NODE=B168

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

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

OMITTED FROM SUMMARY TABLE

$\Sigma(1940)$ MASS

NODE=B168M

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	$K^- p \to \Lambda\pi^0$

NODE=B168M
NODE=B168M
→ UNCHECKED ←

$\Sigma(1940)$ WIDTH

NODE=B168W

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	$K^- p \to \Lambda\pi^0$

NODE=B168W
→ UNCHECKED ←

$\Sigma(1940)$ DECAY MODES

NODE=B168215;NODE=B168

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$N\overline{K}$	(13.0±2.0) %	DESIG=1
Γ_2	$\Sigma\pi$	(4.0±2.0) %	DESIG=2
Γ_3	$\Sigma(1385)\pi$, P-wave	(22 ±7) %	DESIG=3
Γ_4	$\Lambda(1520)\pi$, S-wave	(5.0±2.0) %	DESIG=4

$\Sigma(1940)$ BRANCHING RATIOS

NODE=B168220

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

NODE=B168R01

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

NODE=B168R01

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

NODE=B168R02

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

NODE=B168R02

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

NODE=B168R03

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

NODE=B168R03

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

NODE=B168R04

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

NODE=B168R04

$\Sigma(1940)$ REFERENCES

NODE=B168

ZHANG	13A	PR C88 035205	H. Zhang *et al.*	(KSU)	REFID=55441
VANHORN	75	NP B87 145	A.J. van Horn	(LBL)	REFID=32093