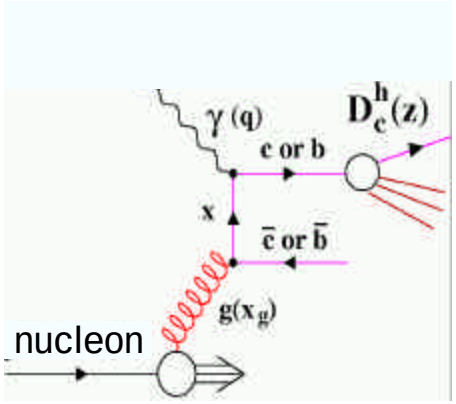
Remarks on FOCUS

Fixed target experiment
180 GeV photons on ^{9}Be
$\rightarrow$hadronic mass W~18 GeV

Hera: 60<W<280 GeV

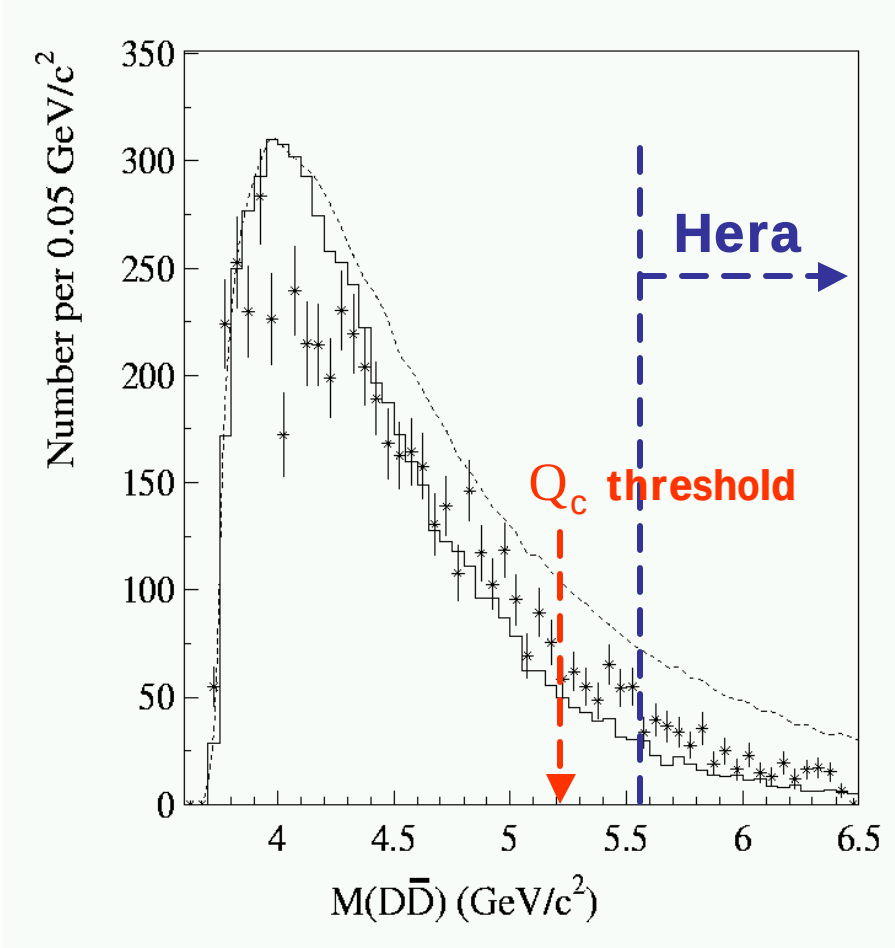


D

$\bar{D}$

M(D$\bar{D}$)

Large phase space suppression for Θ_c in FOCUS
No Monte Carlo used by FOCUS



Remarks on CDF

Charm production via gluon gluon fusion
Similar to BGF at HERA
Depends quadratically on the gluon density

No details on the analysis obtainable e.g.
effect of trigger
D* selection …

CDF used a Monte Carlo for Θ_c signal estimation but
model completely wrong: elastic J/Ψ production decaying to D*p

Remarks on e^+e^- data

- Production baryons and light nuclei in high energy processes not understood

e.g. anti-deuteron production:

H1 γp:	$\bar{d}/\bar{p} = (5.0 \pm 1.0 \pm 0.5) \cdot 10^{-4}$
RHIC Au-Au:	$\bar{d}/\bar{p} = 2 \cdot 10^{-3}$
LEP e^+e^-:	$\bar{d}/\bar{p} < 1.6 \cdot 10^{-4}$

Anti-deuteron production (6 quarks) strongly process dependent

Could be similar for pentaquarks

Remarks on ALEPH

$R_b \approx 22\%$, $R_c \approx 17\%$

D* @ LEP are produced predominantly by beauty

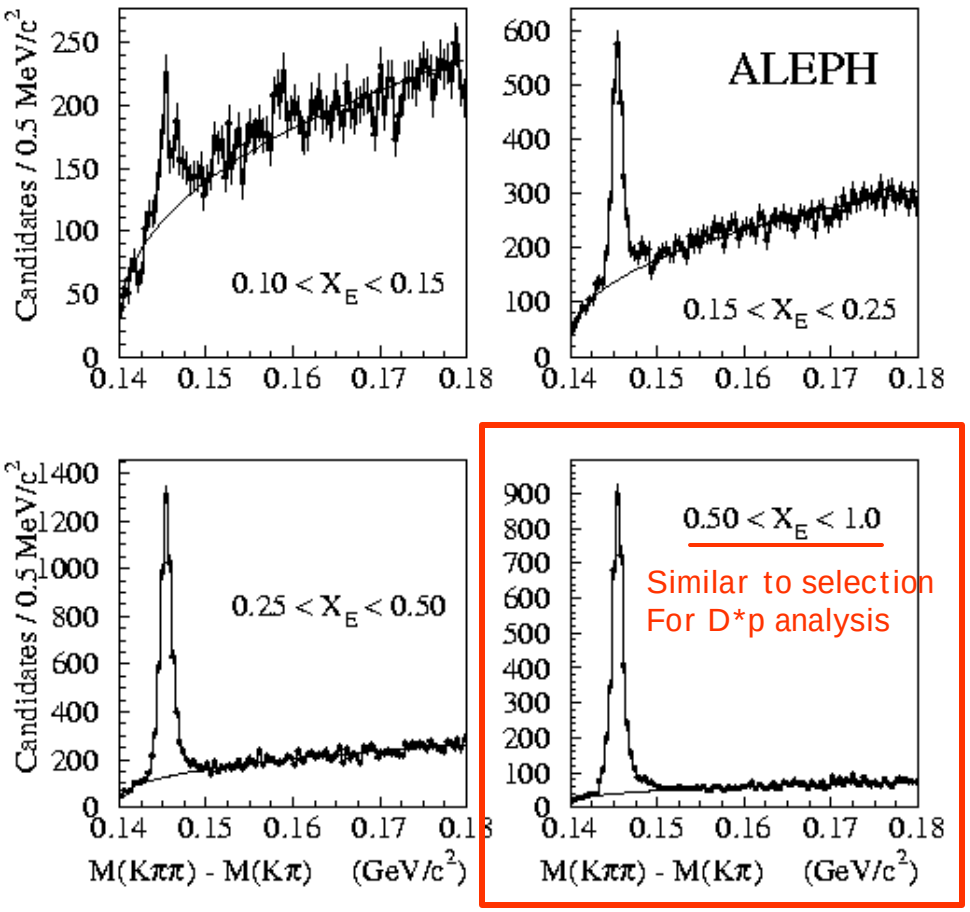
$\langle x_E \rangle_{cc} \approx 0.488$

In case of $Q_c \to D^*p$:
$\langle x_E \rangle_{cc} \approx 0.32$

D* selection may not be appropriate for Q_c
Likely that possible Q_c is cut out by D* selection

No Q_c Monte Carlo used for $Q_c \to D^*p$/D* yields

D* signals for different x_E

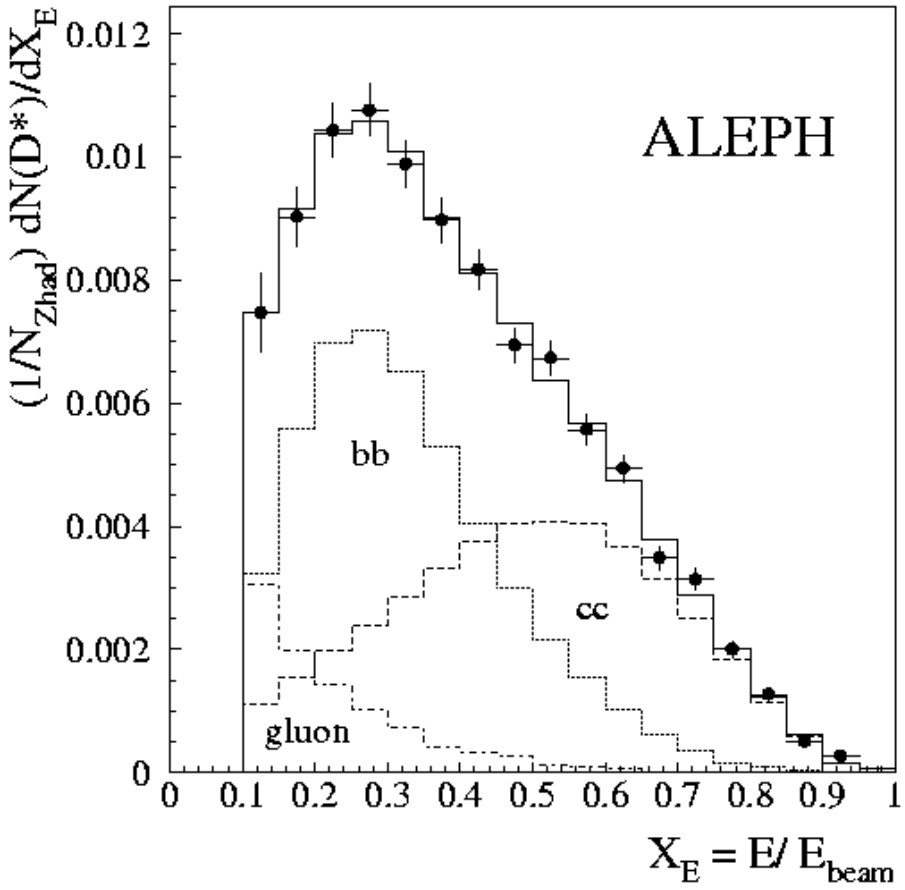


Remarks on D*p searches at LEP

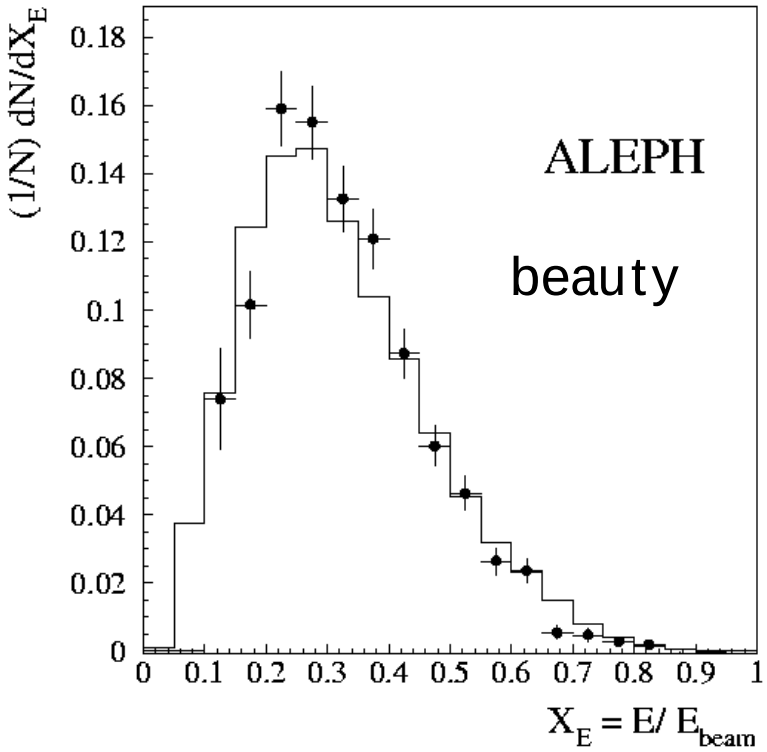
R_b »22%, R_c »17%

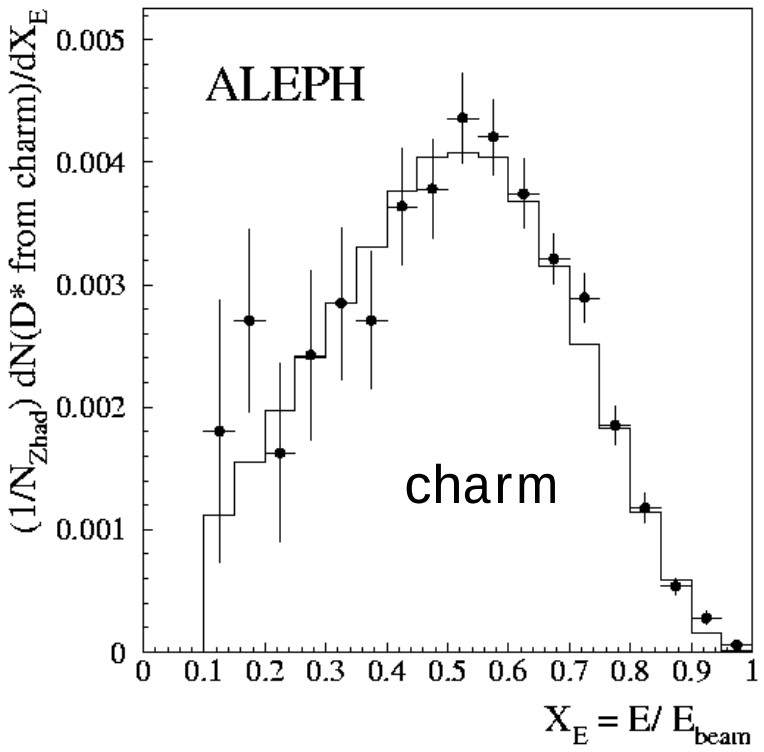
D* @ LEP are produced predominantly by beauty

$\langle x_E \rangle_{cc}$ »0.488

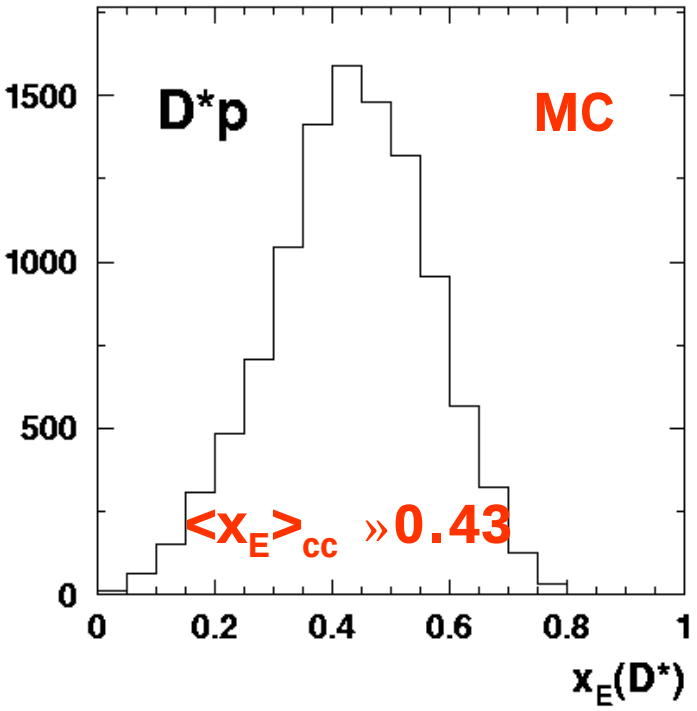


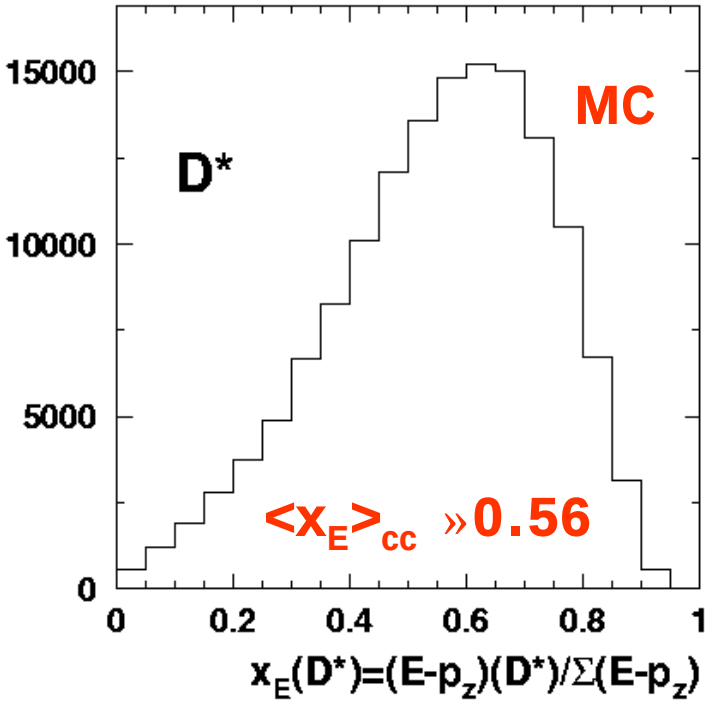
Remarks on D*p searches at LEP





D* from D*p and direct D* at HERA





D*'s from D*p significantly softer than normal D*'s

Should also hold for LEP !