

$\Sigma(2100) 7/2^-$

$I(J^P) = 1(\frac{7}{2}^-)$  Status: \*

OMITTED FROM SUMMARY TABLE

### $\Sigma(2100)$ MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>\approx 2100</math> OUR ESTIMATE</b>			
2060 $\pm$ 20	BARBARO-... 70	DPWA	$K^- p \rightarrow \Lambda \pi^0$
2120 $\pm$ 30	BARBARO-... 70	DPWA	$K^- p \rightarrow \Sigma \pi$

### $\Sigma(2100)$ WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
70 $\pm$ 30	BARBARO-... 70	DPWA	$K^- p \rightarrow \Lambda \pi^0$
135 $\pm$ 30	BARBARO-... 70	DPWA	$K^- p \rightarrow \Sigma \pi$

### $\Sigma(2100)$ DECAY MODES

Mode	
$\Gamma_1$	$N \bar{K}$
$\Gamma_2$	$\Lambda \pi$
$\Gamma_3$	$\Sigma \pi$

### $\Sigma(2100)$ BRANCHING RATIOS

See "Sign conventions for resonance couplings" in the Note on  $\Lambda$  and  $\Sigma$  Resonances.

<u><math>(\Gamma_i \Gamma_f)^{1/2} / \Gamma_{\text{total}}</math> in <math>N \bar{K} \rightarrow \Sigma(2100) \rightarrow \Lambda \pi</math></u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	<u><math>(\Gamma_1 \Gamma_2)^{1/2} / \Gamma</math></u>
-0.07 $\pm$ 0.02	BARBARO-... 70	DPWA	$K^- p \rightarrow \Lambda \pi^0$	

<u><math>(\Gamma_i \Gamma_f)^{1/2} / \Gamma_{\text{total}}</math> in <math>N \bar{K} \rightarrow \Sigma(2100) \rightarrow \Sigma \pi</math></u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	<u><math>(\Gamma_1 \Gamma_3)^{1/2} / \Gamma</math></u>
+0.13 $\pm$ 0.02	BARBARO-... 70	DPWA	$K^- p \rightarrow \Sigma \pi$	

### $\Sigma(2100)$ REFERENCES

BARBARO-... 70 Duke Conf. 173 A. Barbaro-Galtieri (LRL) IJP  
Hyperon Resonances, 1970