BES Status Report

Xiaonan Li

Jan. 13, 2000

Data Summary

- BES data taking time: 281 hrs
- Integrated luminosity： 1202 nb^{-1}
- Total hadron event number： 2.65 million
- Total Bhabha event number: 0.32 million

BES Status from Online's View

- MDC dE/dx height was increased about 30% by tuning down HV of potential wires 15-25V.
- Big leakage current problem of L6Cell5-8 of field wires was fixed by tuning down HV from 1700V to 1400V.

BES Status(2)

- The hot channels of MDC.
  - It is cross talk of SC reset and gate signals that cause the hot channels.
  - The hot channels are grouped as 32 channels of two nearby main AMP modules.
  - Disconnect some worst channels between pre-AMP and main AMP in the group will fix other hot channels.
  - 16 channels have to be disconnected totally.

BES Status(3)

- Hitmap deficient problem of east D block of ESC before run13928 due to use different amplitude modules.
- T0 jitter existed before run13696. It is fixed by replacing a T0 lock module of trigger system.
- Highest bit “1” problem in the data address. It is fixed by slow down memory copy after RUN13531.

BES Status(4)

- Generally speaking, BES is in pretty good status after hard-working of BES colleague. Malfunction is not happened as many as 1998-1999 run.
- Dead channels of electronics system are kept to least.
  - TOF: 0, VC: 2, MDC_T/MDC_Q: 32/26, BSC/ESC: 3/3, MUON: 0-1

BES Status(5)

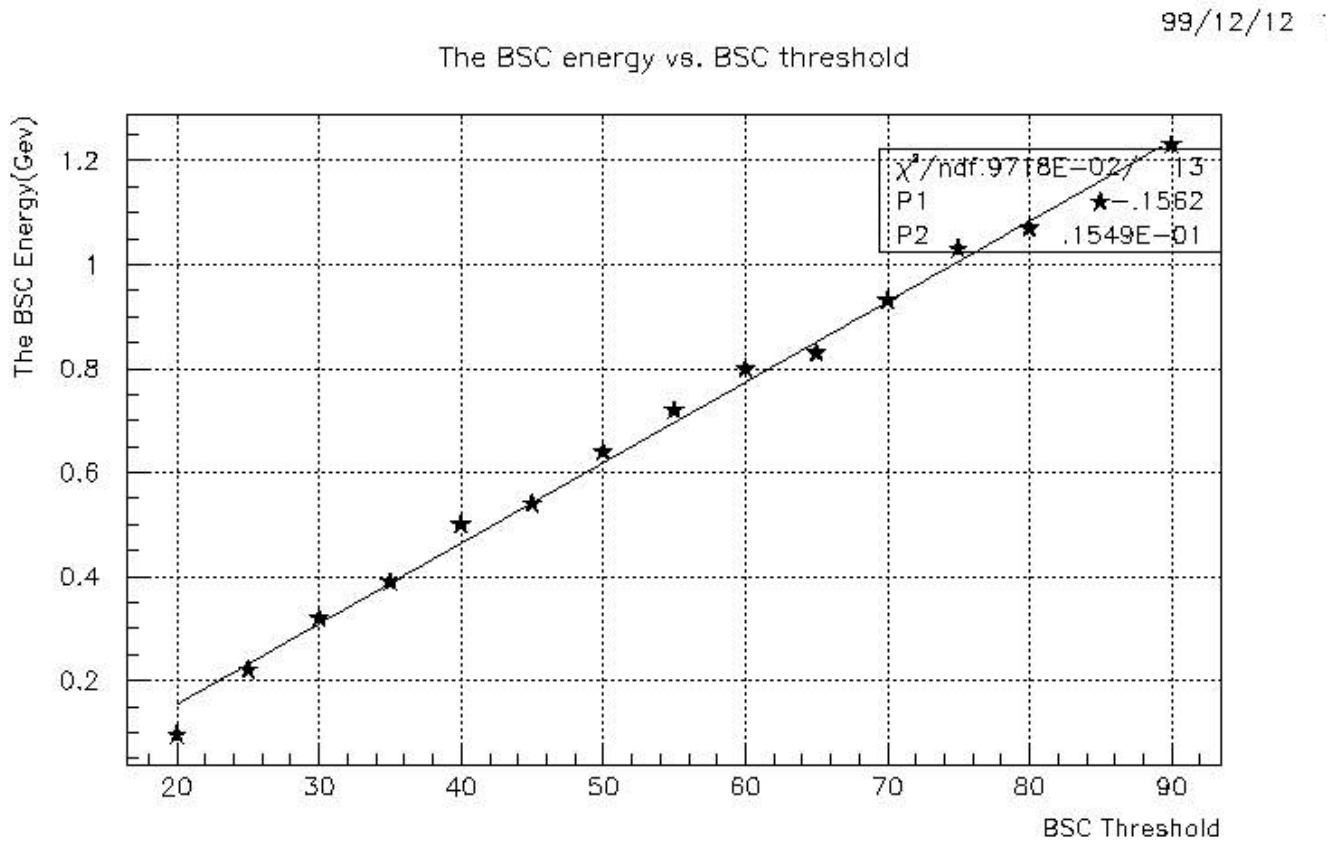
- Trigger system has improved a lot by a new main trigger module used.
- Online is also stable compared with before. The crash due to VME is nearly disappeared after address problem fixed. Now most of crashes are due to network communication.
- Detector system, supported system and gas system are also in good status.

Milestone RUN

- R13531 is first run of J/Psi after address problem fixed.
- R13691. MDC threshold is 625. Before that there are totally 40 cells in 725.
- Run13928, run13696. See slides before.
- History of trigger criteria.

RUN	Etot_l	Etot_h	BSC radial	ESC_tot	ESC radial
13531	20	80	20	40	50
13544	32	80	20	40	50
13548	32	60	20	40	50
13663	20	60	20	40	50
13691	20	55	15	40	40
13742	20	55	15	40	45

BSC Threshold Measurement



Primary Calculation of Trigger Efficiency of Etot_l, Etot_h

- Four sets of Runs in different Etot_l and Etot_h. The results see Li De and Xindong's reports.
- From their results, we have taken data for calculation of trigger efficiency.
  - Etot_l=23, Etot_h=70, BSC_radial=15, ESC_tot=40, ESC_radial=45
- The Etot is much dependent on the BSC peak which are changed in 5%-10% until now.
- The ESC_radial is not stable.
- BSC_radial efficiency is for Bhabha only. How to estimate it for low energy photon? What effect on J/Psi 5 gamma?

Final Words

- We have done a lot.
- We should get a lot.