

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

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

Status: \*

OMITTED FROM SUMMARY TABLE

 $\Lambda(2070)$  POLE POSITION

## REAL PART

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

## −2×IMAGINARY PART

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

 $\Lambda(2070)$  POLE RESIDUESNormalized residue in  $N\bar{K} \rightarrow \Lambda(2070) \rightarrow N\bar{K}$ 

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
<b>0.15 ± 0.05</b>	<b>−37 ± 10</b>	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
<b>0.10 ± 0.03</b>	<b>−47 ± 8</b>	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
<b>0.11 ± 0.03</b>	<b>0 ± 25</b>	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
<b>0.10 ± 0.04</b>	<b>150 ± 17</b>	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
<b>0.08 ± 0.04</b>	<b>20 ± 30</b>	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
<b>0.04 ± 0.02</b>	<b>−175 ± 35</b>	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
<b>0.12 ± 0.07</b>	<b>−160 ± 55</b>	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
<b>0.07 ± 0.04</b>	<b>−145 ± 50</b>	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 (<math>^\circ</math>)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>0.36±0.07</b>	<b>-45 ± 30</b>	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 (<math>^\circ</math>)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>0.16±0.05</b>	<b>150 ± 35</b>	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 (<math>^\circ</math>)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>0.14±0.08</b>	<b>-50 ± 30</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

 **$\Lambda(2070)$  MASS**

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

 **$\Lambda(2070)$  WIDTH**

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

 **$\Lambda(2070)$  DECAY MODES**

	<u>Mode</u>	<u>Fraction (<math>\Gamma_i/\Gamma</math>)</u>
$\Gamma_1$	$N\bar{K}$	(12 ± 5 ) %
$\Gamma_2$	$\Sigma\pi$	( 7.0±3.0) %
$\Gamma_3$	$\Xi K$	( 7.0±3.0) %
$\Gamma_4$	$\Lambda\omega$ , $S=1/2$ , $P$ -wave	( 7 ± 4 ) %
$\Gamma_5$	$\Lambda\omega$ , $S=3/2$ , $P$ -wave	( 3.0±2.0) %
$\Gamma_6$	$\Lambda\omega$ , $S=3/2$ , $F$ -wave	( 1.0±1.0) %
$\Gamma_7$	$\Sigma(1385)\pi$ , $P$ -wave	(10 ± 5 ) %
$\Gamma_8$	$\Sigma(1385)\pi$ , $F$ -wave	( 2.0±2.0) %
$\Gamma_9$	$N\bar{K}^*(892)$ , $S=1/2$ , $P$ -wave	(42 ± 8 ) %
$\Gamma_{10}$	$N\bar{K}^*(892)$ , $S=3/2$ , $P$ -wave	(14 ± 6 ) %
$\Gamma_{11}$	$N\bar{K}^*(892)$ , $S=3/2$ , $F$ -wave	(10 ± 6 ) %

 **$\Lambda(2070)$  BRANCHING RATIOS** **$\Gamma(N\bar{K})/\Gamma_{\text{total}}$   $\Gamma_1/\Gamma$** 

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>0.12±0.05</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

 **$\Gamma(\Sigma\pi)/\Gamma_{\text{total}}$   $\Gamma_2/\Gamma$** 

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>0.07±0.03</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel

$\Gamma(\Xi K)/\Gamma_{\text{total}}$				$\Gamma_3/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.07±0.03</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(\Lambda\omega, S=1/2, P\text{-wave})/\Gamma_{\text{total}}$				$\Gamma_4/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.07±0.04</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(\Lambda\omega, S=3/2, P\text{-wave})/\Gamma_{\text{total}}$				$\Gamma_5/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.03±0.02</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(\Lambda\omega, S=3/2, F\text{-wave})/\Gamma_{\text{total}}$				$\Gamma_6/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.01±0.01</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(\Sigma(1385)\pi, P\text{-wave})/\Gamma_{\text{total}}$				$\Gamma_7/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.10±0.05</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(\Sigma(1385)\pi, F\text{-wave})/\Gamma_{\text{total}}$				$\Gamma_8/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.02±0.02</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(N\bar{K}^*(892), S=1/2, P\text{-wave})/\Gamma_{\text{total}}$				$\Gamma_9/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.42±0.08</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(N\bar{K}^*(892), S=3/2, P\text{-wave})/\Gamma_{\text{total}}$				$\Gamma_{10}/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.14±0.06</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	
$\Gamma(N\bar{K}^*(892), S=3/2, F\text{-wave})/\Gamma_{\text{total}}$				$\Gamma_{11}/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.10±0.06</b>	SARANTSEV 19	DPWA	$\bar{K}N$ multichannel	

### $\Lambda(2070)$ REFERENCES

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