

- Topics: 1. Results
2. AOB

1. Ralph Eichler presented his results on a systematic search for baryon resonances in e^+e^- annihilation.

Data sample: up to run 10243 (~May'82)

Method: select \bar{p} by TOF (momentum < 0.9 GeV/c), combine \bar{p} with up to 2 other tracks with identified pions:

combinations (charge): $\bar{p} \pi^- (-2)$, $\bar{p} \pi^+ (0)$, $\bar{p} \pi^- \pi^- (-3)$, $\bar{p} \pi^- \pi^+ (-1)$,
 $\bar{p} \pi^+ \pi^+ (+1)$.

The only significant peaks seen were $\bar{\Lambda}(\bar{p}\pi^+)$ and $\bar{\Sigma}(\bar{\Lambda}\pi)$. The $\bar{\Sigma}$ mass seemed to be higher than the official value by about 40 MeV.

2. Discussion on future PETRA running in scheduling meeting was reported by Rolf Felst. Main worry is now that we are running already above $t\bar{t}$ ground state, since Harold Fritzsche predicts $M_{t\bar{t}}^{1s} = 36.9 \pm 0.1$ GeV. The 1980 top scan reached 36.72 GeV. Oh boy!

3. On monday (21.12.) there will be a discussion on long term JADE improvements, relating also to HERA. Dieter Haidt will explain how events are going to look like in HERA ep collisions.

- 4) The predicted desert at energies between 10^3 GeV and the Planck mass will be reached at PETRA at the end of this year already, when all water supplies in the experimental halls will be discontinued (27.-30.12.). Everybody who needs water for electronics or cooling is kindly requested to bring his own water. Empty bottles are available from the DESY Hallendienst (X 3321), but supplies are limited. In the worst case you should turn off equipment which requires water for operation.

- 5) Each member of the JADE collaboration is reminded of his responsibility to survive the Xmas and new years celebrations in physically and mentally healthy conditions!

21.12.82

Gerhard Knies

Minutes of the JADE meeting 2.12.1982

1) Beampipe. It has already been reported that the present beampipe has a meanwhile sealed leak somewhere in the cooling system of the synchrotron radiation absorber. There are several options for next year's running period :

- i. Install repaired beampipe (if repair is easily possible).
- ii. Install new beampipe which is almost ready.

The diameter of the central part however can still be decided on.

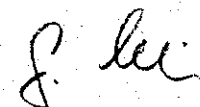
For information the diameters of beam pipes and synchr. absorbers are as follows :

CELLO	Ø 156 mm	thickness 2 mm Alu	Synchr. Absorber none
JADE	Ø 246 mm	4	Ø 160 mm
MARK J	Ø 192 mm	4	none
TASSO	Ø 130 mm	1.8 Be	Ø 125 mm

No decision has been taken. W. Bartel will investigate with other experiments having small diameters about their problems with synchrotron radiation background.

2) Fast Multihadron Selection. M. Minowa showed results on R with the fast multihadron selection scheme. The time delay between data taking and results on R is dominated by the time intervals the IBM disk is dumped on to tape. With the present data taking rate this amounts to a delay of ~ 2 days. Possibly we need a faster response.

3) Two Photon Trigger. G. Zorn proposed a trigger to record $e^+e^- \rightarrow e^+e^-\pi^0$, $\rightarrow e^+e^-\eta$ requiring one tagged electron and a low energetic photon in the barrel leadglass. Krehbiel, Olsson and Zorn will investigate the rates.



G. Heinzelmänn

Minutes of the JADE meeting on 25.11.1982

U. J. ...

- Top's: 1.) PETRA + Experiments
2.) Miscellaneous.

1) PETRA + Experiments (Rolf Felst)

- a) The running PETRA machine reached 19.0 GeV with 6mA per beam. Tomorrow it is planned to move to 19.3 GeV, the present maximum. From there PETRA will scan toward, in steps of $\Delta E_{\text{Beam}} = 30 \text{ MeV}$ and 50 nb^{-1} per energy point. Data taking ends at 20.12.1982 at 7⁰⁰, followed by machine shifts until 23.12. evening. Between 13. - 15.12. in one shift PETRA will try to go higher energies (19.5 GeV) with lower currents and one bunch per beam to provide a new background for the detectors.
- b) Detector running
At present JADE and MARK J are not harmed by background. TASSO employs a special top trigger and also CELLO has reduced operation to cope with synchrotron radiation.
- c) PETRA shut down
PETRA shut down will last from 24.12.1982 to early March '83. Experiments will start again after Easter, early April. PETRA will install 32 further cavities with 7 cells. They will bring the top energy into the 21 GeV region.

2) Miscellaneous

- 2.1 Online program for total x section on screen available (at present more incredible than preliminary); Lumi from EC + Barrel Bhabhas. (Howard Mills)
- 2.2 Shut down planning (Wulfrin Bartel)
Major work: inner μ -chambers
- new SF6 for SF5
- fix leak in pressure vessel
- leak in vacuum chamber
Magnet has to be opened, and beam pipe has to go out. For details see back page.
- 2.3 If top is found - how to publish? All 4 experiments independent, all 4 together? Or 3 together? Please give your opinion to Rolf Felst.
- 2.4 Give notice to the spokesman if you present a talk somewhere.

Richard Mills

Shut Down

Dec. 23. - ~ March 20.

27.12. - 7.1.

preparatory work
open exp.
open endplugs, work on tank
take out beam pipe
take out mini β

10.1. - 21.1.

μ chamber work part I
open magnet
take out μ chambers
prepare lead glass operation

24.1. - 11.2.

lead glass work

14.2. - 25.2.

install μ -chambers (part II)
reassemble magnet

28.2. - 4.3.

final installations and tests

7.3. - 20.3.

first phase of rucksack extension

Olson

Minutes of the JADE Meeting 18.11.82

- Top's:
- 1) Present run
 - 2) AOB
 - 3) New Results

- 1) PETRA managed to run at energies below 18.5 GeV. With new transmitter, starting on Friday, it may go higher. CELLO damaged parts of a PETRA quadrupole.

There are dangerously high rates in some parts of JADE μ -chambers but not in central detector. CELLO cannot operate its track chamber at present background conditions. TASSO also has severe problems with background. We should push for higher energies. JADE wants to find top (be-) for Xmas, and CELLO wants to see how background is at ≥ 19 GeV.

- 2) R. Eichler proposes to tighten the event z_0 cut from 350 \rightarrow 300 mm in the T_2 trigger. Reduces event rate (tapes, IBM time) by about 20%, because the peaks from synchrotron radiation absorbers are then cut out. The meeting felt that the 300 mm cut should be put into effect immediately.

Multihadron path is working. Multiprong events are available on the screen a few hours after submitting C-LIST.

After any power failure, the detector running has to be started from scratch, to make sure all controls are properly initialized.

- 3) Robin Marshall presents new results on jet fragmentation. He didn't use neutrals: they are lighter, but not easier! If the effects he sees are non-trivial they may be interesting and should be investigated further.

4) Meetings

Mo, 11⁰⁰ (Lab.II) Software meeting. Introduction to JADE data analysis continued.

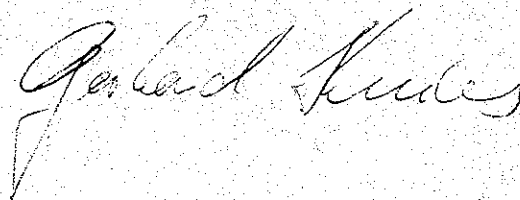
Richard Kuder

Minutes of the JADE - Meeting 11.11.1982

- Agenda:
- 1) Status of PETRA
 - 2) Status of Detector
 - 3) AOB

- 1) Rolf Felst reported, that PETRA is running at $E_B = 18$ GeV, with 3.5 mA per bunch at present. The machine group wants to ramp the energy at the end of a filling to higher energies (18.5 first, and later to 19.0 and 19.5 GeV eventually) to tune PETRA.
Background at JADE is now higher than before, but some other (!) PETRA experiments have much more severe background problems.
- 2) All detector components are in good shape.
- 3) Wulfrin Bartel proposes that shift people about 2 times a day should process the C-LIST for submitting the REFORM job. But only those who can read the corresponding JADE note. W.B. will carefully approach some candidates.
- 4) Peter Steffen reminds the meeting of a previous decision to operate the JADE jet chambers at 1/2 (and 3/4) B_{normal} . He needs ca. 100 000 events with this field for calibration. It was felt that it should be done as soon as possible, i.e. Friday this week, together with jet chamber experts.
- 5) The question of having very brief minutes of the JADE meeting was raised. They should be useful as a document of decisions and for communications to our boys abroad. Who writes them? After the exchange of some very altruistic points of view, Gerhard Knies volunteered to take over for a few times.

11.11.82 Gerhard Knies



Meetings

Monday, 15.11., 11⁰⁰ Software meeting (L2B)