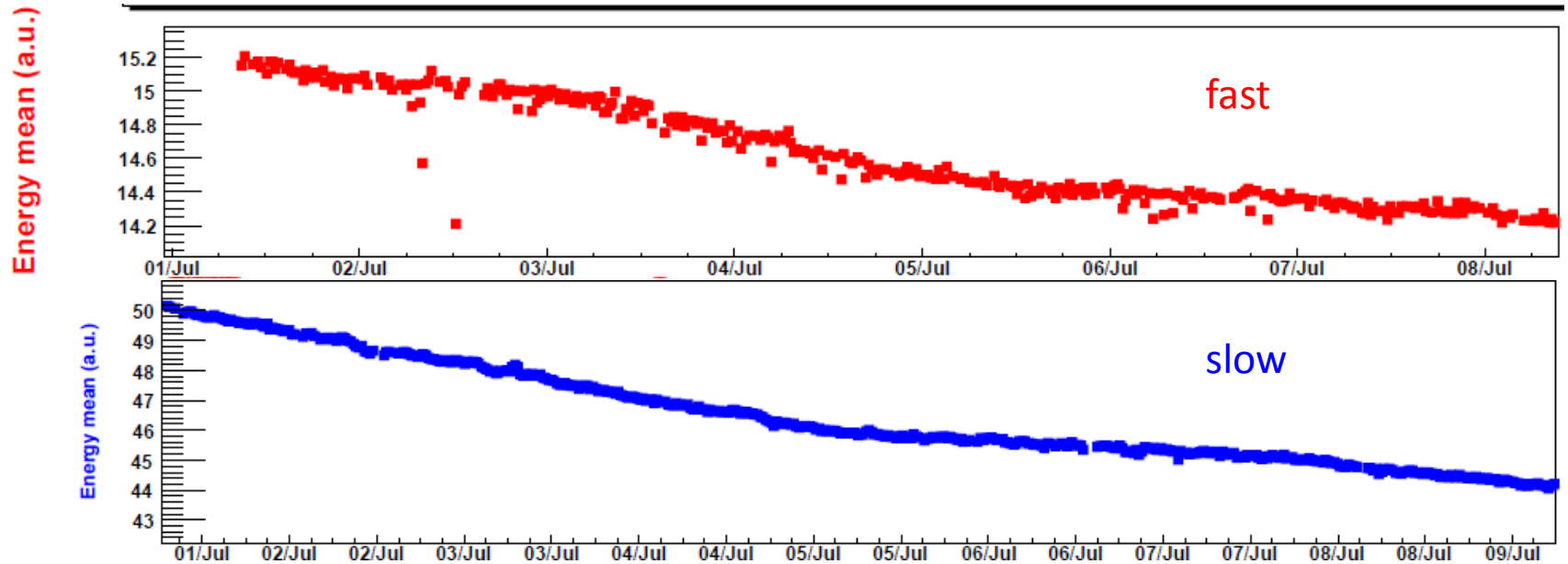


Power measurement 11 July



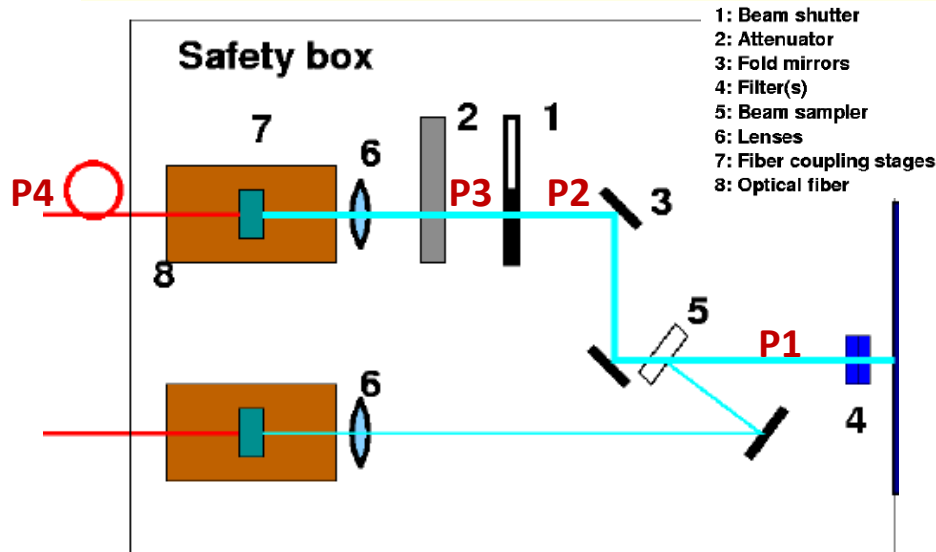
DP2 power degradation again after Technical stop 29 June (B field on again)
-6.5% on fast monitoring and -11.5% on slow monitoring from 1-8 July
→ Need a power measurement

Action 11 JULY:

- 1) Clean both the main and monitoring fibre;**
- 2) Check and move the folding mirror which was already replaced and moved during the TS in June. Its position was changed again to see the consequence.**

Power measurement 11 July

Before Technical stop:

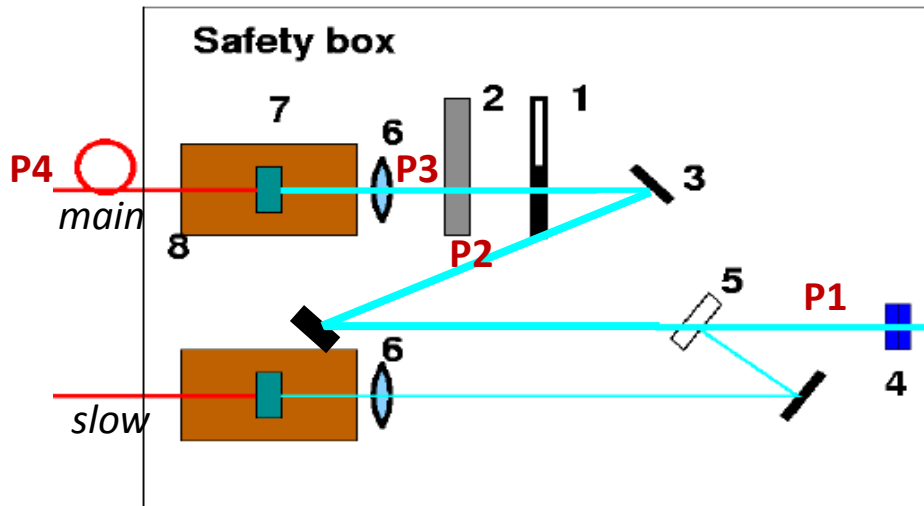


P1) DP2-447 output:
P2) Before shutter :
P3) After shutter:
P4) After 1m fibre:

26 April (*installation*)

87
82mW
61 mW **-1.54 dB**

After Technical stop:



P1) DP2-447 output:
P2) Before fold mirror 3:
P3) After attenuator:
P4) After 1m fibre:

28 June

93 mW
83 mW **-0.49dB**
77 mW **-0.82 dB**
65 mW **-1.44dB**

11 July

P1) DP2-447 output:
P2) Before fold mirror 3:
P3) After attenuator:
P4) After 1m fibre:

89.3 mW
80 mW **-0.47dB**
70.5mW **-1 dB**
62.5mW **-1.55dB**

- > Before and after moving the folding mirror, power increase by +0.6% no damage in the folding mirror;
- > Cleaning main fibre : no improvement on power;
- > Cleaning slow fibre: power goes from 44 a.u. level to 48.5 a.u., +10%. This explains the difference observed between the slow and fast monitors.

My conclusion:

- ✓ No damage was found in the folding mirror replaced in June;
- ✓ The larger degradation observed by slow monitor is due to dust on the fiber, indicating regular fiber cleaning is necessary, especially after works in the laser barracks;
- ✓ DP2 power of 89.3 mW measured in $B=3.8T$ is 4% lower than the 93 mW measured in $B=0T$, indicating a B field induced pulse intensity degradation;
- ✓ DP2 power of 89.3 mW measured in $B=3.8T$ for about 12 days is 2.6% higher than the 87 mW measured in $B=3.8T$ for more than 20 days, indicating a possible slow magnetization process in the laser.
- ✓ The increasing of the DP2 laser pulse intensity in $B=0T$ indicates a possible slow de-magnetization process in the laser.