



## Status of KLOE data taking

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KLOE General Meeting  
September 24, 2001

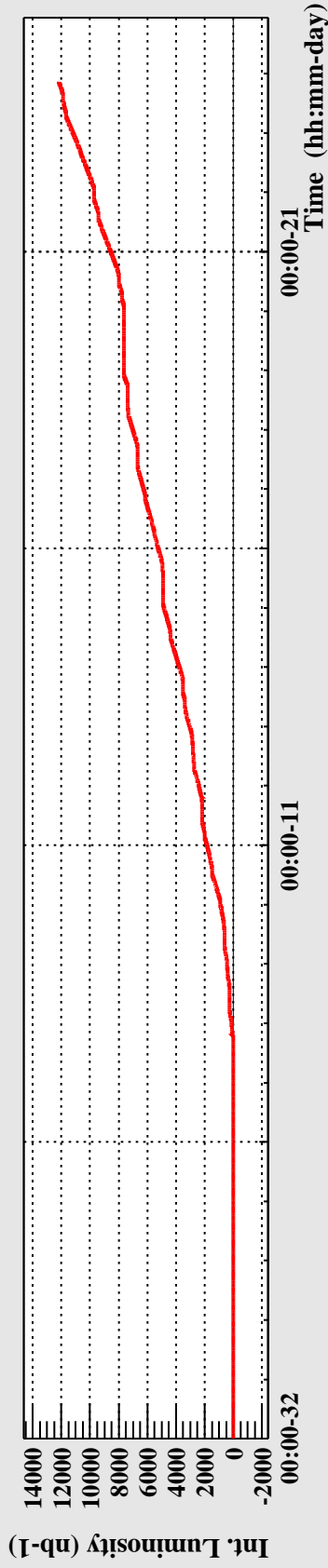
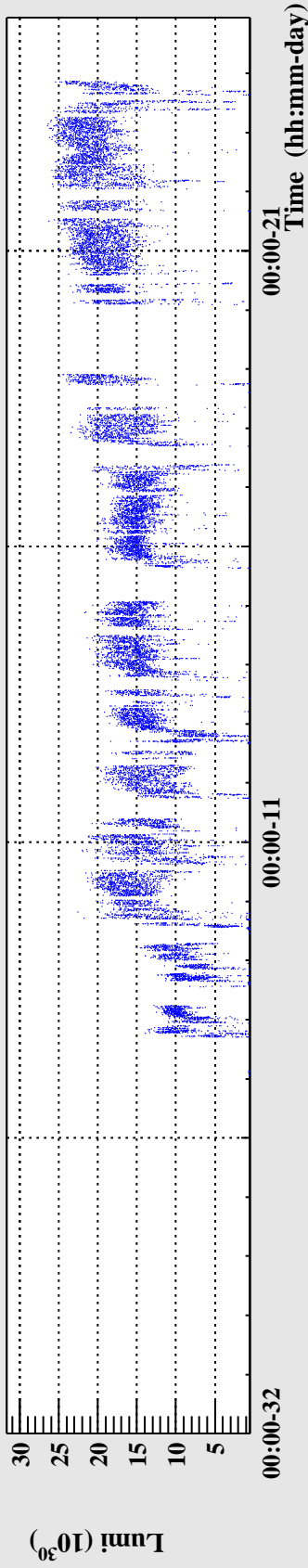
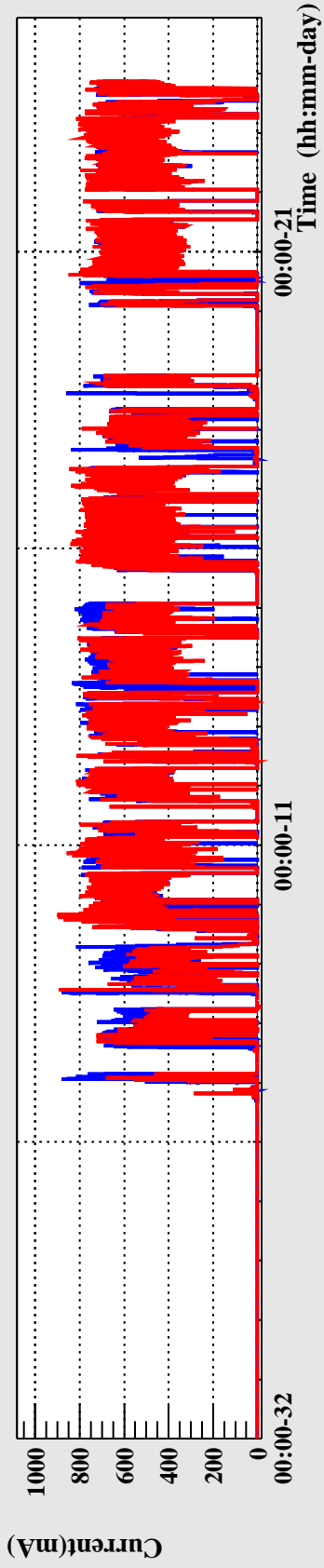
### Outline:

- Integrated luminosity
- Backgrounds
- Magnetic field
- Offline counters
- Conclusions



- Luminosity integrated in September: **12 pb<sup>-1</sup>** (as of yesterday at 21.00)
- Average run luminosity:  $(1 \times 10^{31} \rightarrow 2.2 \times 10^{31}) \text{ cm}^{-2} \text{ s}^{-1}$
- Maximum luminosity integrated in a day : **1.5 pb<sup>-1</sup>** (from 00.00 to 24.00, September 22)
- Average luminosity over the whole period :  $\approx 0.7 \div 0.8 \text{ pb}^{-1} / \text{day}$
- Reasonably stable conditions, increasing performance.

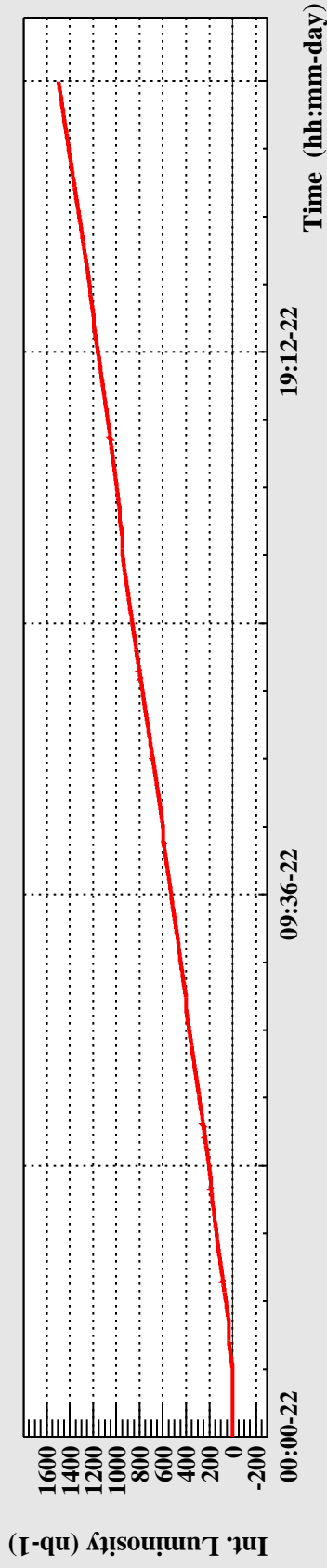
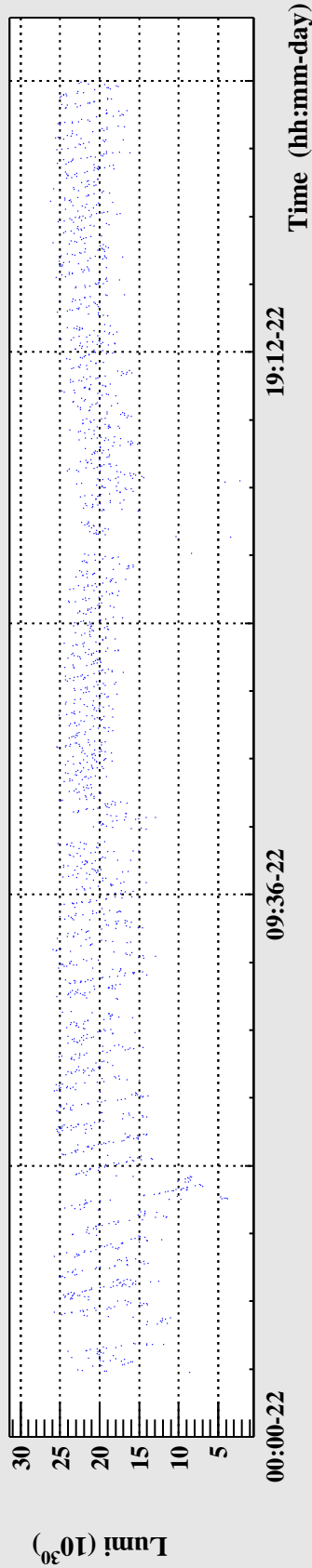
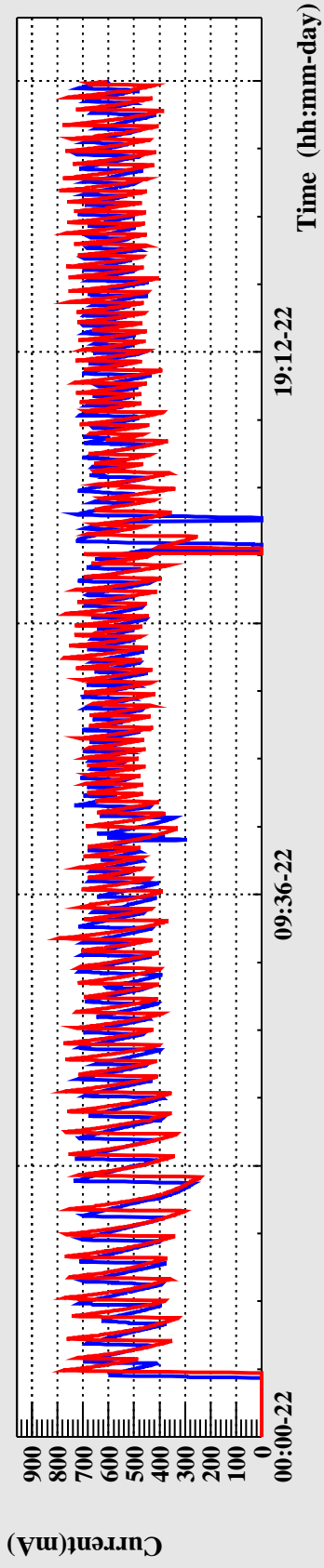
KLOE Presenter (History, 01-09-2001 : 23-09-2001)



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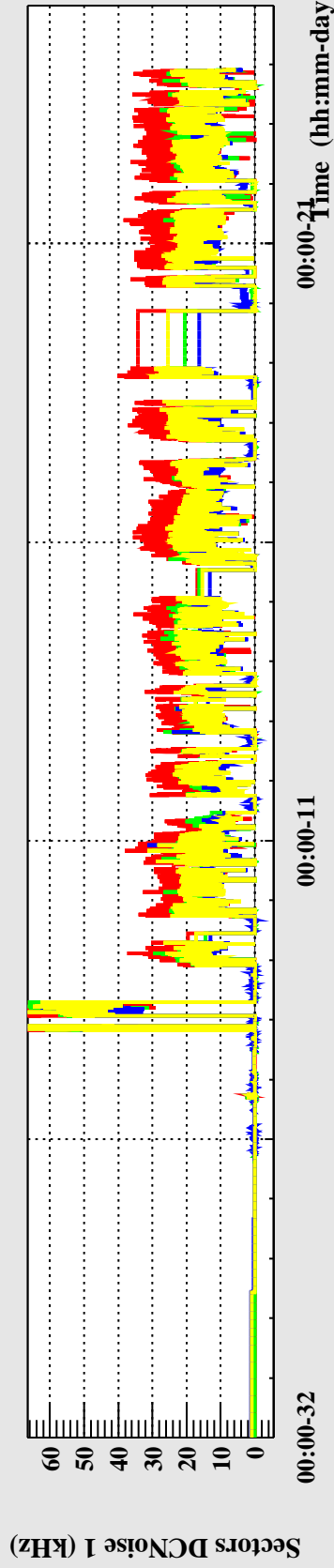
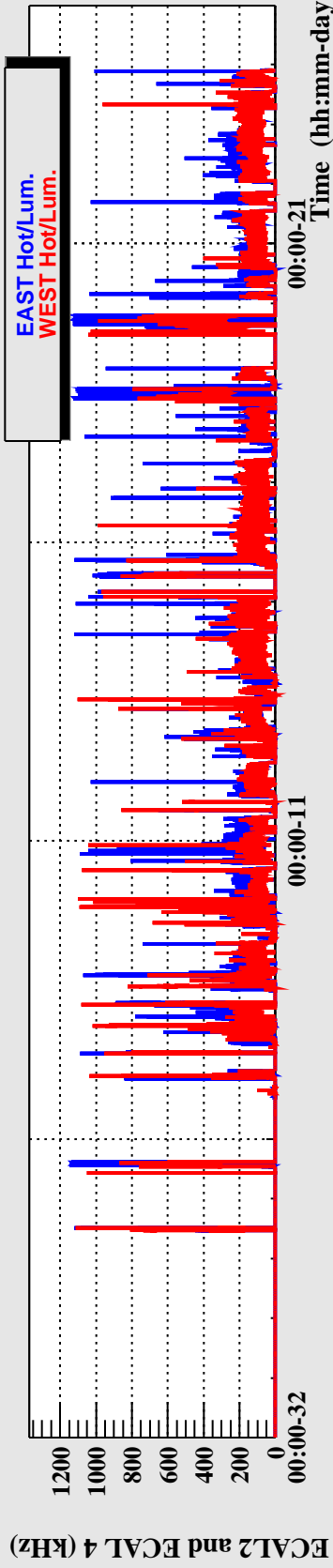
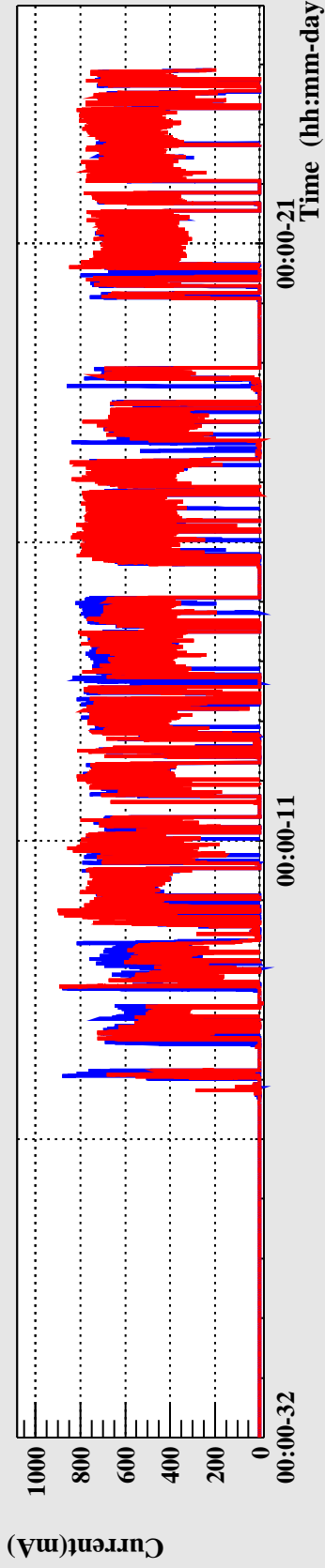
KLOE Presenter (History, 22-09-2001 : 22-09-2001)



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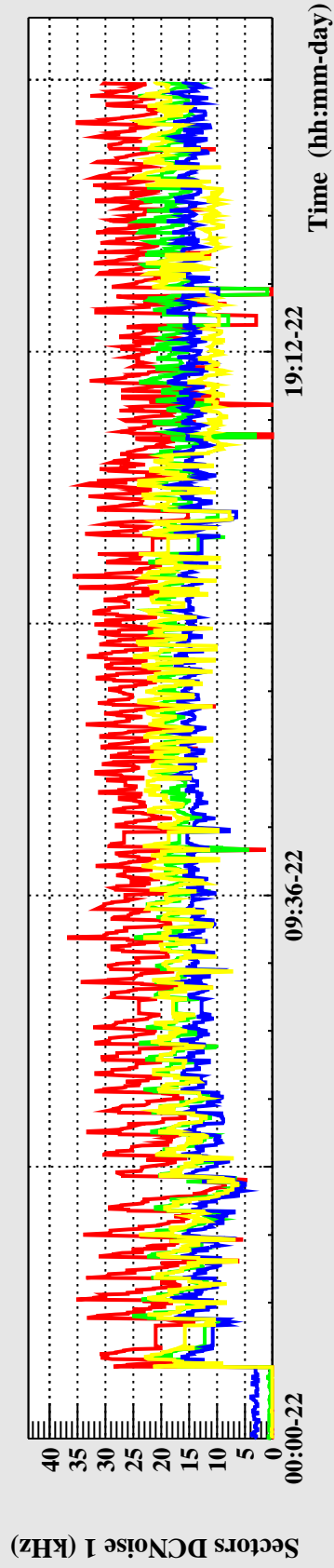
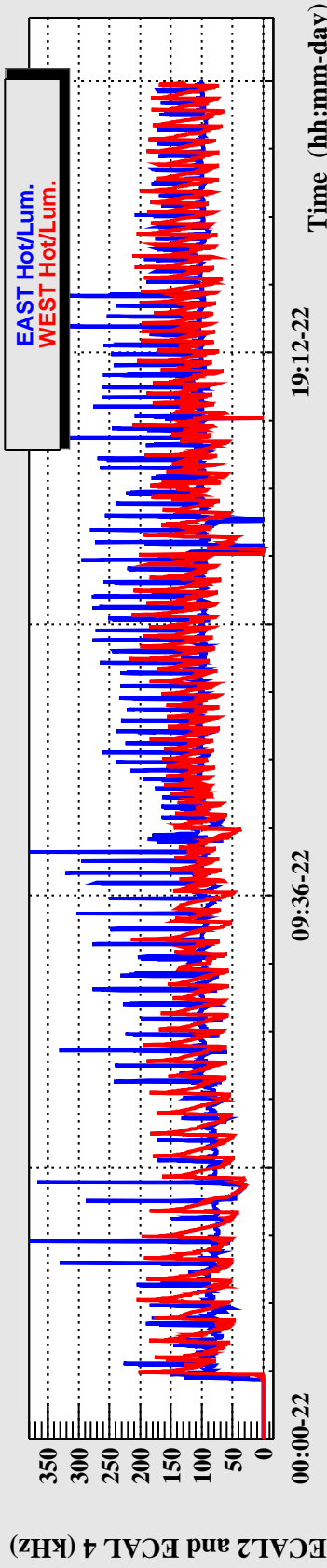
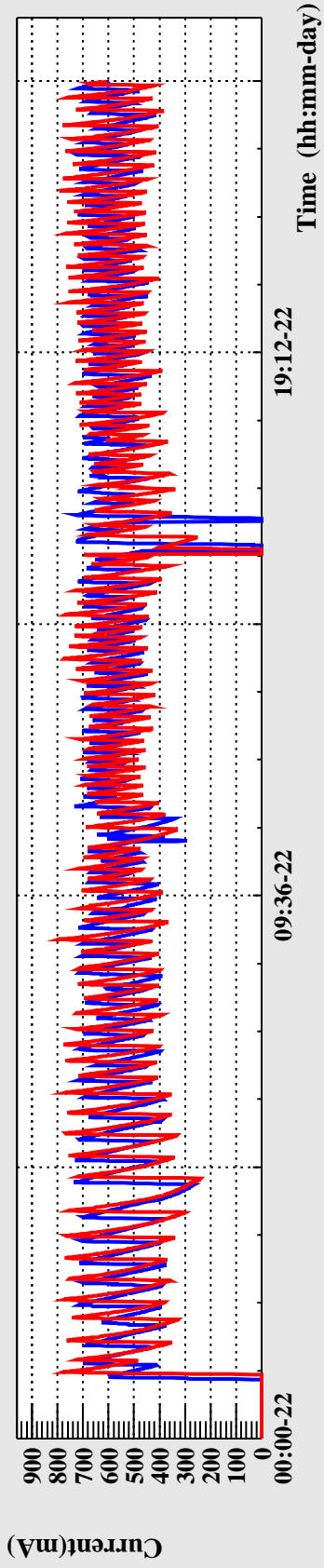
KLOE Presenter (History, 01-09-2001 : 23-09-2001)



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KLOE Presenter (History, 22-09-2001 : 22-09-2001)



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## Background



- Emc HOT background level  $\approx 100 \div 150$  kHz
- DC HOT sectors background level  $\approx 30 \div 35$  kHz/wire
- Some improvement since beginning of September
- Offline counters OK, data quality reasonable (see after).



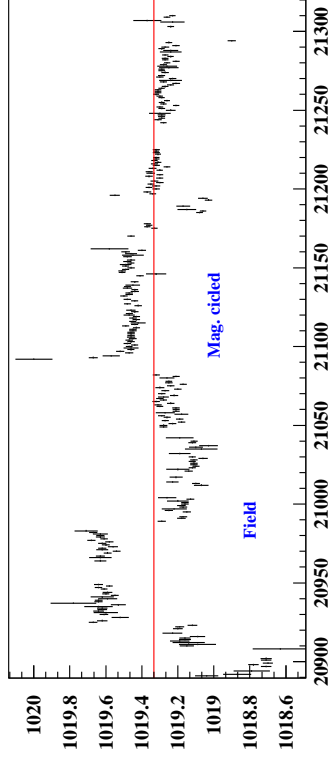
## Magnetic field ( $I$ )

- Evidence for change in KLOE field after a  $\simeq 150\text{A}$  fluctuation of the current.
- Current first moved ( $-0.35\text{ A}$ ) according to probe (partial solution)
- Problem solved when  $I \rightarrow 0\text{ A}$  (magnet cycled)
- After new breakdown of  $\approx 1000\text{ A}$ , and new cycling, everything OK....
- ...but probe gets an offset ( $\simeq 4\text{ G}$ )

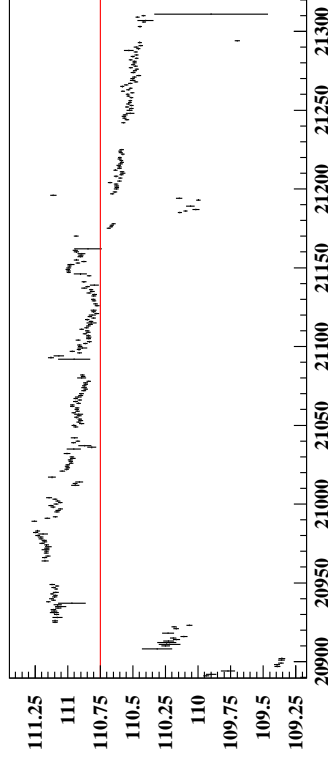




# Magnetic field (II)

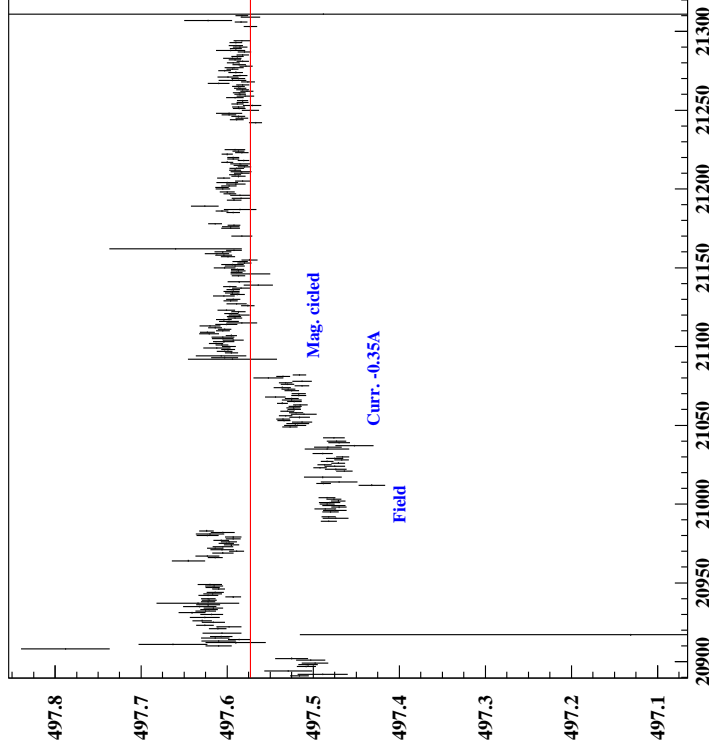


Sqrt(s) e<sup>+</sup> vs. Run Number



$p_K(K^0 \rightarrow \pi^+ \pi^-)$  vs. Run Number

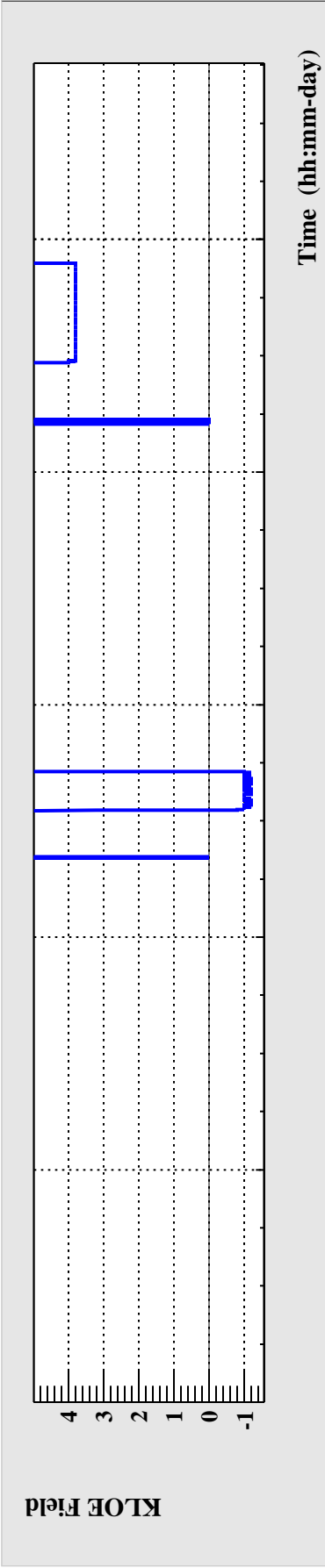
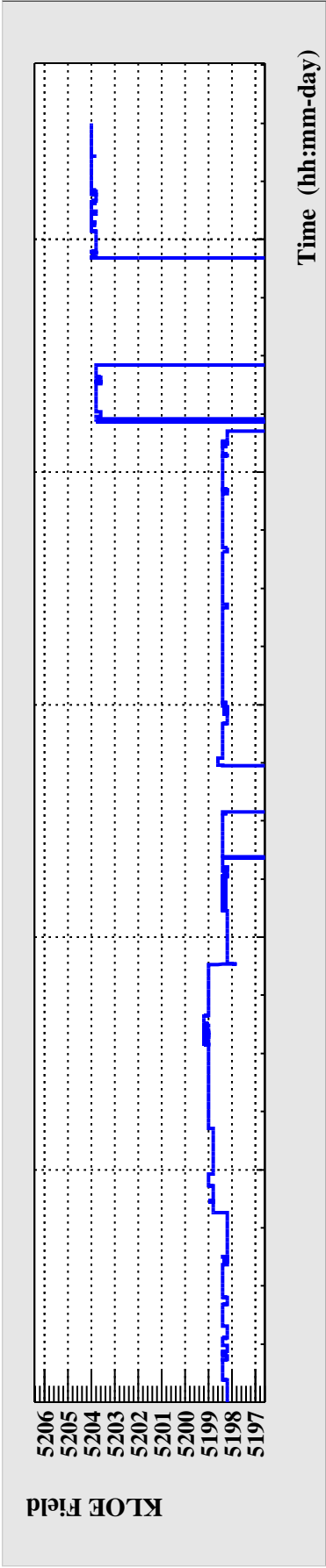
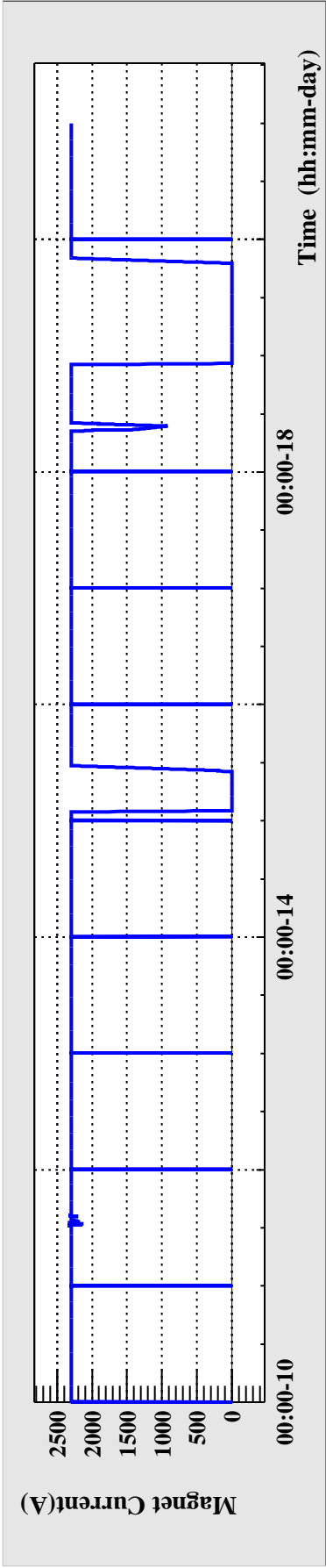
$\sqrt{s}$  and  $p_K$



$M(K^0 \rightarrow \pi^+ \pi^-)$  vs. Run Number

$M_{K_S}$

# KLOE Presenter (History, 10-09-2001 : 20-09-2001)



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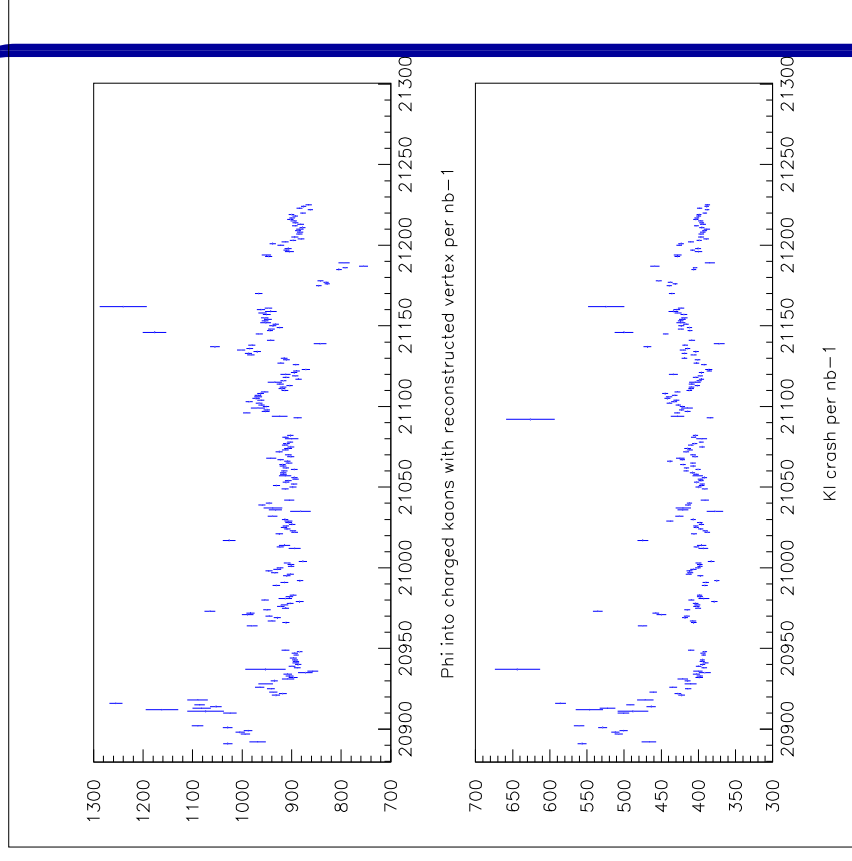
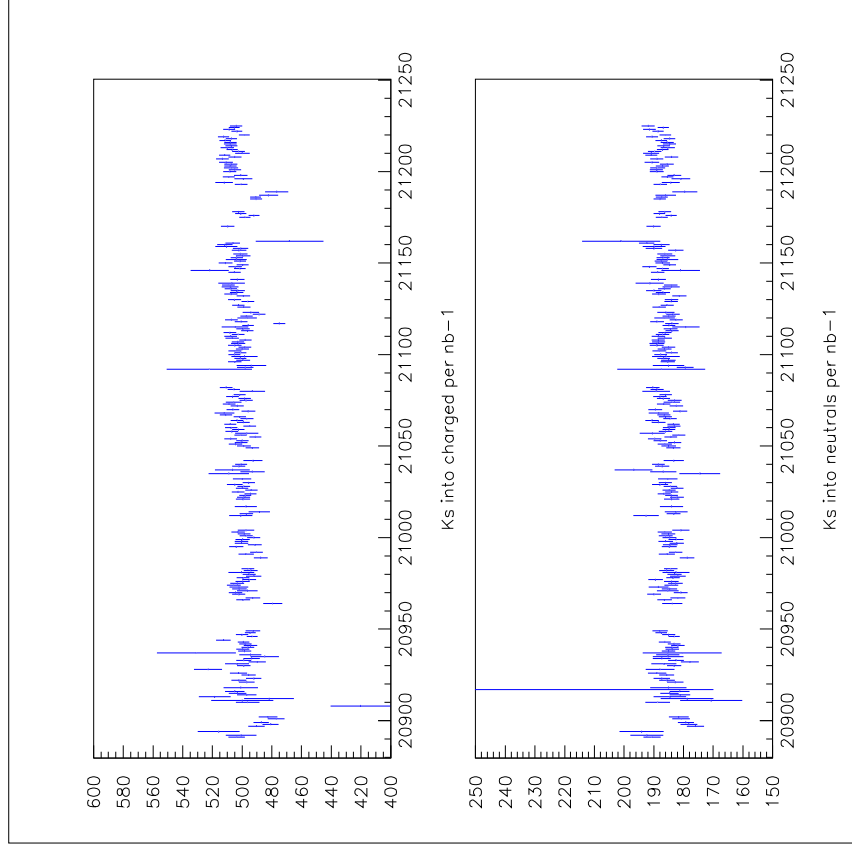
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- $K_S \rightarrow \pi^+ \pi^-$  and  $K_S \rightarrow \pi^0 \pi^0$  stable, apart from  $\sqrt{s}$  effects.
- Charged kaons and  $K_L$  crash more sensitive to machine conditions.
- Radiative ok



# Offline counters (II)





## Conclusions

- Collisions started on September 6.
- Quite stable data taking ( $\approx 36$ h maximum stop).
- Luminosity and background comparable/better to July
- Positive trend with time...
- ...let's cross fingers...