$\Sigma(1940)\ 3/2^+$

$I(J^P) = 1(\frac{3}{2}^+)$ Status: *

OMITTED FROM SUMMARY TABLE

$\Sigma(1940)$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
1920 to 1960 (≈ 1940) OUR ESTIMATE				
1941± 18	ZHANG	13A	DPWA	$\overline{K}N$ multichannel
1925±200	VANHORN	75	DPWA	$K^- p \to \Lambda\pi^0$

$\Sigma(1940)$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
100 to 400 (≈ 250) OUR ESTIMATE				
400±49	ZHANG	13A	DPWA	$\overline{K}N$ multichannel
65^{+50}_{-20}	VANHORN	75	DPWA	$K^- p \to \Lambda\pi^0$

$\Sigma(1940)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$N\overline{K}$	(13.0±2.0) %
Γ_2	$\Sigma\pi$	(4.0±2.0) %
Γ_3	$\Sigma(1385)\pi$, P-wave	(22 ±7) %
Γ_4	$\Lambda(1520)\pi$, S-wave	(5.0±2.0) %

$\Sigma(1940)$ BRANCHING RATIOS

$\Gamma(N\overline{K})/\Gamma_{\text{total}}$ Γ_1/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.13±0.02	ZHANG	13A	DPWA	$\overline{K}N$ multichannel

$\Gamma(\Sigma\pi)/\Gamma_{\text{total}}$ Γ_2/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.04±0.02	ZHANG	13A	DPWA	$\overline{K}N$ multichannel

$\Gamma(\Sigma(1385)\pi, P\text{-wave})/\Gamma_{\text{total}}$ Γ_3/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.22±0.07	ZHANG	13A	DPWA	$\overline{K}N$ multichannel

$\Gamma(\Lambda(1520)\pi, S\text{-wave})/\Gamma_{\text{total}}$ Γ_4/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.05±0.02	ZHANG	13A	DPWA	$\overline{K}N$ multichannel

Σ(1940) REFERENCES

ZHANG	13A	PR C88 035205	H. Zhang *et al.*	(KSU)
VANHORN	75	NP B87 145	A.J. van Horn	(LBL)