

$\Lambda(2070) \ 3/2^+$ $J^P = \frac{3}{2}^+$

Status: *

OMITTED FROM SUMMARY TABLE

 $\Lambda(2070)$ POLE POSITION**REAL PART**

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

−2×IMAGINARY PART

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

 $\Lambda(2070)$ POLE RESIDUES**Normalized residue in $N\bar{K} \rightarrow \Lambda(2070) \rightarrow N\bar{K}$**

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

Normalized residue in $N\bar{K} \rightarrow \Lambda(2070) \rightarrow \Sigma\pi$

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

Normalized residue in $N\bar{K} \rightarrow \Lambda(2070) \rightarrow \Xi K$

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

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

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

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

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

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

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

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

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

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

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

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

<u>MODULUS</u>	<u>PHASE (°)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
0.36 ± 0.07	-45 ± 30	SARANTSEV	19	DPWA $\bar{K}N$ multichannel

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

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

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

<u>MODULUS</u>	<u>PHASE (°)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
0.14 ± 0.08	-50 ± 30	SARANTSEV	19	DPWA $\bar{K}N$ multichannel

$\Lambda(2070)$ MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2070 ± 24	SARANTSEV	19	DPWA $\bar{K}N$ multichannel

$\Lambda(2070)$ WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
370 ± 50	SARANTSEV	19	DPWA $\bar{K}N$ multichannel

$\Lambda(2070)$ DECAY MODES

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

$\Lambda(2070)$ 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>	
0.12 ± 0.05	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 ± 0.03	SARANTSEV	19	DPWA $\bar{K}N$ multichannel	

$\Gamma(\Xi K)/\Gamma_{\text{total}}$				Γ_3/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.07 ± 0.03	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(\Lambda\omega, S=1/2, P\text{-wave})/\Gamma_{\text{total}}$				Γ_4/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.07 ± 0.04	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(\Lambda\omega, S=3/2, P\text{-wave})/\Gamma_{\text{total}}$				Γ_5/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.03 ± 0.02	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(\Lambda\omega, S=3/2, F\text{-wave})/\Gamma_{\text{total}}$				Γ_6/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.01 ± 0.01	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(\Sigma(1385)\pi, P\text{-wave})/\Gamma_{\text{total}}$				Γ_7/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.10 ± 0.05	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(\Sigma(1385)\pi, F\text{-wave})/\Gamma_{\text{total}}$				Γ_8/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.02 ± 0.02	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(N\overline{K}^*(892), S=1/2, P\text{-wave})/\Gamma_{\text{total}}$				Γ_9/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.42 ± 0.08	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(N\overline{K}^*(892), S=3/2, P\text{-wave})/\Gamma_{\text{total}}$				Γ_{10}/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.14 ± 0.06	SARANTSEV 19	DPWA	$\overline{K} N$ multichannel	
$\Gamma(N\overline{K}^*(892), S=3/2, F\text{-wave})/\Gamma_{\text{total}}$				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)