$\Sigma(2455)$ Bumps

$I(J^P) = 1(?^?)$ Status: $**$

OMITTED FROM SUMMARY TABLE

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

$\Sigma(2455)$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
≈ 2455 OUR ESTIMATE				
2455±10	ABRAMS	70	CNTR	$K^- p$, $K^- d$ total
2455± 7	BUGG	68	CNTR	$K^- p$, $K^- d$ total

$\Sigma(2455)$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
140	ABRAMS	70	CNTR	$K^- p$, $K^- d$ total
100±20	BUGG	68	CNTR	

$\Sigma(2455)$ DECAY MODES

	Mode
Γ_1	$N\overline{K}$

$\Sigma(2455)$ BRANCHING RATIOS

$(J+\frac{1}{2})\times\Gamma(N\overline{K})/\Gamma_{\text{total}}$ **Γ_1/Γ**

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.39	ABRAMS	70	CNTR	$K^- p$, $K^- d$ total
0.05±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 *et al.*	(BNL) I
Also		PRL 19 678	R.J. Abrams *et al.*	(BNL)
BRICMAN	70	PL 31B 152	C. Bricman *et al.*	(CERN, CAEN, SACL)
BUGG	68	PR 168 1466	D.V. Bugg *et al.*	(RHEL, BIRM, CAVE) I
GREENBERG	68	PRL 20 221	J.S. Greenberg *et al.*	(YALE)