

NODE=B183

$$\Sigma(2110) \ 1/2^-$$

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

OMITTED FROM SUMMARY TABLE
was $\Sigma(2160)$

$\Sigma(2110)$ POLE POSITION

NODE=B183225

REAL PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2158 ± 25	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183RE
NODE=B183RE

−2×IMAGINARY PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
300^{+300}_{-60}	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183IM
NODE=B183IM

$\Sigma(2110)$ POLE RESIDUES

NODE=B183250

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow N\bar{K}$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.29 ± 0.08	-20 ± 35	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A00
NODE=B183A00

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow \Sigma\pi$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.14 ± 0.04	-5 ± 35	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A01
NODE=B183A01

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow \Lambda\pi$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.39 ± 0.08	85 ± 25	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A02
NODE=B183A02

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow \Xi K$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.05 ± 0.02	-85 ± 35	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A03
NODE=B183A03

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow \Lambda(1520)\pi$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.025 ± 0.015		SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A04
NODE=B183A04

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow \Sigma(1385)\pi$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.03 ± 0.02		SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A05
NODE=B183A05

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow \Delta\bar{K}$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.035 ± 0.02	-30 ± 40	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A06
NODE=B183A06

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow N\bar{K}^*(892), S\text{-wave}$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.09 ± 0.03	-40 ± 50	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A07
NODE=B183A07

Normalized residue in $N\bar{K} \rightarrow \Sigma(2110) \rightarrow N\bar{K}^*(892), D\text{-wave}$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.04 ± 0.03		SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

NODE=B183A08
NODE=B183A08

$\Sigma(2110)$ MASS

NODE=B183M

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2110 ± 50 OUR AVERAGE	Error includes scale factor of 3.4.		
2165 ± 23	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel
2060 ± 20	ZHANG 13A	DPWA	$\bar{K}N$ multichannel

NODE=B183M

$\Sigma(2110)$ WIDTH

NODE=B183W

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
310^{+120}_{-50} OUR AVERAGE			
320^{+300}_{-60}	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel
300 ± 134	ZHANG 13A	DPWA	$\overline{K} N$ multichannel

NODE=B183W

$\Sigma(2110)$ DECAY MODES

NODE=B183220;NODE=B183

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad N\overline{K}$	$(29 \pm 7) \%$
$\Gamma_2 \quad \Sigma\pi$	$(7.0 \pm 2.0) \%$
$\Gamma_3 \quad \Lambda\pi$	$(54 \pm 12) \%$
$\Gamma_4 \quad N\overline{K}^*(892), S\text{-wave}$	$(3.0 \pm 1.0) \%$
$\Gamma_5 \quad N\overline{K}^*(892), D\text{-wave}$	

DESIG=1

DESIG=2

DESIG=3

DESIG=5

DESIG=4

$\Sigma(2110)$ BRANCHING RATIOS

NODE=B183215

$\Gamma(N\overline{K})/\Gamma_{\text{total}}$				Γ_1/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.29 ± 0.07	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(\Sigma\pi)/\Gamma_{\text{total}}$				Γ_2/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.07 ± 0.02	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(\Lambda\pi)/\Gamma_{\text{total}}$				Γ_3/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.54 ± 0.12	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(N\overline{K}^*(892), S\text{-wave})/\Gamma_{\text{total}}$				Γ_4/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.03 ± 0.01	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(N\overline{K}^*(892), D\text{-wave})/\Gamma_{\text{total}}$				Γ_5/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
• • • We do not use the following data for averages, fits, limits, etc. • • •				
~ 0.01	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	

NODE=B183R01
NODE=B183R01

NODE=B183R02
NODE=B183R02

NODE=B183R03
NODE=B183R03

NODE=B183R00
NODE=B183R00

NODE=B183R04
NODE=B183R04

$\Sigma(2110)$ REFERENCES

NODE=B183

SARANTSEV 19	EPJ A55 180	A.V. Sarantsev <i>et al.</i>	(BONN, PNPI)
ZHANG 13A	PR C88 035205	H. Zhang <i>et al.</i>	(KSU)

REFID=59986
REFID=55441