

# CCJ Usage for Belle

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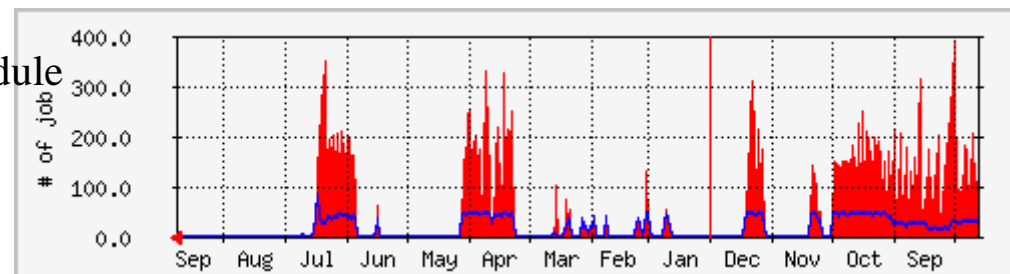
*CCJ User's Meeting*

*September 26, 2003*

- Monte Carlo production and analysis
  - CPU time: 170K hours (Aug.1, 02 ~ Aug.22, 03)
    - MC production 145K hours
    - Analysis 25K hours
  - 1TB HD for work space
    - to keep generated MC (mDST) files
    - to keep histogram files for analysis
  - 1 Linux box for DB server

# Monte Carlo Production

- RIKEN duty:  $10 \text{ fb}^{-1}$  equivalent (=120M events) / year
- Job procedure
  - Copy input files (generator) from KEK to CCJ
  - Submit jobs
  - Check output files (mDST)
  - Send mDST files to KEK
- Typical MC job
  - I/O file size: in 10MB, out 200MB
  - CPU usage:  $3.5 \text{ sec/event} \times 6 \text{ k events} = 5.8 \text{ hours}$
  - Max memory 360MB; max swap 1GB
  - Sending output files: scp,  $0.7 \text{ MB/sec} \rightarrow 285 \text{ sec}$
- belle\_sim queue
  - 30-50 CPUs
  - $\sim 200 \text{ jobs/day}$  (1M events/day)  $\rightarrow 40 \text{ GB output/day}$
- Submission schedule
  - Depends on experiment schedule
  - Oct 03 – Apr 04



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# Analysis

- Job procedure
  - make analysis (skimmed) histograms at KEK farm
  - Copy the histogram files to CCJ
  - Merge files; detailed analysis at CCJ
  - Keep out put files at 1TB HDD
- Schedule
  - Constant; basically small size of jobs
  - Produce specific (toy) MC at CCJ
  - Copy data at KEK to CCJ HPSS (3.5T for data; 10T for MC)
  - Full data and MC analysis ( $150\text{fb}^{-1} \rightarrow 30\text{K hours}$ )