

$\Sigma(2455)$ 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>
≈ 2455 OUR ESTIMATE			
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>	Γ_1 / Γ
0.39	ABRAMS	70 CNTR	$K^- p, K^- d$ total	
0.05 \pm 0.05	¹ BRICMAN	70 CNTR	Total, charge exchange	
0.3	BUGG	68 CNTR		

 $\Sigma(2455)$ FOOTNOTES

¹ 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)