Λ(2080) 5/2−

$J^P = \frac{5}{2}^-$ Status: ∗

OMITTED FROM SUMMARY TABLE

Λ(2080) POLE POSITION

REAL PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2070±15	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

−2×IMAGINARY PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
172±28	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Λ(2080) POLE RESIDUES

Normalized residue in $N\overline{K} \to$ Λ(2080) $\to N\overline{K}$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.12±0.03	**−35 ± 22**	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to$ Λ(2080) $\to \Sigma\pi$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.07±0.03	**11 ± 16**	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to$ Λ(2080) $\to \Xi K$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.06±0.02	**115 ± 20**	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to$ Λ(2080) $\to \Lambda\omega$, S=1/2, *D*-wave

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.06±0.03	**115 ± 25**	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to$ Λ(2080) $\to \Lambda\omega$, S=3/2 , *D*-wave

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.09±0.03	**−10 ± 35**	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to$ Λ(2080) $\to \Sigma(1385)\pi$, *D*-wave

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.14±0.04	**155 ± 45**	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to$ Λ(2080) $\to \Sigma(1385)\pi$, *G*-wave

MODULUS	PHASE (°)	DOCUMENT ID	COMMENT
0.05±0.03	**30 ± 45**	SARANTSEV 19	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to$ Λ(2080) $\to N\overline{K}^*(892)$, S=1/2 , *D*-wave

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.16±0.08	**−120 ± 50**	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2080) \to N\overline{K}{}^*(892)$, S=3/2 , D-wave

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.20±0.14	**60 ± 50**	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2080)$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2082±13	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2080)$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
181±29	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2080)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$N\overline{K}$	(11.0 ± 3.0) %
Γ_2	$\Sigma\pi$	(5.0 ± 2.0) %
Γ_3	ΞK	(4.0 ± 1.0) %
Γ_4	$\Lambda\omega$, S=1/2, D-wave	(4.0 ± 2.0) %
Γ_5	$\Lambda\omega$, S=3/2, D-wave	(8.0 ± 3.0) %
Γ_6	$\Sigma(1385)\pi$, D-wave	(15 ± 5) %
Γ_7	$\Sigma(1385)\pi$, G-wave	(3.0 ± 2.0) %
Γ_8	$N\overline{K}{}^*(892)$, S=1/2, D-wave	(17 ± 9) %
Γ_9	$N\overline{K}{}^*(892)$, S=3/2, D-wave	(25 ± 16) %

$\Lambda(2080)$ BRANCHING RATIOS

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

VALUE	DOCUMENT ID	TECN	COMMENT
0.11±0.03	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

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

VALUE	DOCUMENT ID	TECN	COMMENT
0.05±0.02	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Gamma(\Xi K)/\Gamma_{total}$ $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ Γ_3/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
0.04±0.01	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Gamma(\Lambda\omega,$ S=1/2, D-wave$)/\Gamma_{total}$ $\qquad\qquad\qquad\qquad\qquad$ Γ_4/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
0.04±0.02	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Gamma\left(\Lambda\omega,\, S{=}3/2,\, D\text{-wave}\right)/\Gamma_{\text{total}}$ $\qquad\qquad$ Γ_5/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.08±0.03	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$\Gamma\left(\Sigma(1385)\pi,\, D\text{-wave}\right)/\Gamma_{\text{total}}$ $\qquad\qquad$ Γ_6/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.15±0.05	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$\Gamma\left(\Sigma(1385)\pi,\, G\text{-wave}\right)/\Gamma_{\text{total}}$ $\qquad\qquad$ Γ_7/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.03±0.02	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$\Gamma\left(N\overline{K}{}^*(892),\, S{=}1/2,\, D\text{-wave}\right)/\Gamma_{\text{total}}$ $\qquad\qquad$ Γ_8/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.17±0.09	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$\Gamma\left(N\overline{K}{}^*(892),\, S{=}3/2,\, D\text{-wave}\right)/\Gamma_{\text{total}}$ $\qquad\qquad$ Γ_9/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.25±0.16	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2080)$ REFERENCES

SARANTSEV   19   EPJ A55 180   A.V. Sarantsev et al.   (BONN, PNPI)