$\tau(N \to \nu\rho)$ τ_9

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>27	***p***	**90**	**5**	**1.5**	HIRATA	89C	KAMI
>19	***n***	**90**	**0**	**0.5**	SEIDEL	88	IMB
• • • We do not use the following data for averages, fits, limits, etc. • • •							
> 9	*n*	90	4	2.4	BERGER	89	FREJ
>24	*p*	90	0	0.9	BERGER	89	FREJ
>13	*n*	90	4	3.6	HIRATA	89C	KAMI
>13	*p*	90	1	1.1	SEIDEL	88	IMB
> 8	*p*	90	6	5	HAINES	86	IMB
> 2	*n*	90	15	10	HAINES	86	IMB
>11	*p*	90	2	1	KAJITA	86	KAMI
> 4	*n*	90	2	2	KAJITA	86	KAMI
> 4.1	*p* (free)	90	6	7	BLEWITT	85	IMB
> 8.4	*p*	90	6	5	BLEWITT	85	IMB
> 2	*n*	90	7	3	PARK	85	IMB
> 0.9	*p*	90	2		[23] CHERRY	81	HOME
> 0.6	*n*	90	2		[23] CHERRY	81	HOME

[23] We have converted 2 possible events to 90% CL limit.

$\tau(p \to e^+\omega)$ τ_{10}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>45	***p***	**90**	**2**	**1.45**	HIRATA	89C	KAMI
• • • We do not use the following data for averages, fits, limits, etc. • • •							
>17	*p*	90	0	1.1	BERGER	91	FREJ
>26	*p*	90	1	1.0	SEIDEL	88	IMB
> 1.5	*p*	90	0		BARTELT	87	SOUD
>37	*p*	90	6	5.3	HAINES	86	IMB
>25	*p*	90	1	<1.4	ARISAKA	85	KAMI
>12	*p* (free)	90	6	7.5	BLEWITT	85	IMB
>37	*p*	90	6	5.7	BLEWITT	85	IMB
> 0.6	*p*	90	1	0.3	[24] BARTELT	83	SOUD
> 9.8	*p*	90	1		[25] KRISHNA...	82	KOLR
> 2.8	*p*	90	2		[26] CHERRY	81	HOME

[24] Limit based on zero events.
[25] We have calculated 90% CL limit from 0 confined events.
[26] We have converted 2 possible events to 90% CL limit.

$\tau(p \to \mu^+\omega)$ τ_{11}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>57	***p***	**90**	**2**	**1.9**	HIRATA	89C	KAMI
• • • We do not use the following data for averages, fits, limits, etc. • • •							
>11	*p*	90	0	1.0	BERGER	91	FREJ
> 4.4	*p*	90	0	0.7	PHILLIPS	89	HPW
>10	*p*	90	2	1.3	SEIDEL	88	IMB
>23	*p*	90	2	1	HAINES	86	IMB
> 6.5	*p* (free)	90	9	8.7	BLEWITT	85	IMB
>23	*p*	90	8	7	BLEWITT	85	IMB

$\tau(n \to \nu\omega)$ τ_{12}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>43	***n***	**90**	**3**	**2.7**	HIRATA	89C	KAMI
• • • We do not use the following data for averages, fits, limits, etc. • • •							
>17	*n*	90	1	0.7	BERGER	89	FREJ
> 6	*n*	90	2	1.3	SEIDEL	88	IMB
>12	*n*	90	6	6	HAINES	86	IMB
>18	*n*	90	2	2	KAJITA	86	KAMI
>16	*n*	90	1	2	PARK	85	IMB
> 2.0	*n*	90	2		[27] CHERRY	81	HOME

[27] We have converted 2 possible events to 90% CL limit.

$\tau(N \to e^+K)$ τ_{13}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>150	***p***	**90**	**0**	**<0.27**	HIRATA	89C	KAMI
> 1.3	***n***	**90**	**0**		ALEKSEEV	81	BAKS
• • • We do not use the following data for averages, fits, limits, etc. • • •							
> 60	*p*	90	0		BERGER	91	FREJ
> 70	*p*	90	0	1.8	SEIDEL	88	IMB
> 77	*p*	90	5	4.5	HAINES	86	IMB
> 38	*p*	90	0	<0.8	ARISAKA	85	KAMI
> 24	*p* (free)	90	7	8.5	BLEWITT	85	IMB
> 77	*p*	90	5	4	BLEWITT	85	IMB
> 1.3	*p*	90	0		ALEKSEEV	81	BAKS

$\tau(p \to e^+K^0_S)$ τ_{14}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>76	***p***	**90**	**0**	**0.5**	BERGER	91	FREJ

$\tau(p \to e^+K^0_L)$ τ_{15}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>44	***p***	**90**	**0**	**≤ 0.1**	BERGER	91	FREJ

$\tau(N \to \mu^+K)$ τ_{16}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>120	***p***	**90**	**1**	**0.4**	HIRATA	89C	KAMI
> 1.1	***n***	**90**	**0**		BARTELT	87	SOUD
• • • We do not use the following data for averages, fits, limits, etc. • • •							
> 54	*p*	90	0		BERGER	91	FREJ
> 3.0	*p*	90	0	0.7	PHILLIPS	89	HPW
> 19	*p*	90	3	2.5	SEIDEL	88	IMB
> 1.5	*p*	90	0		[28] BARTELT	87	SOUD
> 40	*p*	90	7	6	HAINES	86	IMB
> 19	*p*	90	1	<1.1	ARISAKA	85	KAMI
> 6.7	*p* (free)	90	11	13	BLEWITT	85	IMB
> 40	*p*	90	7	8	BLEWITT	85	IMB
> 6	*p*	90	1		BATTISTONI	84	NUSX
> 0.6	*p*	90	0		[29] BARTELT	83	SOUD
> 0.4	*n*	90	0		[29] BARTELT	83	SOUD
> 5.8	*p*	90	2		[30] KRISHNA...	82	KOLR
> 2.0	*p*	90	0		CHERRY	81	HOME
> 0.2	*n*	90			[31] GURR	67	CNTR

[28] BARTELT 87 limit applies to $p \to \mu^+ K^0_S$.
[29] Limit based on zero events.
[30] We have calculated 90% CL limit from 1 confined event.
[31] We have converted half-life to 90% CL mean life.

$\tau(p \to \mu^+K^0_S)$ τ_{17}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>64	***p***	**90**	**0**	**1.2**	BERGER	91	FREJ

$\tau(p \to \mu^+K^0_L)$ τ_{18}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>44	***p***	**90**	**0**	**≤ 0.1**	BERGER	91	FREJ

$\tau(N \to \nu K)$ τ_{19}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>100	***p***	**90**	**9**	**7.3**	HIRATA	89C	KAMI
> 86	***n***	**90**	**0**	**2.4**	HIRATA	89C	KAMI
• • • We do not use the following data for averages, fits, limits, etc. • • •							
> 15	*n*	90	1	1.8	BERGER	89	FREJ
> 15	*p*	90	1	1.8	BERGER	89	FREJ
> 0.28	*p*	90	0	0.7	PHILLIPS	89	HPW
> 0.3	*p*	90	0		BARTELT	87	SOUD
> 0.75	*n*	90	0		[32] BARTELT	87	SOUD
> 10	*p*	90	6	5	HAINES	86	IMB
> 15	*n*	90	3	5	HAINES	86	IMB
> 28	*p*	90	3	3	KAJITA	86	KAMI
> 32	*n*	90	0	1.4	KAJITA	86	KAMI
> 1.8	*p* (free)	90	6	11	BLEWITT	85	IMB
> 9.6	*p*	90	6	5	BLEWITT	85	IMB
> 10	*n*	90	2	2	PARK	85	IMB
> 5	*n*	90	0		BATTISTONI	84	NUSX
> 2	*p*	90	0		BATTISTONI	84	NUSX
> 0.3	*n*	90	0		[33] BARTELT	83	SOUD
> 0.1	*p*	90	0		[33] BARTELT	83	SOUD
> 5.8	*p*	90	1		[34] KRISHNA...	82	KOLR
> 0.3	*n*	90	2		[35] CHERRY	81	HOME

[32] BARTELT 87 limit applies to $n \to \nu K^0_S$.
[33] Limit based on zero events.
[34] We have calculated 90% CL limit from 1 confined event.
[35] We have converted 2 possible events to 90% CL limit.

$\tau(p \to e^+K^*(892)^0)$ τ_{20}

LIMIT (10^{30} years)	PARTICLE	CL%	EVTS	BKGD EST	DOCUMENT ID		TECN
>52	***p***	**90**	**2**	**1.55**	HIRATA	89C	KAMI
• • • We do not use the following data for averages, fits, limits, etc. • • •							
>10	*p*	90	0	0.8	BERGER	91	FREJ
>10	*p*	90	1	<1	ARISAKA	85	KAMI