

**$\Sigma(2455)$  Bumps**

$$I(J^P) = 1(?^?) \quad \text{Status: } *$$

OMITTED FROM SUMMARY TABLE

There is also some slight evidence for  $Y^*$  states in this mass region from the reaction  $\gamma p \rightarrow K^+ X$  — see GREENBERG 68.

 **$\Sigma(2455)$  MASS**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>\approx 2455</math> OUR ESTIMATE</b>			
2455 $\pm$ 10	ABRAMS	70	CNTR $K^- p, K^- d$ total
2455 $\pm$ 7	BUGG	68	CNTR $K^- p, K^- d$ total

 **$\Sigma(2455)$  WIDTH**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
140	ABRAMS	70	CNTR $K^- p, K^- d$ total
100 $\pm$ 20	BUGG	68	CNTR

 **$\Sigma(2455)$  DECAY MODES**

Mode
$\Gamma_1 \quad N\bar{K}$

 **$\Sigma(2455)$  BRANCHING RATIOS**

$(J+\frac{1}{2}) \times \Gamma(N\bar{K}) / \Gamma_{\text{total}}$	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	$\Gamma_1 / \Gamma$
0.39	ABRAMS	70	CNTR $K^- p, K^- d$ total	
0.05 $\pm$ 0.05	<sup>1</sup> BRICMAN	70	CNTR Total, charge exchange	
0.3	BUGG	68	CNTR	

 **$\Sigma(2455)$  FOOTNOTES**

<sup>1</sup> Fit of total cross section given by BRICMAN 70 is poor in this region.

 **$\Sigma(2455)$  REFERENCES**

ABRAMS	70	PR D1 1917	R.J. Abrams <i>et al.</i>	(BNL) I
Also		PRL 19 678	R.J. Abrams <i>et al.</i>	(BNL)
BRICMAN	70	PL 31B 152	C. Bricman <i>et al.</i>	(CERN, CAEN, SACL)
BUGG	68	PR 168 1466	D.V. Bugg <i>et al.</i>	(RHEL, BIRM, CAVE) I
GREENBERG	68	PRL 20 221	J.S. Greenberg <i>et al.</i>	(YALE)