$\Lambda(2070)\ 3/2^+$

$J^P = \frac{3}{2}^+$ Status: $*$

OMITTED FROM SUMMARY TABLE

$\Lambda(2070)$ POLE POSITION

REAL PART

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
2044±20	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$-2\times$IMAGINARY PART

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
360±45	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2070)$ POLE RESIDUES

Normalized residue in $N\overline{K} \to \Lambda(2070) \to N\overline{K}$

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.15±0.05	**−37 ± 10**	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to \Sigma\pi$

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.10±0.03	**−47 ± 8**	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to \Xi K$

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.11±0.03	**0 ± 25**	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to \Lambda\omega$, S=1/2 , P-wave

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.10±0.04	**150 ± 17**	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to \Lambda\omega$, S=3/2 , P-wave

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.08±0.04	**20 ± 30**	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to \Lambda\omega$, S=3/2 , F-wave

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.04±0.02	**−175 ± 35**	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to \Sigma(1385)\pi$, P-wave

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.12±0.07	**−160 ± 55**	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to \Sigma(1385)\pi$, F-wave

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.07±0.04	**−145 ± 50**	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to N\overline{K}{}^*(892)$, S=1/2 , P-wave

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.36±0.07	−45 ± 30	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to N\overline{K}{}^*(892)$, S=3/2 , P-wave

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.16±0.05	150 ± 35	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Lambda(2070) \to N\overline{K}{}^*(892)$, S=3/2 , F-wave

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.14±0.08	−50 ± 30	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2070)$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2070±24	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2070)$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
370±50	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2070)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$N\overline{K}$	(12 ±5) %
Γ_2	$\Sigma\pi$	(7.0±3.0) %
Γ_3	ΞK	(7.0±3.0) %
Γ_4	$\Lambda\omega$, S=1/2 , P-wave	(7 ±4) %
Γ_5	$\Lambda\omega$, S=3/2 , P-wave	(3.0±2.0) %
Γ_6	$\Lambda\omega$, S=3/2 , F-wave	(1.0±1.0) %
Γ_7	$\Sigma(1385)\pi$, P-wave	(10 ±5) %
Γ_8	$\Sigma(1385)\pi$, F-wave	(2.0±2.0) %
Γ_9	$N\overline{K}{}^*(892)$, S=1/2 , P-wave	(42 ±8) %
Γ_{10}	$N\overline{K}{}^*(892)$, S=3/2 , P-wave	(14 ±6) %
Γ_{11}	$N\overline{K}{}^*(892)$, S=3/2 , F-wave	(10 ±6) %

$\Lambda(2070)$ BRANCHING RATIOS

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

VALUE	DOCUMENT ID	TECN	COMMENT
0.12±0.05	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

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

VALUE	DOCUMENT ID	TECN	COMMENT
0.07±0.03	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

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

VALUE	DOCUMENT ID	TECN	COMMENT
0.07±0.03	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

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

VALUE	DOCUMENT ID	TECN	COMMENT
0.07±0.04	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

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

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

$\Gamma(\Lambda\omega, S=3/2, F\text{-wave})/\Gamma_{total}$ $\qquad$ Γ_6/Γ

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

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

VALUE	DOCUMENT ID	TECN	COMMENT
0.10±0.05	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Gamma(\Sigma(1385)\pi, F\text{-wave})/\Gamma_{total}$ $\qquad$ Γ_8/Γ

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

$\Gamma(N\overline{K}^*(892), S=1/2, P\text{-wave})/\Gamma_{total}$ $\qquad$ Γ_9/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
0.42±0.08	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Gamma(N\overline{K}^*(892), S=3/2, P\text{-wave})/\Gamma_{total}$ $\qquad$ Γ_{10}/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
0.14±0.06	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Gamma(N\overline{K}^*(892), S=3/2, F\text{-wave})/\Gamma_{total}$ $\qquad$ Γ_{11}/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
0.10±0.06	SARANTSEV 19	DPWA	$\overline{K}N$ multichannel

$\Lambda(2070)$ REFERENCES

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