

## Further States

### OMITTED FROM SUMMARY TABLE

This section contains states observed by a single group, and that thus need confirmation. Publications that exclude earlier claims in this section are listed under 'Other Related Papers.'

### QUANTUM NUMBERS, MASSES, WIDTHS, AND BRANCHING RATIOS

<b>X(1110)</b> $I^G(J^{PC}) = 0^+(\text{even } ++)$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
1107±4	111 ± 8 ± 15	DAFTARI	87 DBC	0. $\bar{p}n \rightarrow$ $\rho^- \pi^+ \pi^-$	
<b>X(1420)</b> $I^G(J^{PC}) = 2^+(0^{++})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
1420±20	160 ± 10	FILIPPI	00 OBLX	0 $\bar{n}p \rightarrow$ $\pi^+ \pi^+ \pi^-$	
<b>X(1650)</b> $I^G(J^{PC}) = 0^-(?^{? -})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1652±7	<50	100	PROKOSHKIN 96	GAM2	32,38 $\pi p \rightarrow$ $\omega \eta n$
<b>X(1775)</b> $I^G(J^{PC}) = 1^-(?^{-+})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
1763±20	192 ± 60	CONDO	91 SHF	$\gamma p \rightarrow$ $(p\pi^+)(\pi^+ \pi^- \pi^-)$	
1787±18	118 ± 60	CONDO	91 SHF	$\gamma p \rightarrow n\pi^+ \pi^+ \pi^-$	
<b>X(1855)</b> $I^G(J^{PC}) = ?^?(?^{??})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
1856.6±5	20 ± 5	BRIDGES	86D SPEC	0. $\bar{p}d \rightarrow \pi\pi N$	
<b>X(1870)</b> $I^G(J^{PC}) = ?^?(?^{??})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
~ 1870	~ 10	DALKAROV	97 RVUE	0.0 $\bar{p}d \rightarrow$ $p3\pi^- 2\pi^+$	
<b>X(1870)</b> $I^G(J^{PC}) = ?^?(2^{??})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
1870±40	250 ± 30	ALDE	86D GAM4	100 $\pi^- p \rightarrow 2\eta X$	

<b>X(1870)</b>	$I^G(J^{PC}) = ??(1^{--})$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1870 ± 10	10 ± 5	ANTONELLI	96	SPEC	$e^+ e^- \rightarrow \text{hadrons}$	

<b><math>\pi_2(1880)</math></b>	$I^G(J^{PC}) = 1^-(2^{-+})$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1880 ± 20	255 ± 45	ANISOVICH	01B	$\bar{p}p \rightarrow (a_2(1320)\eta)\pi^0$		

<b><math>\rho(1910)</math></b>	$I^G(J^{PC}) = 1^+(1^{--})$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1911 ± 4 ± 1	29 ± 11 ± 4	FRABETTI	01	E687	$\gamma p \rightarrow 3\pi^+ 3\pi^- p$	

<b>X(1935)</b>	$I^G(J^{PC}) = 1^+(1^{-?})$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1935 ± 20	215 ± 30	EVANGELISTA	79	OMEG	10,16 $\pi^- p \rightarrow \bar{p}pn$	

<b><math>\omega_3(1955)</math></b>	$I^G(J^{PC}) = 0^-(3^{--})$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1955 ± 30	165 ± 30	ANISOVICH	01C	SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega\eta$	

<b><math>b_1(1960)</math></b>	$I^G(J^{PC}) = 1^-(1^{+-})$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1960 ± 40	210 ± 80	ANISOVICH	01D	SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega\pi^0$	

<b><math>\rho(1965)</math></b>	$I^G(J^{PC}) = 1^-(1^{--})$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1965 ± 30	165 ± 30	ANISOVICH	01D	SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega\pi^0$	

<b><math>f_1(1970)</math></b>	$I^G(J^{PC}) = 0^+(1^{++})$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1971 ± 15	240 ± 45	ANISOVICH	00J	SPEC		

<b>X(1970)</b>	$I^G(J^{PC}) = ??(???)$	<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1970 ± 10	40 ± 20	CHLIAPNIK...	80	HBC	32 $K^+ p \rightarrow 2K_S^0 2\pi X$	

<b>X(1975)</b>		$I^G(J^{PC}) = ??(???)$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
1973 ± 15	80	30	CASO	70	HBC	11.2 $\pi^- p \rightarrow \rho 2\pi$	

<b>a<sub>2</sub>(1990)</b>		$I^G(J^{PC}) = 1^-(2^{++})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>			
1990 <sup>+15</sup> <sub>-30</sub>	190 ± 50		ANISOVICH	99C	SPEC		

<b>h<sub>1</sub>(1995)</b>		$I^G(J^{PC}) = 0^-(1^{+-})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
1995 ± 20	205 ± 20		ANISOVICH	01C	SPEC	0.6–1.9 $\bar{p} p \rightarrow \omega \eta$	

<b>ρ(2000)</b>		$I^G(J^{PC}) = 1^+(1^{--})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>			
2000 ± 30	295 ± 85		ANISOVICH	00J	SPEC		

<b>f<sub>2</sub>(2000)</b>		$I^G(J^{PC}) = 0^+(2^{++})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>			
2001 ± 10	312 ± 32		ANISOVICH	00J	SPEC		

<b>π<sub>2</sub>(2005)</b>		$I^G(J^{PC}) = 1^-(2^{-+})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
2005 ± 15	200 ± 40		ANISOVICH	01F	SPEC	2.0 $\bar{p} p \rightarrow 3\pi^0, \pi^0 \eta, \pi^0 \eta'$	

<b>η(2010)</b>		$I^G(J^{PC}) = 0^+(0^{-+})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>			
2010 <sup>+35</sup> <sub>-60</sub>	270 ± 60		ANISOVICH	00J	SPEC		

<b>a<sub>0</sub>(2020)</b>		$I^G(J^{PC}) = 1^-(0^{++})$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>			
2025 ± 30	330 ± 75		ANISOVICH	99C	SPEC		

<b>X(2020)</b>		$I^G(J^{PC}) = ??(???)$					
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
2015 ± 3	10 ± 4		FERRER	99	RVUE	$\pi p \rightarrow p p \bar{p} \pi(\pi)$	

<b><math>b_3(2025)</math></b>		$I^G(J^{PC}) = 1^-(3^{+-})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
2025 ± 15	107 ± 20	ANISOVICH	01D SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega \pi^0$		

<b><math>\eta_2(2030)</math></b>		$I^G(J^{PC}) = 0^+(2^{-+})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
2030 ± 5 ± 15	205 ± 10 ± 15	ANISOVICH	00E SPEC			

<b><math>B(a_2\pi)_{L=0}/B(a_2\pi)_{L=2}</math></b>		<u>DOCUMENT ID</u>	<u>TECN</u>		
<u>VALUE</u>					
0.74 ± 0.17		<sup>1</sup> ANISOVICH	00E SPEC		

<b><math>B(a_0\pi)/B(a_2\pi)_{L=2}</math></b>		<u>DOCUMENT ID</u>	<u>TECN</u>		
<u>VALUE</u>					
0.072 ± 0.016		<sup>1</sup> ANISOVICH	00E SPEC		

<b><math>B(f_2\eta)/B(a_2\pi)_{L=2}</math></b>		<u>DOCUMENT ID</u>	<u>TECN</u>		
<u>VALUE</u>					
0.074 ± 0.026		<sup>1</sup> ANISOVICH	00E SPEC		

<b><math>f_3(2050)</math></b>		$I^G(J^{PC}) = 0^+(3^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
2048 ± 8	213 ± 34	ANISOVICH	00J SPEC			

<b><math>f_0(2060)</math></b>		$I^G(J^{PC}) = 0^+(0^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
~ 2050	~ 120	<sup>2</sup> OAKDEN	94 RVUE	0.36–1.55 $\bar{p}p \rightarrow \pi\pi$		
~ 2060	~ 50	<sup>2</sup> OAKDEN	94 RVUE	0.36–1.55 $\bar{p}p \rightarrow \pi\pi$		

<b><math>a_3(2070)</math></b>		$I^G(J^{PC}) = 1^-(3^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
2070 ± 20	170 ± 40	ANISOVICH	99C SPEC			

<b><math>a_2(2080)</math></b>		$I^G(J^{PC}) = 1^-(2^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
2060 ± 20	195 ± 30	ANISOVICH	99C SPEC			
2100 <sup>+10</sup> <sub>-30</sub>	360 <sup>+40</sup> <sub>-100</sub>	ANISOVICH	99E SPEC			

<b><math>X(2080)</math></b>		$I^G(J^{PC}) = ?^?(?^{??})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
2080 ± 10	110 ± 20	KREYMER	80 STRC	13 $\pi^- d \rightarrow p\bar{p}n(n_s)$		

<b>X(2080)</b> $I^G(J^{PC}) = ??(3^{-?})$		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>			
2080 ± 10	190 ± 15	ROZANSKA	80 SPRK	18 $\pi^- p \rightarrow p\bar{p}n$

<b><math>\eta(2100)</math></b> $I^G(J^{PC}) = 0^+(0^{-+})$		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>EVTS</u>		
2103 ± 50	187 ± 75	586	<sup>3</sup> BISELLO	89B DM2 $J/\psi \rightarrow 4\pi\gamma$

<b>X(2100)</b> $I^G(J^{PC}) = ??(0^{??})$		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>			
2100 ± 40	250 ± 40	ALDE	86D GAM4	100 $\pi^- p \rightarrow 2\eta X$

<b>X(2110)</b> $I^G(J^{PC}) = 1^+(3^{-?})$		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>			
2110 ± 10	330 ± 20	EVANGELISTA	79 OMEG	10,16 $\pi^- p \rightarrow \bar{p}pn$

<b><math>f_2(2140)</math></b> $I^G(J^{PC}) = 0^+(2^{++})$		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>EVTS</u>		
2141 ± 12	49 ± 28	389	GREEN	86 MPSF 400 $pA \rightarrow 4KX$

<b><math>\omega(2145)</math></b> $I^G(J^{PC}) = 0^-(1^{--})$		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>			
2150 ± 20	235 ± 30	ANISOVICH	01C SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega\eta$
2145 ± 20	200 ± 25	ANISOVICH	00D SPEC	

<b>X(2150)</b> $I^G(J^{PC}) = ??(2^{+?})$		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>			
2150 ± 10	260 ± 10	ROZANSKA	80 SPRK	18 $\pi^- p \rightarrow p\bar{p}n$

<b><math>\eta(2190)</math></b> $I^G(J^{PC}) = 0^+(0^{-+})$		<u>DOCUMENT ID</u>	<u>TECN</u>	
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>			
2190 ± 50	850 ± 100	BUGG	99 BES	

<b>X(2210)</b> $I^G(J^{PC}) = ??(???)$		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>			
2210 <sup>+79</sup> <sub>-21</sub>	203 <sup>+437</sup> <sub>-87</sub>	EVANGELISTA	79B OMEG	10 $\pi^- p \rightarrow K^+ K^- n$

**X(2210)**  $I^G(J^{PC}) = ??(???)$

<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2207 ± 22	130	CASO	70 HBC	11.2 $\pi^- p$

**$\rho_2(2240)$**   $I^G(J^{PC}) = 1^-(2^{--})$

<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2240 ± 55	330 ± 60	ANISOVICH	01D SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega \pi^0$

**$\rho_4(2240)$**   $I^G(J^{PC}) = 1^-(4^{--})$

<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2240 ± 25	190 ± 50	ANISOVICH	01D SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega \pi^0$

**$\eta_2(2250)$**   $I^G(J^{PC}) = 0^+(2^{-+})$

<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2248 ± 20	280 ± 20	ANISOVICH	00I SPEC	
2267 ± 14	290 ± 50	ANISOVICH	00J SPEC	

**$\pi_4(2250)$**   $I^G(J^{PC}) = 1^-(4^{-+})$

<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2250 ± 15	215 ± 25	ANISOVICH	01F SPEC	2.0 $\bar{p}p \rightarrow 3\pi^0, \pi^0 \eta, \pi^0 \eta'$

**$\omega_3(2250)$**   $I^G(J^{PC}) = 0^-(3^{--})$

<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2250 ± 20	200 ± 40	ANISOVICH	01C SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega \eta$

**X(2260)**  $I^G(J^{PC}) = 0^+(4^{+?})$

<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2260 ± 20	400 ± 100	EVANGELISTA	79 OMEG	10,16 $\pi^- p \rightarrow \bar{p}pn$

**$h_1(2265)$**   $I^G(J^{PC}) = 0^-(1^{+-})$

<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2270 ± 15	150 ± 45	ANISOVICH	01C SPEC	0.6–1.9 $\bar{p}p \rightarrow \omega \eta$
2265 ± 25	190 ± 35	ANISOVICH	00D SPEC	

<b><math>a_1(2270)</math></b>		$I^G(J^{PC}) = 1^-(1^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
$2270^{+55}_{-40}$	$305^{+70}_{-40}$	ANISOVICH	01F SPEC	$2.0 \bar{p}p \rightarrow 3\pi^0,$ $\pi^0\eta, \pi^0\eta'$		

<b><math>a_2(2270)</math></b>		$I^G(J^{PC}) = 1^-(2^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
$2265 \pm 20$	$235^{+60}_{-35}$	ANISOVICH	99C SPEC			
$2280 \pm 30$	$280 \pm 50$	ANISOVICH	99E SPEC			

<b><math>h_3(2275)</math></b>		$I^G(J^{PC}) = 0^-(3^{+-})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
$2275 \pm 35$	$180 \pm 35$	ANISOVICH	00D SPEC			

<b><math>a_4(2280)</math></b>		$I^G(J^{PC}) = 1^-(4^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
$2300 \pm 20$	$230 \pm 40$	ANISOVICH	99C SPEC			
$2260 \pm 15$	$180 \pm 20$	ANISOVICH	99E SPEC			

<b><math>\eta(2280)</math></b>		$I^G(J^{PC}) = 0^+(0^{-+})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
$2285 \pm 20$	$325 \pm 30$	ANISOVICH	00J SPEC			
$2320 \pm 15$	$230 \pm 35$	<sup>4</sup> ANISOVICH	00M SPEC			

<b><math>\rho(2280)</math></b>		$I^G(J^{PC}) = 1^-(1^{--})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>		
$2280 \pm 50$	$440 \pm 110$	ATKINSON	85 OMEG	$20-70 \gamma p \rightarrow$ $\rho\omega\pi^+\pi^-\pi^0$		

<b><math>f_2(2300)</math></b>		$I^G(J^{PC}) = 0^+(2^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
$2293 \pm 13$	$216 \pm 37$	ANISOVICH	00J SPEC			

<b><math>f_3(2300)</math></b>		$I^G(J^{PC}) = 0^+(3^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
$2303 \pm 15$	$214 \pm 29$	ANISOVICH	00J SPEC			

<b><math>a_3(2310)</math></b>		$I^G(J^{PC}) = 1^-(3^{++})$				
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>			
$2310 \pm 40$	$180^{+120}_{-60}$	ANISOVICH	99C SPEC			

<b><math>f_1(2310)</math></b> $I^G(J^{PC}) = 0^+(1^{++})$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2310 ± 60	255 ± 70		ANISOVICH	00J	SPEC	
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<b><math>\eta_4(2320)</math></b> $I^G(J^{PC}) = 0^+(4^{-+})$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2328 ± 38	240 ± 90		ANISOVICH	00J	SPEC	
<hr/>						
<b><math>\omega(2330)</math></b> $I^G(J^{PC}) = 0^-(1^{--})$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2330 ± 30	435 ± 75		ATKINSON	88	OMEG	25-50 $\gamma p \rightarrow \rho^\pm \rho^0 \pi^\mp$
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<b><math>a_1(2340)</math></b> $I^G(J^{PC}) = 1^-(1^{++})$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2340 ± 40	230 ± 70		ANISOVICH	99E	SPEC	
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<b><math>X(2340)</math></b> $I^G(J^{PC}) = ??(???)$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2340 ± 20	180 ± 60	126	<sup>5</sup> BALTAY	75	HBC	15 $\pi^+ p \rightarrow p 5\pi$
<hr/>						
<b><math>X(2360)</math></b> $I^G(J^{PC}) = ??(4^{+?})$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2360 ± 10	430 ± 30		ROZANSKA	80	SPRK	18 $\pi^- p \rightarrow p \bar{p} n$
<hr/>						
<b><math>X(2440)</math></b> $I^G(J^{PC}) = ??(5^{-?})$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2440 ± 10	310 ± 20		ROZANSKA	80	SPRK	18 $\pi^- p \rightarrow p \bar{p} n$
<hr/>						
<b><math>X(2680)</math></b> $I^G(J^{PC}) = ??(???)$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2676 ± 27	150		CASO	70	HBC	11.2 $\pi^- p \rightarrow \rho^- \pi^+ \pi^- p$
<hr/>						
<b><math>X(2710)</math></b> $I^G(J^{PC}) = ??(6^{+?})$						
<u>MASS (MeV)</u>	<u>WIDTH (MeV)</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2710 ± 20	170 ± 40		ROZANSKA	80	SPRK	18 $\pi^- p \rightarrow p \bar{p} n$
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<b>X(2750)</b>		$I^G(J^{PC}) = ??(7^{-?})$				
MASS (MeV)	WIDTH (MeV)	DOCUMENT ID	TECN	COMMENT		
2747 ± 32	195 ± 75	DENNEY	83	LASS	10 $\pi^+ p \rightarrow$ $K^+ K^- \pi^+ p$	

<b>X(3250)</b>		$I^G(J^{PC}) = ??(???)$		3-Body Decays		
MASS (MeV)	WIDTH (MeV)	DOCUMENT ID	TECN	COMMENT		
3250 ± 8 ± 20	45 ± 18	ALEEV	93	BIS2	X(3250) → $\Lambda \bar{p} K^+$	
3265 ± 7 ± 20	40 ± 18	ALEEV	93	BIS2	X(3250) → $\bar{\Lambda} p K^-$	

<b>X(3250)</b>		$I^G(J^{PC}) = ??(???)$		4-Body Decays		
MASS (MeV)	WIDTH (MeV)	DOCUMENT ID	TECN	COMMENT		
3245 ± 8 ± 20	25 ± 11	ALEEV	93	BIS2	X(3250) → $\Lambda \bar{p} K^+ \pi^\pm$	
3250 ± 9 ± 20	50 ± 20	ALEEV	93	BIS2	X(3250) → $\bar{\Lambda} p K^- \pi^\mp$	
3270 ± 8 ± 20	25 ± 11	ALEEV	93	BIS2	X(3250) → $K_S^0 \rho \bar{p} K^\pm$	

### FOOTNOTES for Further States

- <sup>1</sup> Corrected for all decay modes.
- <sup>2</sup> See SEMENOV 99 and KLOET 96.
- <sup>3</sup> ASTON 81B sees no peak, has 850 events in Ajinenko+Barth bins. ARESTOV 80 sees no peak.
- <sup>4</sup> Combined fit along with data of ANISOVICH 00J.
- <sup>5</sup> Dominant decay into  $\rho^0 \rho^0 \pi^+$ . BALTAY 78 finds confirmation in  $2\pi^+ \pi^- 2\pi^0$  events which contain  $\rho^+ \rho^0 \pi^0$  and  $2\rho^+ \pi^-$ .

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ANISOVICH	01D	PL B508 6	A.V. Anisovich <i>et al.</i>	
ANISOVICH	01F	PL B517 261	A.V. Anisovich <i>et al.</i>	
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ANISOVICH	00E	PL B477 19	A.V. Anisovich <i>et al.</i>	
ANISOVICH	00I	PL B491 40	A.V. Anisovich <i>et al.</i>	
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ANISOVICH	00M	PL B496 145	A.V. Anisovich <i>et al.</i>	
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