The Run Status of BESII in 1999/2000

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- Operation and Data taking
- Performance of BESII
- Summary

Table 1. Duration of BESII operation in this RUN

Data	Purpose	Days	Comment
14/11/1999-29/11/1999	BEPC and BES tuning	15	Nov.19 BES begin tuning with beam
29/11/1999-15/05/2000	Data taking	145	Subtract : Machine study 12 days Synchrotron radiation 11days
15/05/2000-30/05/2000	BEPC machine study	15	Online and Luminosity only

$\varepsilon = 76.9 / 145 = 53\%$

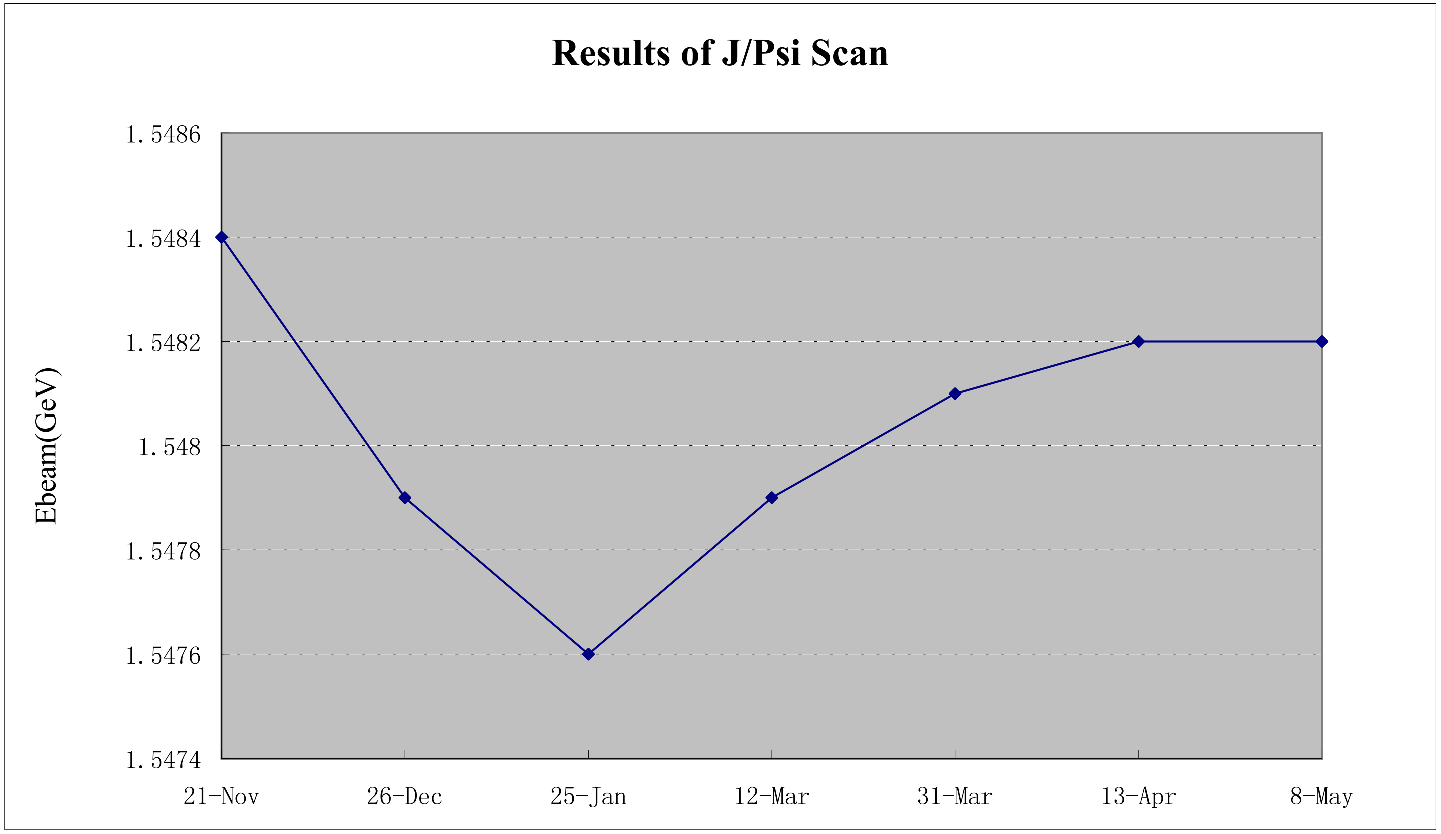
Table 2. Data taking

Data Sample	Acquired	Record
J/ψ	22.5×10^6 online Hadron Events	1 Shift: 122k 1 Day: 326k 1 week: 1,692k
Ecm=3.0GeV	240 nb^{-1}	
ψ'	1123 nb^{-1}	

Trigger Table for J/Ψ Runs

Type		BHABHA	CHARGE	2-MU	CHAR2	NEUTRAL	Eneutral	ESC	BB2
Active?		N	Y	N	Y	Y	Y	Y	N
Level 1 Trigger	TOF B-B	-	-	Y	-	-	-	-	Y
	$N_{TOF}\geq 1$	-	Y	Y	-	-	-	-	-
	$N_{TOF}\geq 2$	-	-	-	Y	-	-	-	Y
	RADIAL	-	-	-	-	Y	-	-	-
	$N_{VC}\geq 1$	-	Y	Y	Y	-	-	Y	-
	E_{radial}	Y	-	-	-	-	Y	-	-
	ETOF B-B	-	-	-	-	-	-	Y	-
	$E_{TOF}\geq 1$	-	-	-	-	-	-	-	-
	$N_{VC}\geq 2$	-	-	-	-	-	-	-	-
Level 2 Trigger	$N_{TRK}\geq 1$	-	Y	-	-	-	-	-	-
	$N_{TRK}\geq 2$	-	-	-	Y	-	-	-	Y
	$N_{TRK}\geq 4$	-	-	-	-	-	-	-	-
	MUON-OR	-	-	-	-	-	-	-	-
	E_{TRK}	-	-	-	-	-	-	-	-
	ESC-E_{tot}	-	-	-	-	-	Y	Y	-
	E_{tot} LOW	-	Y	-	-	-	-	-	Y
	E_{tot}HIGH	-	-	-	-	Y	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-

In case of the beam energy shift of BEPC, fast J/Psi scans were done.
One Psi' scan also did, Ebeam=1.8437



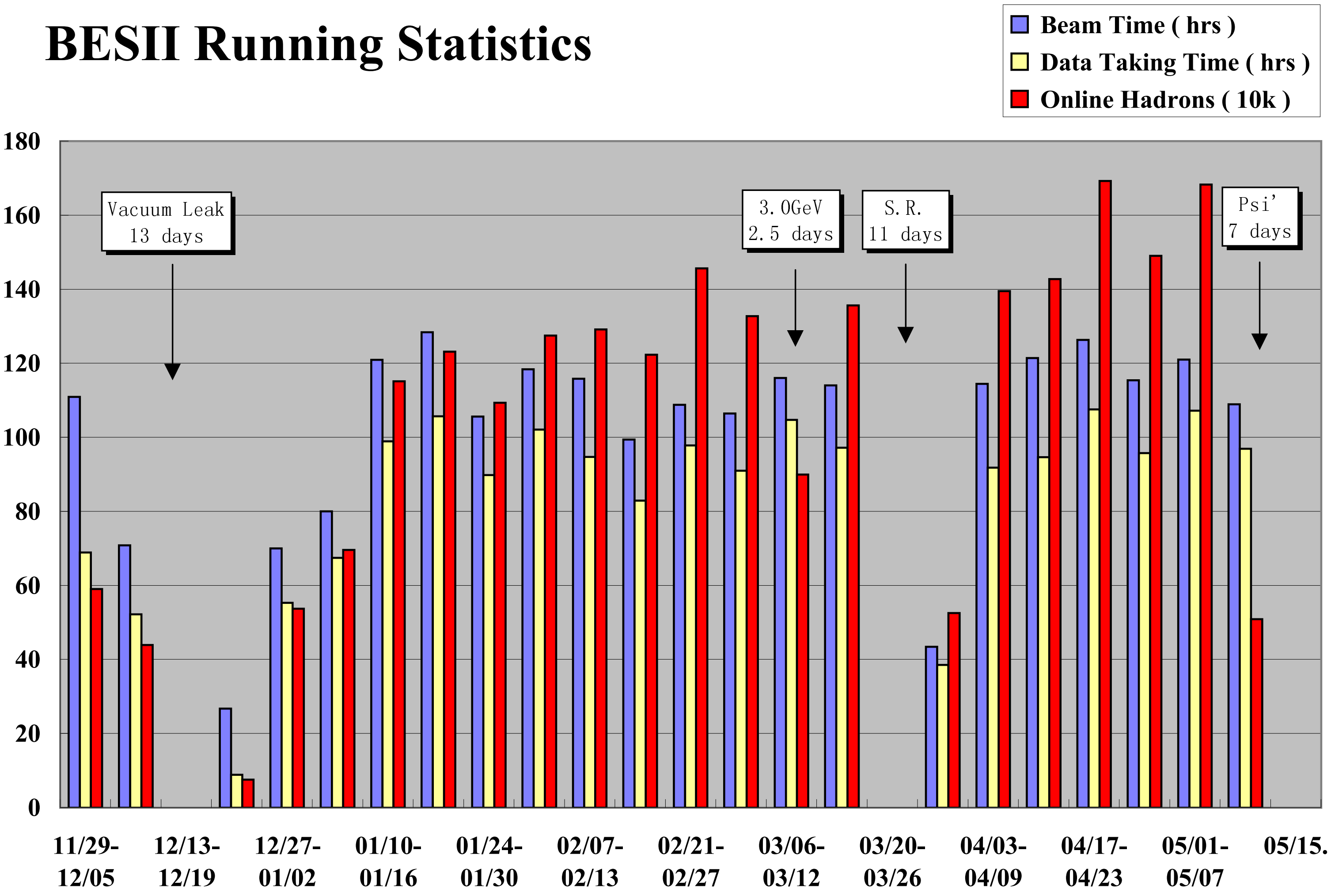

BESII Running Statistics
Beam Time (hrs)
Data Taking Time (hrs)
Online Hadrons (10k)
Vacuum Leak
13 days
3.0GeV
2.5 days
S.R.
11 days
Psi'
7 days
180
160
140
120
100
80
60
40
20
0
11/29-
12/05
12/13-
12/19
12/27-
01/02
01/10-
01/16
01/24-
01/30
02/07-
02/13
02/21-
02/27
03/06-
03/12
03/20-
03/26
04/03-
04/09
04/17-
04/23
05/01-
05/07
05/15.

Table3: Performance of BESII

Sub-system	Status
VC	Normal
MDC	Field wires (L4:1, L6:2)
TOF	Normal
BSC	2 wires broken
ESC	Wrong amplifiers were used
μ	Normal
Luminosity	Connection of delay
Trigger	Normal
Online	High bit set to 1 System crash (error-tolerance,network)
Support	Normal

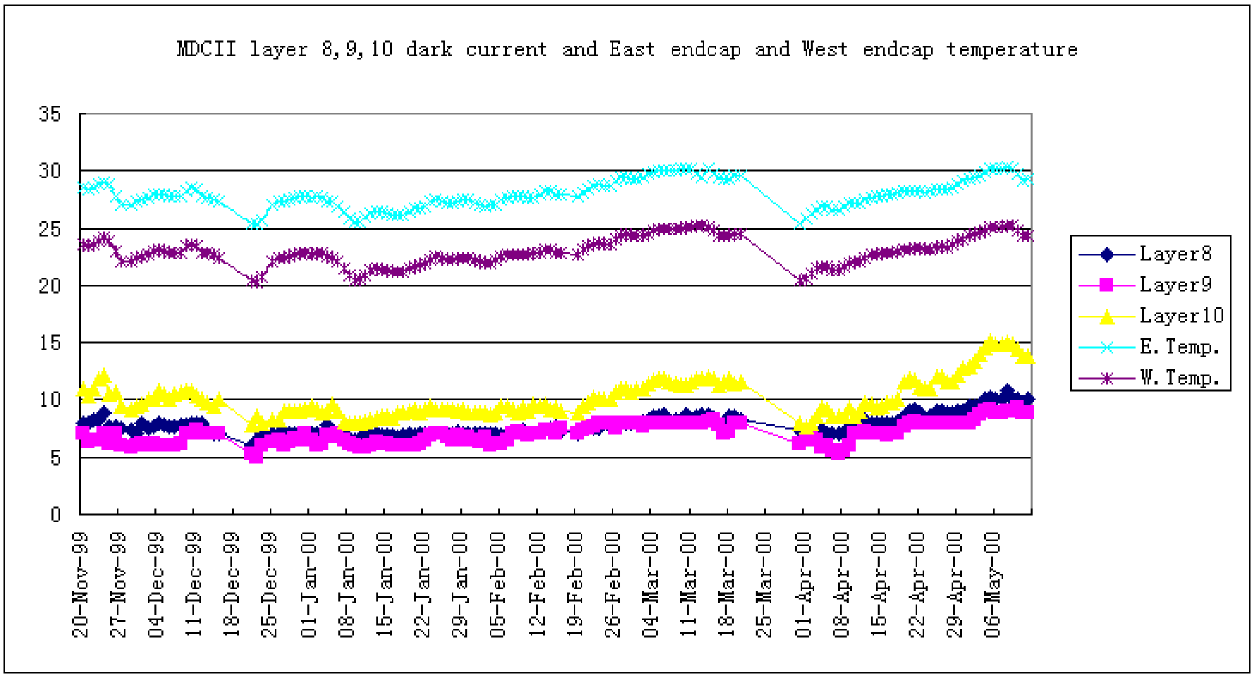
- After terminators were added to the SC RESET and GATE signal to reduce their reflection, the MDC hot channels and MDC track finding hot channels were obviously decreased.'

Summary

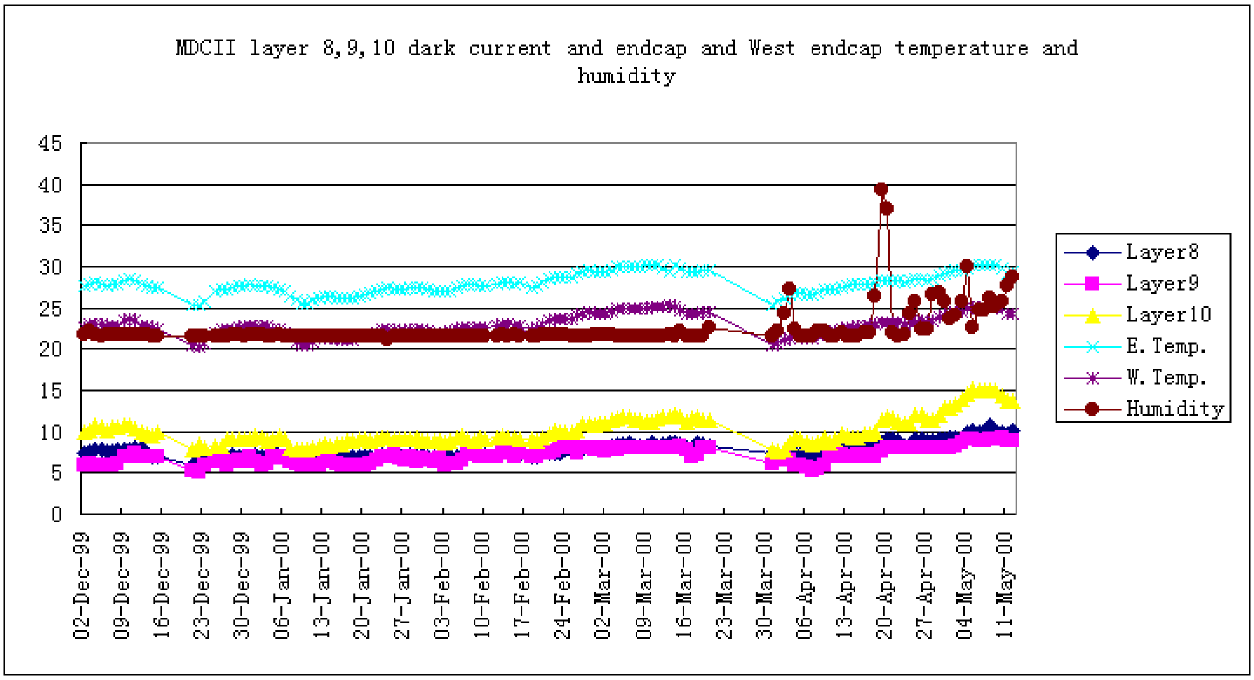
♠ The J/ψ data taking is successful .
22.5 Million J/ψ events have got !

♠ The performance of BESII is reasonably good though more aging problem.

♠ Thanks to all BES collaboration and BEPC people !

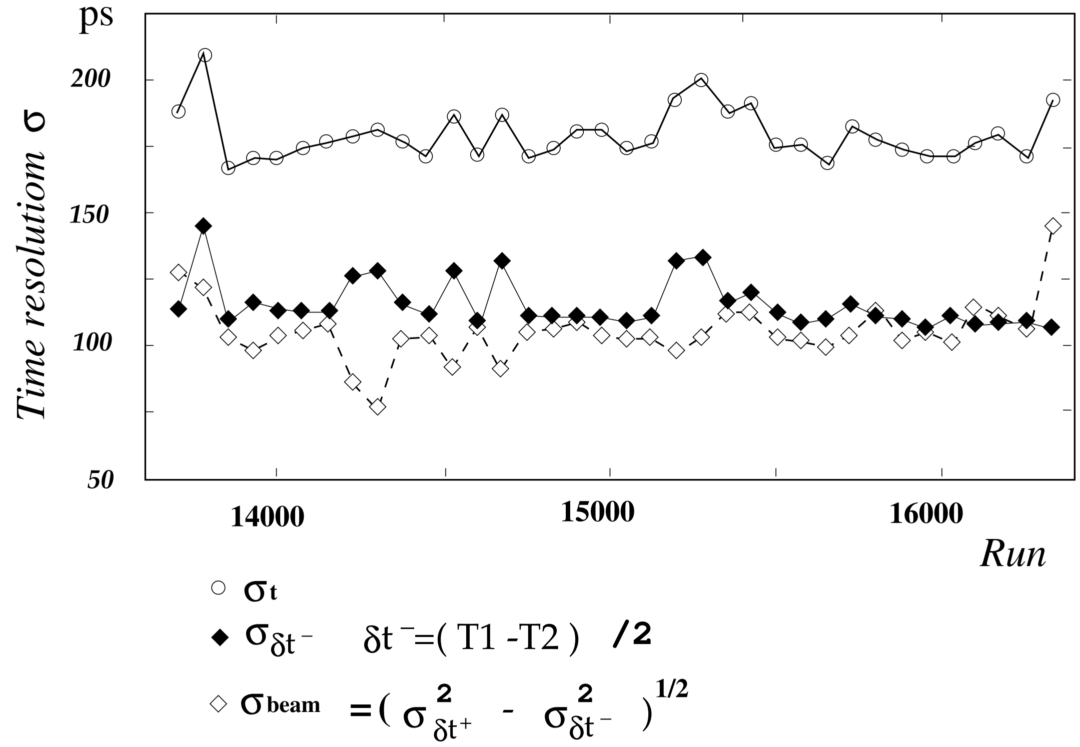


MDCII layer 8,9,10 dark current and East endcap and West endcap temperature
35
30
25
20
15
10
5
0
20-Nov-99
27-Nov-99
04-Dec-99
11-Dec-99
18-Dec-99
25-Dec-99
01-Jan-00
08-Jan-00
15-Jan-00
22-Jan-00
29-Jan-00
05-Feb-00
12-Feb-00
19-Feb-00
26-Feb-00
04-Mar-00
11-Mar-00
18-Mar-00
25-Mar-00
01-Apr-00
08-Apr-00
15-Apr-00
22-Apr-00
29-Apr-00
06-May-00
Layer8
Layer9
Layer10
E. Temp.
W. Temp.

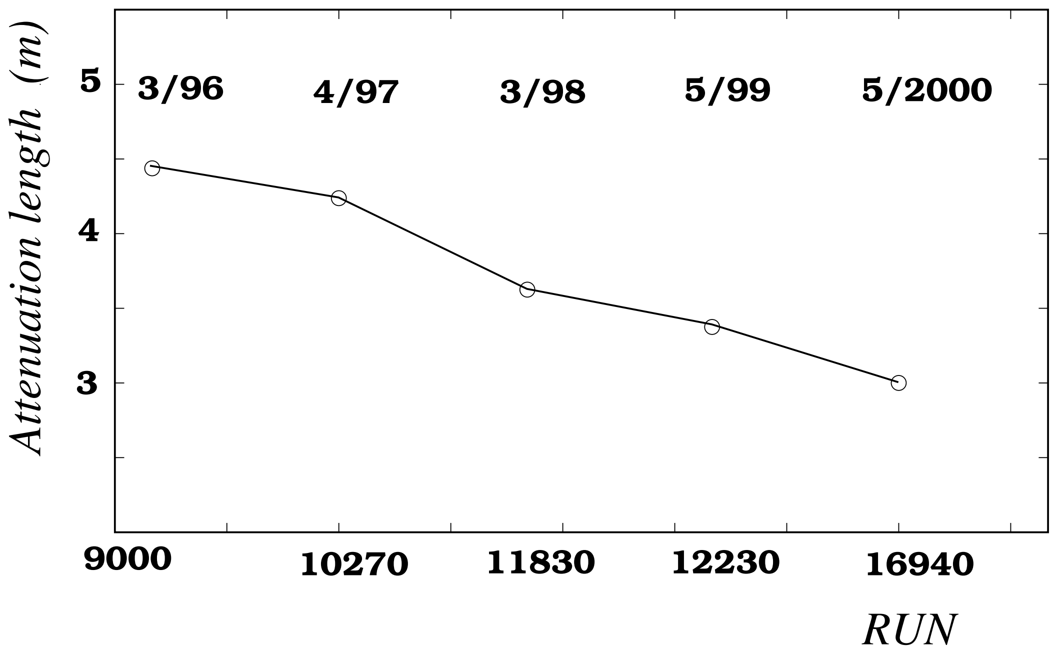


MDCII layer 8,9,10 dark current and endcap and West endcap temperature and humidity
45
40
35
30
25
20
15
10
5
0
02-Dec-99
09-Dec-99
16-Dec-99
23-Dec-99
30-Dec-99
06-Jan-00
13-Jan-00
20-Jan-00
27-Jan-00
03-Feb-00
10-Feb-00
17-Feb-00
24-Feb-00
02-Mar-00
09-Mar-00
16-Mar-00
23-Mar-00
30-Mar-00
06-Apr-00
13-Apr-00
20-Apr-00
27-Apr-00
04-May-00
11-May-00
Layer8
Layer9
Layer10
E. Temp.
W. Temp.
Humidity

BTOF time resolution (ββ)

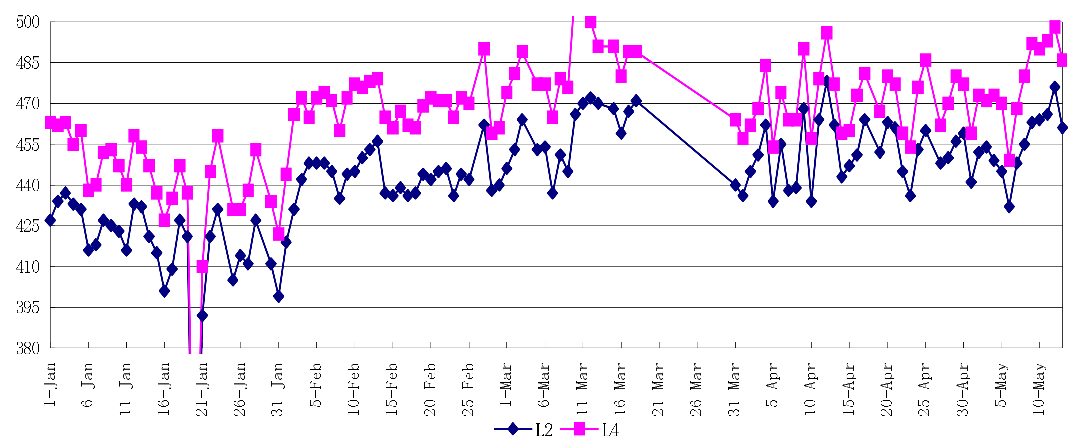


TOF attenuation length (ββ)

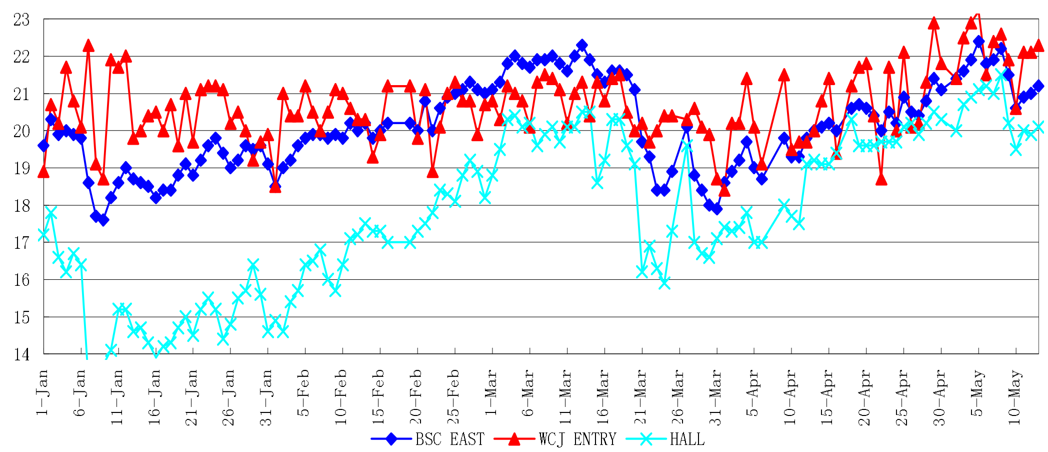


BSC

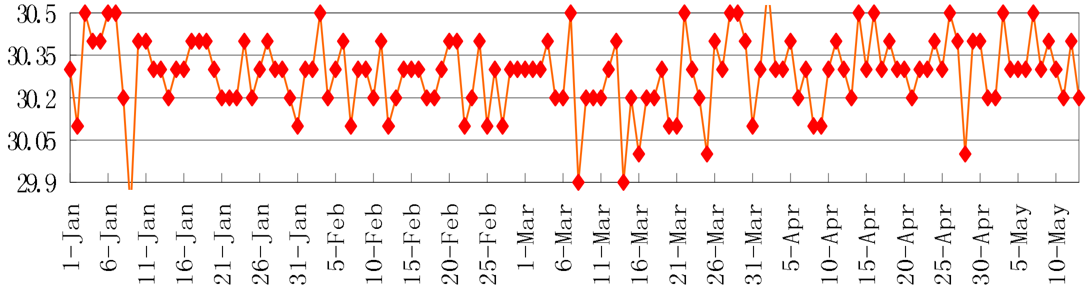
Q1+Q2

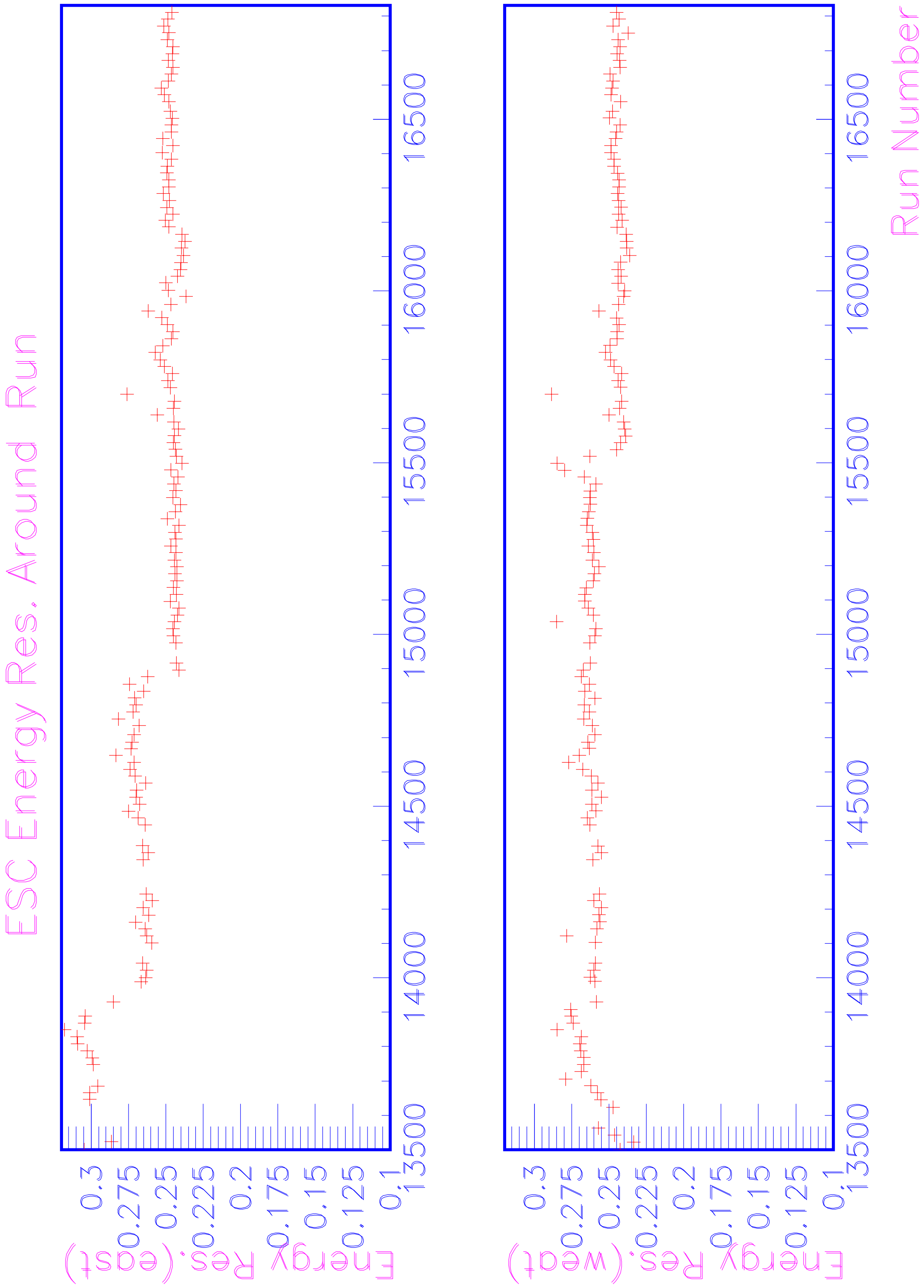


Temperature

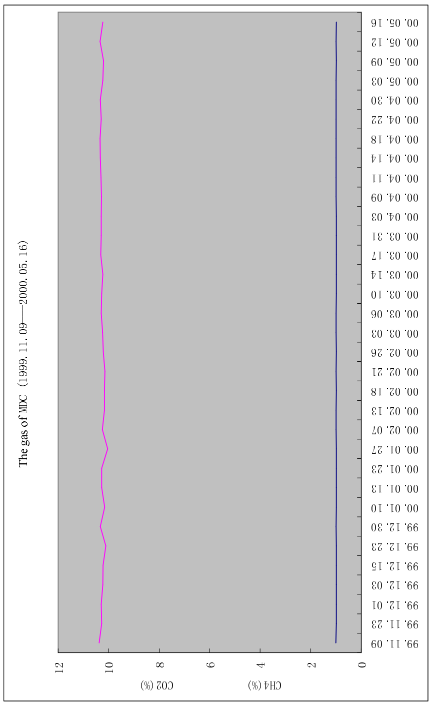


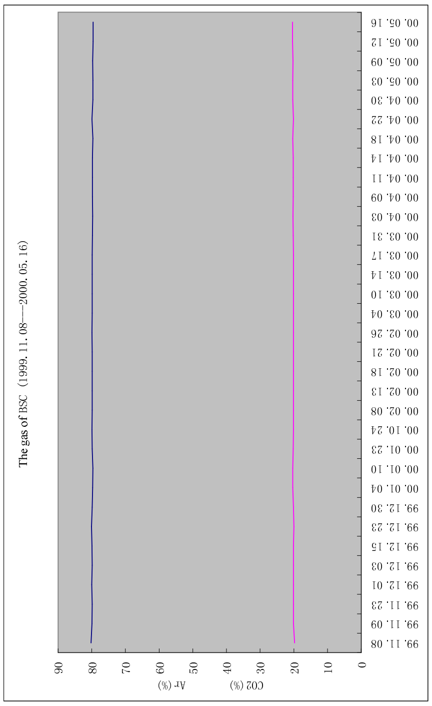
n-pentane

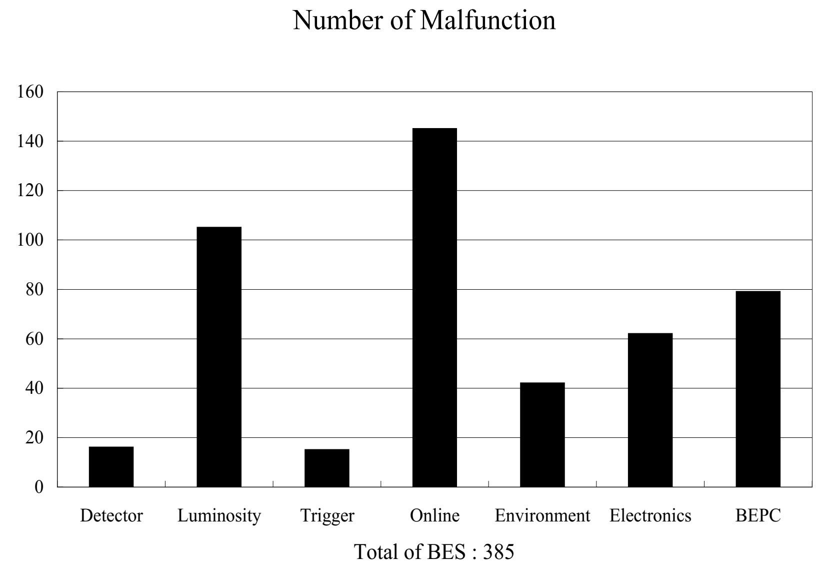




ESC Energy Res. Around Run
Energy Res.(east)
Energy Res.(west)
Run Number
0.3
0.275
0.25
0.225
0.2
0.175
0.15
0.125
0.1
13500
14000
14500
15000
15500
16000
16500







We were fighting againest aging problem everyday. (> 2/day)

Magnet Status