

K(3100)

$$I^G(J^{PC}) = ??(???)$$

OMITTED FROM SUMMARY TABLE
also known as $K_J^?(3100)$

Narrow peak observed in several ($\Lambda\bar{p} + \text{pions}$) and ($\bar{\Lambda}p + \text{pions}$) states in Σ^- Be reactions by BOURQUIN 86 and in np and nA reactions by ALEEV 93. Not seen by BOEHNLEIN 91. If due to strong decays, this state has exotic quantum numbers ($B=0, Q=+1, S=-1$ for $\Lambda\bar{p}\pi^+\pi^+$ and $I \geq 3/2$ for $\Lambda\bar{p}\pi^-\pi^-$). Needs confirmation.

K(3100) MASSVALUE (MeV)
 ≈ 3100 OUR ESTIMATEDOCUMENT ID**3-BODY DECAYS**VALUE (MeV)DOCUMENT IDTECNCOMMENT **3054 ± 11 OUR AVERAGE**

$3060 \pm 7 \pm 20$	¹ ALEEV	93	BIS2	$K(3100) \rightarrow \Lambda\bar{p}\pi^+$
$3056 \pm 7 \pm 20$	¹ ALEEV	93	BIS2	$K(3100) \rightarrow \bar{\Lambda}p\pi^-$
$3055 \pm 8 \pm 20$	¹ ALEEV	93	BIS2	$K(3100) \rightarrow \Lambda\bar{p}\pi^-$
$3045 \pm 8 \pm 20$	¹ ALEEV	93	BIS2	$K(3100) \rightarrow \bar{\Lambda}p\pi^+$

4-BODY DECAYSVALUE (MeV)DOCUMENT IDTECNCOMMENT **3059 ± 11 OUR AVERAGE**

$3067 \pm 6 \pm 20$	¹ ALEEV	93	BIS2	$K(3100) \rightarrow \Lambda\bar{p}\pi^+\pi^+$
$3060 \pm 8 \pm 20$	¹ ALEEV	93	BIS2	$K(3100) \rightarrow \Lambda\bar{p}\pi^+\pi^-$
$3055 \pm 7 \pm 20$	¹ ALEEV	93	BIS2	$K(3100) \rightarrow \bar{\Lambda}p\pi^-\pi^-$
$3052 \pm 8 \pm 20$	¹ ALEEV	93	BIS2	$K(3100) \rightarrow \bar{\Lambda}p\pi^-\pi^+$

● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●

3105 ± 30	BOURQUIN	86	SPEC	$K(3100) \rightarrow \Lambda\bar{p}\pi^+\pi^+$
3115 ± 30	BOURQUIN	86	SPEC	$K(3100) \rightarrow \Lambda\bar{p}\pi^+\pi^-$

5-BODY DECAYSVALUE (MeV)DOCUMENT IDTECNCOMMENT

● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●

3095 ± 30	BOURQUIN	86	SPEC	$K(3100) \rightarrow \Lambda\bar{p}\pi^+\pi^+\pi^-$
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¹Supersedes ALEEV 90.**K(3100) WIDTH****3-BODY DECAYS**VALUE (MeV)DOCUMENT IDTECNCOMMENT

● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●

42 ± 16	² ALEEV	93	BIS2	$K(3100) \rightarrow \Lambda\bar{p}\pi^+$
36 ± 15	² ALEEV	93	BIS2	$K(3100) \rightarrow \bar{\Lambda}p\pi^-$
50 ± 18	² ALEEV	93	BIS2	$K(3100) \rightarrow \Lambda\bar{p}\pi^-$
30 ± 15	² ALEEV	93	BIS2	$K(3100) \rightarrow \bar{\Lambda}p\pi^+$

4-BODY DECAYS

VALUE (MeV)	CL%	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
22 ± 8		² ALEEV 93	BIS2	$K(3100) \rightarrow \Lambda \bar{p} \pi^+ \pi^+$
28 ± 12		² ALEEV 93	BIS2	$K(3100) \rightarrow \Lambda \bar{p} \pi^+ \pi^-$
32 ± 15		² ALEEV 93	BIS2	$K(3100) \rightarrow \bar{\Lambda} p \pi^- \pi^-$
30 ± 15		² ALEEV 93	BIS2	$K(3100) \rightarrow \bar{\Lambda} p \pi^- \pi^+$
<30	90	BOURQUIN 86	SPEC	$K(3100) \rightarrow \Lambda \bar{p} \pi^+ \pi^+$
<80	90	BOURQUIN 86	SPEC	$K(3100) \rightarrow \Lambda \bar{p} \pi^+ \pi^-$

5-BODY DECAYS

VALUE (MeV)	CL%	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
<30	90	BOURQUIN 86	SPEC	$K(3100) \rightarrow \Lambda \bar{p} \pi^+ \pi^+ \pi^-$
² Supersedes ALEEV 90.				

K(3100) DECAY MODES

Mode
$\Gamma_1 \quad K(3100)^0 \rightarrow \Lambda \bar{p} \pi^+$
$\Gamma_2 \quad K(3100)^{-} \rightarrow \Lambda \bar{p} \pi^-$
$\Gamma_3 \quad K(3100)^{-} \rightarrow \Lambda \bar{p} \pi^+ \pi^-$
$\Gamma_4 \quad K(3100)^{+} \rightarrow \Lambda \bar{p} \pi^+ \pi^+$
$\Gamma_5 \quad K(3100)^0 \rightarrow \Lambda \bar{p} \pi^+ \pi^+ \pi^-$
$\Gamma_6 \quad K(3100)^0 \rightarrow \Sigma(1385)^+ \bar{p}$

$\Gamma(\Sigma(1385)^+ \bar{p})/\Gamma(\Lambda \bar{p} \pi^+)$				Γ_6/Γ_1
VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.04	90	ALEEV 93	BIS2	$K(3100)^0 \rightarrow \Sigma(1385)^+ \bar{p}$

K(3100) REFERENCES

ALEEV	93	PAN 56 1358 Translated from YAF 56 100.	A.N. Aleev <i>et al.</i>	(BIS-2 Collab.)
BOEHNLEIN	91	NPBPS B21 174	A. Boehnlein <i>et al.</i>	(FLOR, BNL, IND+)
ALEEV	90	ZPHY C47 533	A.N. Aleev <i>et al.</i>	(BIS-2 Collab.)
BOURQUIN	86	PL B172 113	M.H. Bourquin <i>et al.</i>	(GEVA, RAL, HEIDP+)