DECAY MODES

<table>
<thead>
<tr>
<th>Mode</th>
<th>Fraction (( \Gamma_i / \Gamma ))</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \Gamma_1 )</td>
<td>( e^+ e^- )</td>
</tr>
<tr>
<td>( \Gamma_2 )</td>
<td>( \phi \pi )</td>
</tr>
<tr>
<td>( \Gamma_3 )</td>
<td>( \omega \pi )</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>( \Gamma(\phi \pi) \times \Gamma(e^+ e^-) / \Gamma_{\text{total}} )</th>
<th>( \Gamma_2 \Gamma_1 / \Gamma )</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE (eV)</td>
<td>CL%</td>
</tr>
<tr>
<td>3.5 ± 0.9 ± 0.3</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;70</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5 From the fit with two resonances.
6 Using mass and width of BITYUKOV 87.
### $\rho(1570)$ BRANCHING RATIOS

<table>
<thead>
<tr>
<th>$\Gamma(\phi\pi)/\Gamma_{total}$</th>
<th>DOCUMENT ID</th>
<th>TECN</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>not seen</td>
<td>ABELE 97H</td>
<td>CBAR</td>
<td>$p p \rightarrow K^0 L K^0 S \pi^0 \pi^0$</td>
</tr>
</tbody>
</table>

- We do not use the following data for averages, fits, limits, etc. 
- $<0.01$

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

<table>
<thead>
<tr>
<th>$\Gamma(\phi\pi)/\Gamma(\omega\pi)$</th>
<th>$\Gamma_2/\Gamma_3$</th>
<th>DOCUMENT ID</th>
<th>TECN</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>$&gt;0.5$</td>
<td>95</td>
<td>BITYUKOV 87</td>
<td>SPEC</td>
<td>32.5 $\pi^- p \rightarrow \phi \pi^0 n$</td>
</tr>
</tbody>
</table>

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

### $\rho(1570)$ REFERENCES

- AUBERT 08S PR D77 092002 B. Aubert et al. (BABAR Collab.)
- ABELE 97H PL B415 280 A. Abele et al. (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 et al. (ARGUS Collab.)
- AULCHENKO 87B JETPL 45 145 V.M. Aulchenko et al. (NOVO)
- BITYUKOV 87 PL B188 383 S.I. Bityukov et al. (SERP)
- DOLINSKY 86 PL B174 453 S.I. Dolinsky et al. (NOVO)