NODE=B154

$\Theta_c(3100)^0$

$I(J^P) = 0(?^?)$

OMITTED FROM SUMMARY TABLE

NODE=B154

AKTAS 04A in $e^{\pm} p$ reactions at c.m. energies of 300 and 320 GeV sees the peak in $D^*(2010)^- p$ and $D^*(2010)^+ \overline{p}$ mass spectra. The minimum quark content would be $u u d d \overline{c}$.

However:

- SCHAEL 04 in a search in $D^- p$ and $D^{*-} p$ (and charge conjugate) events from 3.5M Z decays sees no evidence for the peak.
- CHEKANOV 04D finds no evidence in $D^{*-} p$ (and charge-conjugate) events with more than 60,000 reconstructed $D^{*\pm}$ mesons.
- LINK 05D finds no evidence in $D^- p$ and $D^{*-} p$ (and charge-conjugate) events in a cleaner and 30 times larger sample than that of AKTAS 04A.
- AUBERT,B 06I finds no evidence in 125,000 $D^{*-} p$ (and charge-conjugate) events produced in $e^+ e^-$ reactions at 10.58 GeV.
- DELELLIS 07 finds no evidence in 2262 $\overline{\nu}$ emulsion charged-current events. (This is actually a search for a Θ_c below the $D^- p$ threshold, not for the $\Theta_c(3100)$.)

$\Theta_c(3100)^0$ MASS

NODE=B154205

NODE=B154M

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
3099±3±5	51	[1] AKTAS	04A	H1	$D^{*-} p$ & $D^{*+} \overline{p}$

NODE=B154M;LINKAGE=AK

[1] AKTAS 04A estimates a peak of 51 events above a background of 45 events, and claims a statistical significance of about 5.4 standard deviations; another estimate of significance gives 6.2 standard deviations. (However, no account has been taken of the number of bins searched in.) The gaussian width of the peak, 12 MeV, is consistent with the resolution.

$\Theta_c(3100)^0$ REFERENCES

NODE=B154

DELELLIS	07	NP B763 268	G. De Lellis *et al.*	(CERN CHORUS Collab.)	REFID=51599
AUBERT,B	06I	PR D73 091101R	B. Aubert *et al.*	(BABAR Collab.)	REFID=51304
LINK	05D	PL B622 229	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=50566
AKTAS	04A	PL B588 17	A. Aktas *et al.*	(HERA H1 Collab.)	REFID=49898
CHEKANOV	04D	EPJ C38 29	S. Chekanov *et al.*	(HERA ZEUS Collab.)	REFID=50310
SCHAEL	04	PL B599 1	S. Schael *et al.*	(ALEPH Collab.)	REFID=50121