

$\Sigma(2110) 1/2^-$ $I(J^P) = 1(\frac{1}{2}^-)$ Status: *OMITTED FROM SUMMARY TABLE
was $\Sigma(2160)$ **$\Sigma(2110)$ POLE POSITION****REAL PART**

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

-2×IMAGINARY PART

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

 $\Sigma(2110)$ POLE RESIDUES**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

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

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

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

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

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

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

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

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

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

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

$\Sigma(2110)$ MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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

$\Sigma(2110)$ WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
310⁺¹²⁰₋₅₀ OUR AVERAGE			
320 ⁺³⁰⁰ ₋₆₀	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel
300±134	ZHANG 13A	DPWA	$\bar{K}N$ multichannel

$\Sigma(2110)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $N\bar{K}$	(29 ± 7) %
Γ_2 $\Sigma\pi$	(7.0 ± 2.0) %
Γ_3 $\Lambda\pi$	(54 ± 12) %
Γ_4 $N\bar{K}^*(892)$, <i>S</i> -wave	(3.0 ± 1.0) %
Γ_5 $N\bar{K}^*(892)$, <i>D</i> -wave	

$\Sigma(2110)$ BRANCHING RATIOS

$\Gamma(N\bar{K})/\Gamma_{\text{total}}$				Γ_1/Γ
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
0.29±0.07	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(\Sigma\pi)/\Gamma_{\text{total}}$				Γ_2/Γ
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
0.07±0.02	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(\Lambda\pi)/\Gamma_{\text{total}}$				Γ_3/Γ
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
0.54±0.12	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(N\bar{K}^*(892), S\text{-wave})/\Gamma_{\text{total}}$				Γ_4/Γ
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
0.03±0.01	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	

$\Gamma(N\bar{K}^*(892), D\text{-wave})/\Gamma_{\text{total}}$ 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 $\bar{K}N$ multichannel

$\Sigma(2110)$ REFERENCES

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