E_{beam} from radiative returns

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Cetraro
October 2001

- reminder of status at WWMM
- current status
- future plans

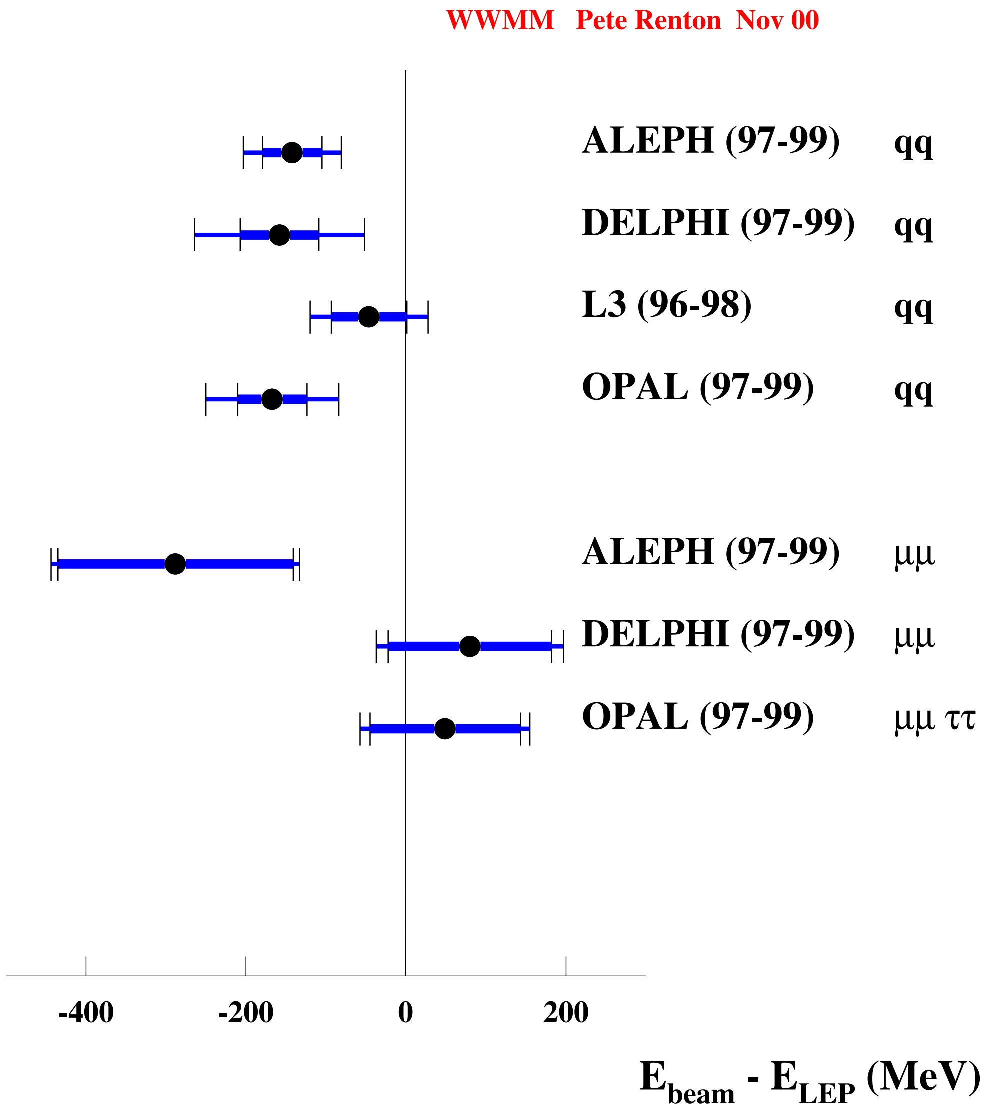
AGENDA

- introduction : pr
- reports from the experiments

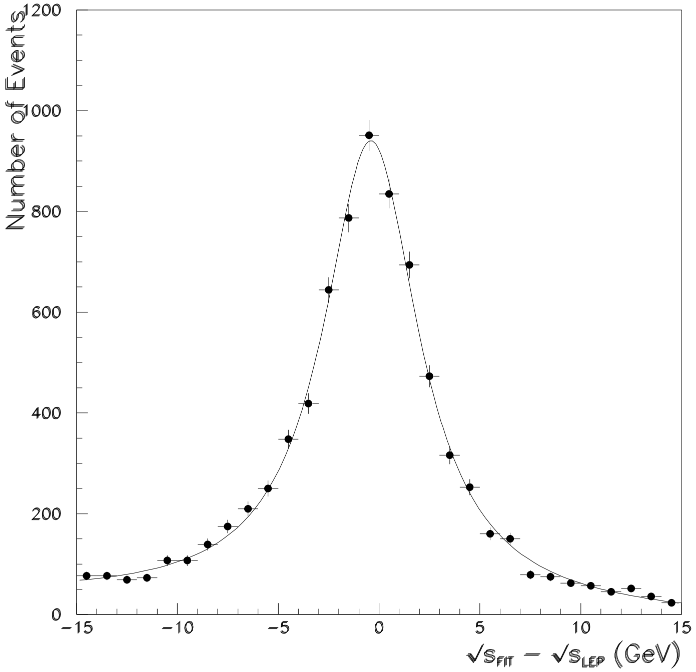
ALEPH Stephane Jezequel
OPAL Mark Thomson
L3 Arno Straessner
DELPHI Gerald Myatt

- LEP Energy Working Group: Eric Torrence
- combination and discussion

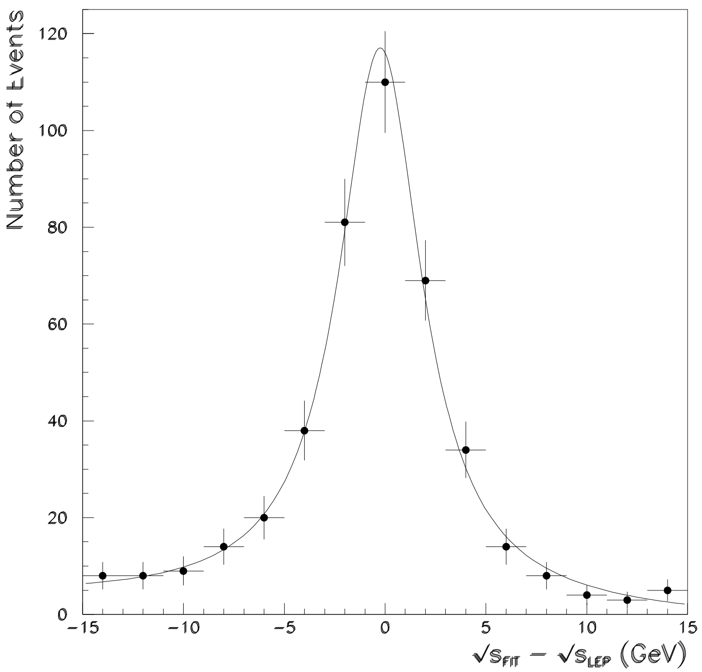
WWMM


WWMM Pete Renton Nov 00
ALEPH (97-99) qq
DELPHI (97-99) qq
L3 (96-98) qq
OPAL (97-99) qq
ALEPH (97-99) μμ
DELPHI (97-99) μμ
OPAL (97-99) μμ ττ
-400
-200
0
200
E_beam - E_LEP (MeV)

$\mu^+\mu^-$ DELPHI

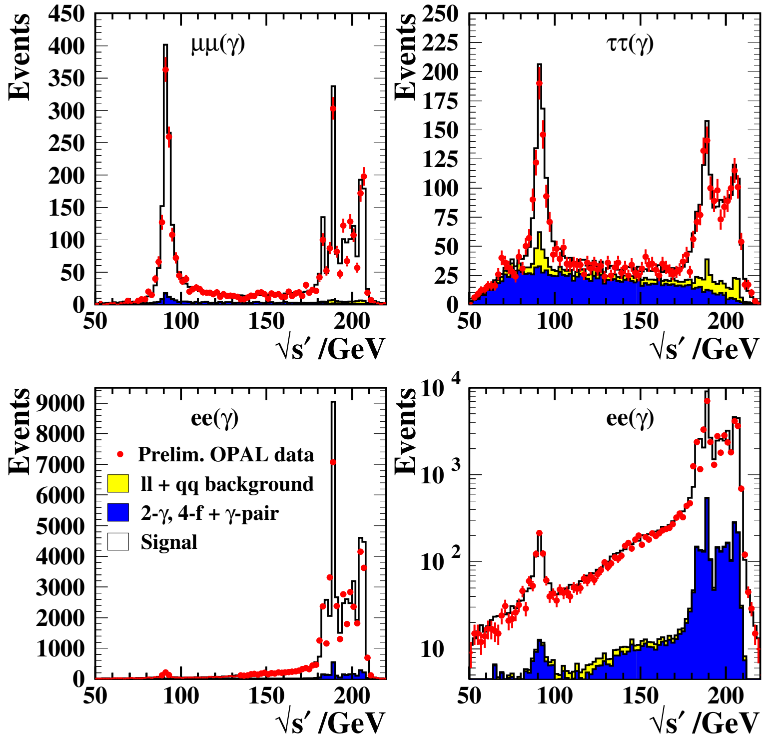


Monte Carlo

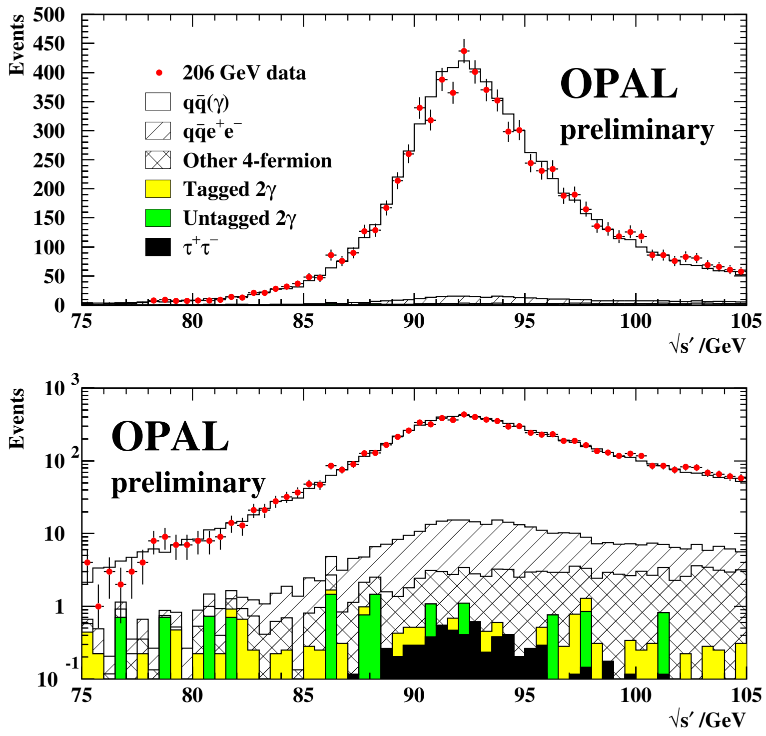


DELPHI data

OPAL

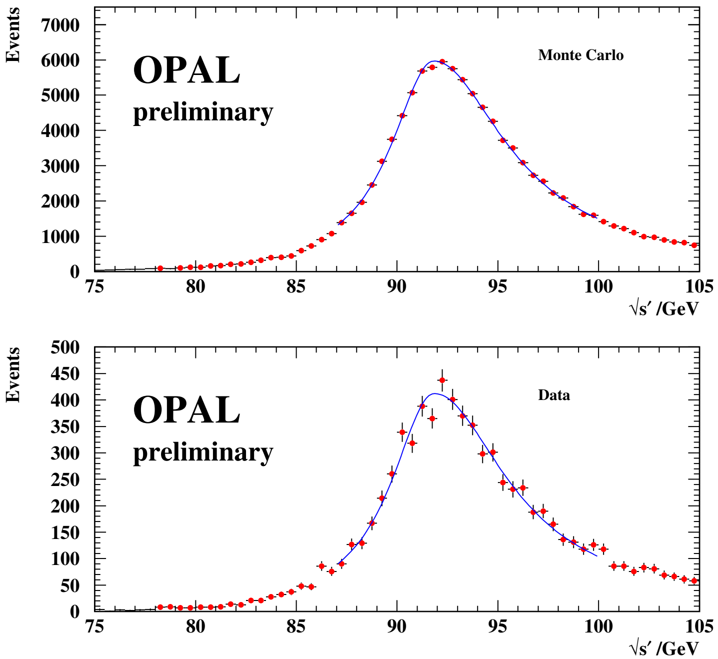


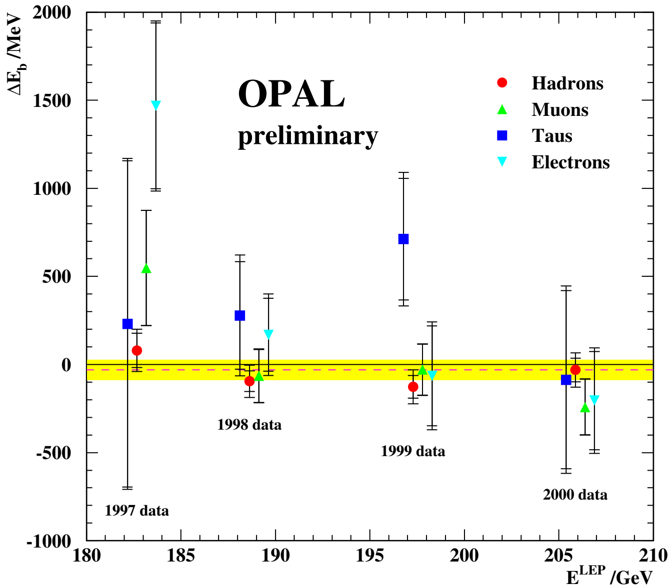
leptons



hadrons

OPAL





fit to hadrons

results by year

error classification

flexible scheme of error classification based on LEP1 Heavy flavour combination program (thanks to Pippa Wells)
User inputting the data defines the correlations

- uncorrelated between expts and channels

eg statistical error, MC stats, internal systematics

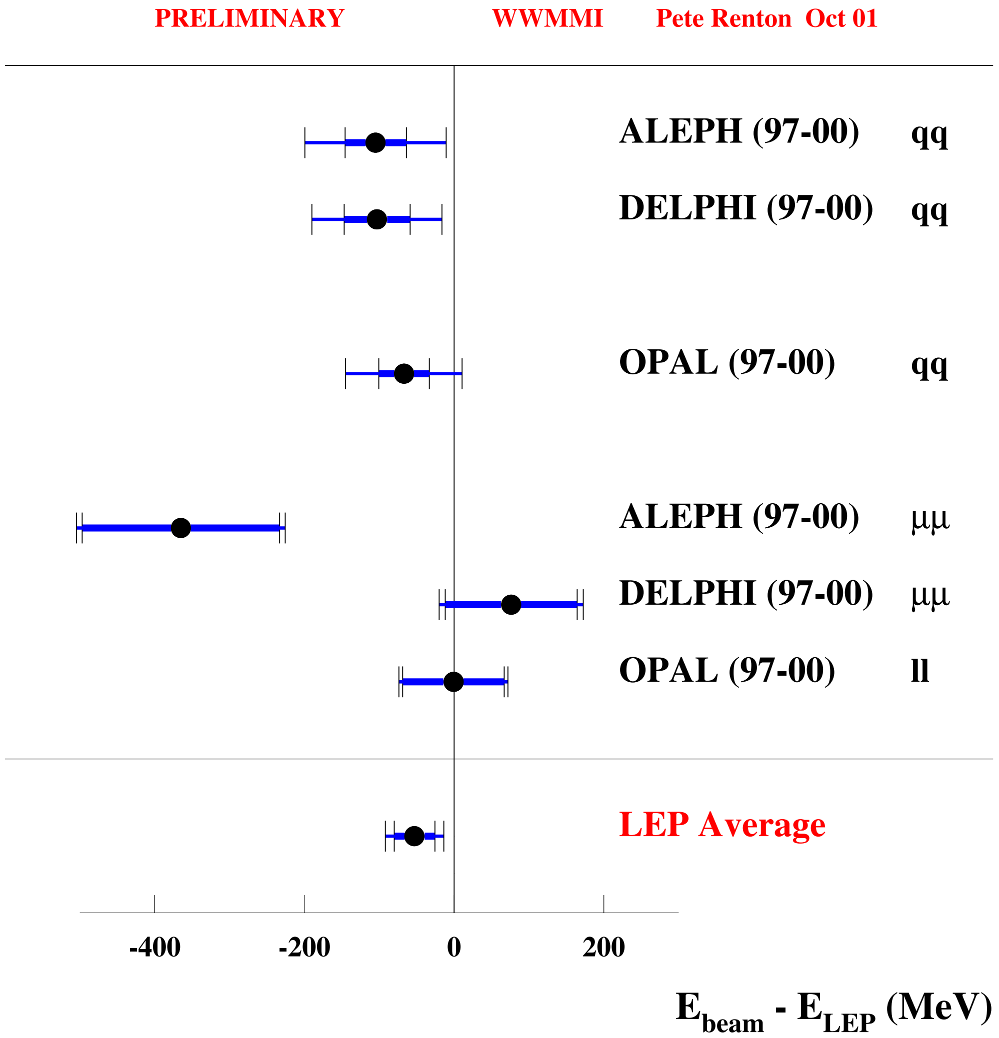
- correlated between all years for a given channel(s) and expt

eg fitting method, aspect ratio, background subtaction

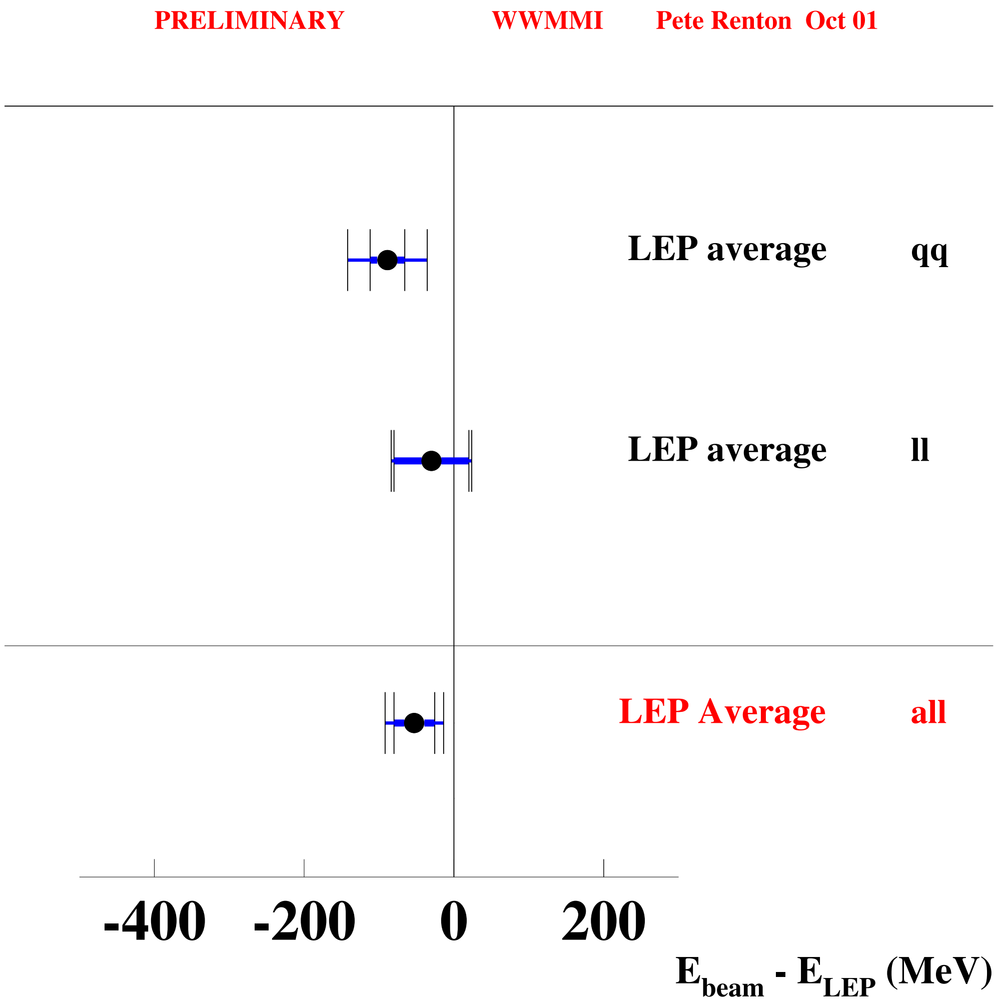
- correlated between all experiments and all years

eg ISR, LEP params, fragmentation ...

WWMMI combination



averages by channel



$\pm$ 23 (stat) $\pm$ 48 (syst)

$\pm$ 50 (stat) $\pm$ 20 (syst)

$\pm$ 27 (stat) $\pm$ 28 (syst)

common systematics

main common systematics on overall LEP average

source	error (MeV)
fragmentation	16
ISR (kk2f)	7
LEP params	3.5
4 fermion	2.4
total syst	28

still to do

- check definitions of fragmentation, ISR etc
- finalise analyses
- publish !

separate papers from each Collaboration plus
a combined LEP paper ?