

# DVCS 12GeV meeting

## Blue light test part

12 & 13 november 2012

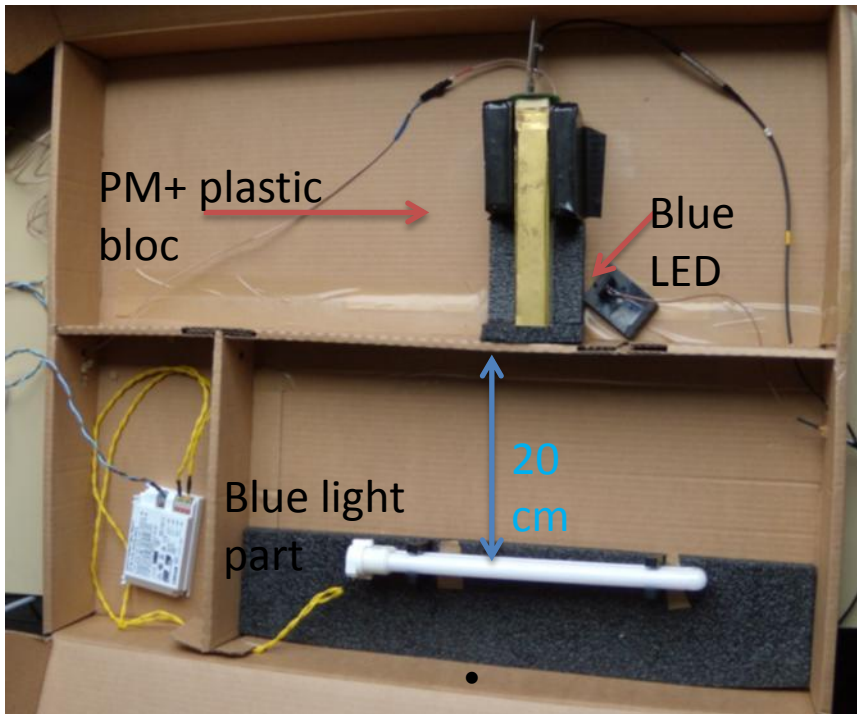
Orsay (France)



Magne Magali - LPC Clermont

DVCS 12GeV meeting -electronics part - 12 & 13 November 2012 – IPN Orsay (France)

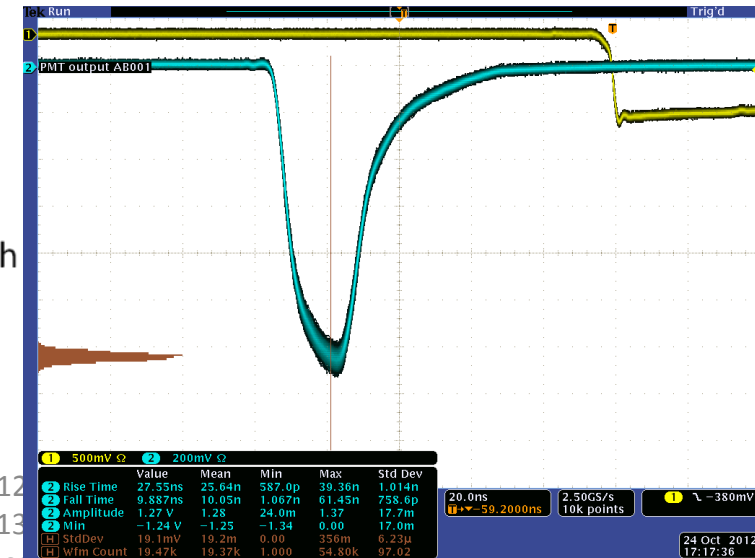
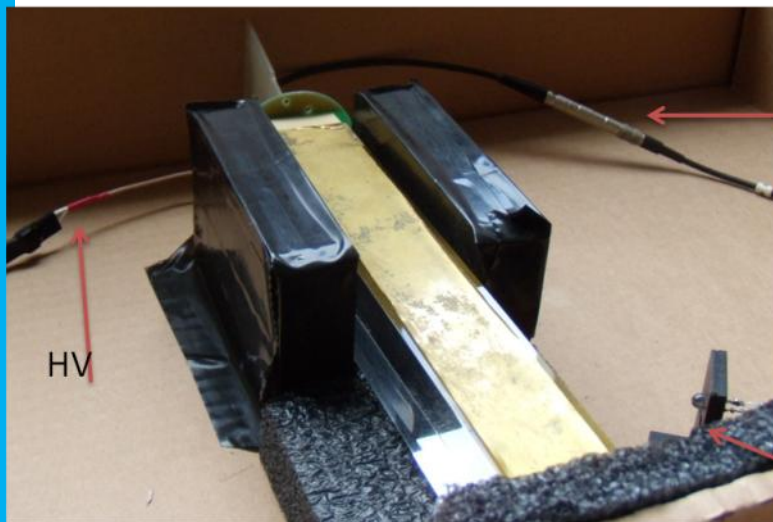
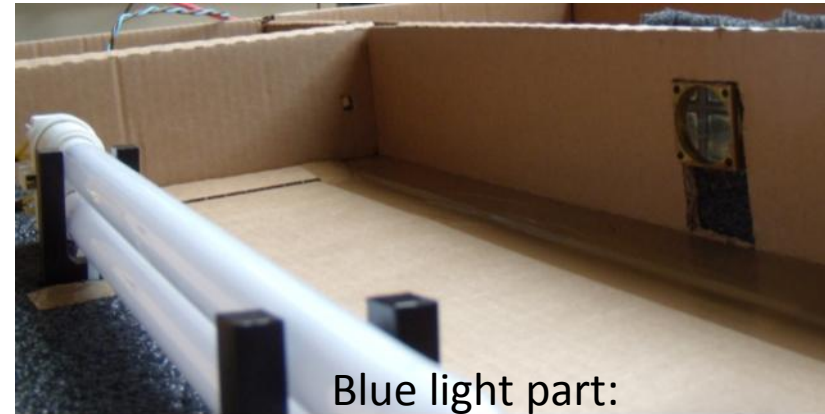
# Blue light tests : test bench



Blue led part

Only the plastic scintillator windows see the blue light

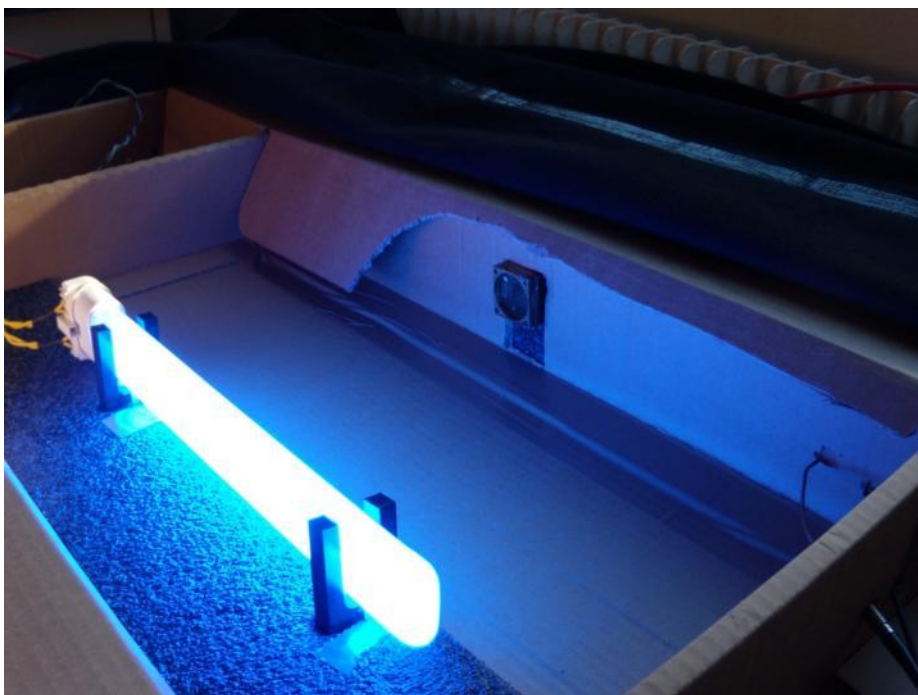
- Test bench top view  
The box is open  
During the tests the box is close and protect by a black cloth to protect of the external light.



## Blue light is ready to light

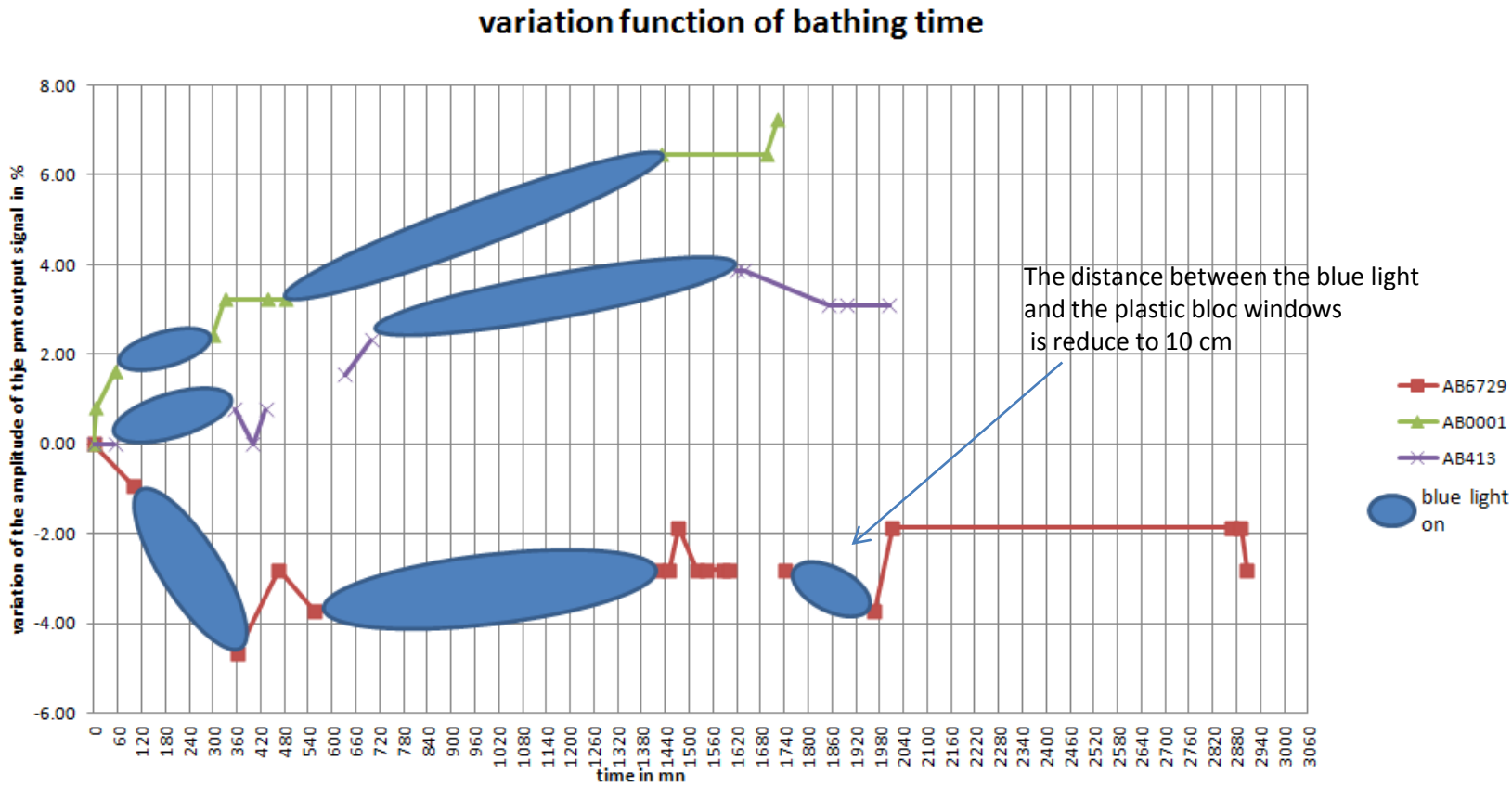
The HV is down

The blue light is switched on



- Test process for short and long time blue light bathing.
  - Power-on => HV and led
  - Power off : => blue light
  - Wait around 1h : PMT stabilization
  - Power off : => HV and led
  - Power-on =>blue light
  - Wait 4h or 14 h (function of 1<sup>st</sup> or 2<sup>nd</sup> test)
  - Power-on => HV and led
  - Power off : => blue light
  - Wait around 1h PMT stabilization
  - And more to be sure of the effect of the blue light bathing on the PMT
  - Shut down or continue the long test

# Amplitude variation before and after blue light bathing

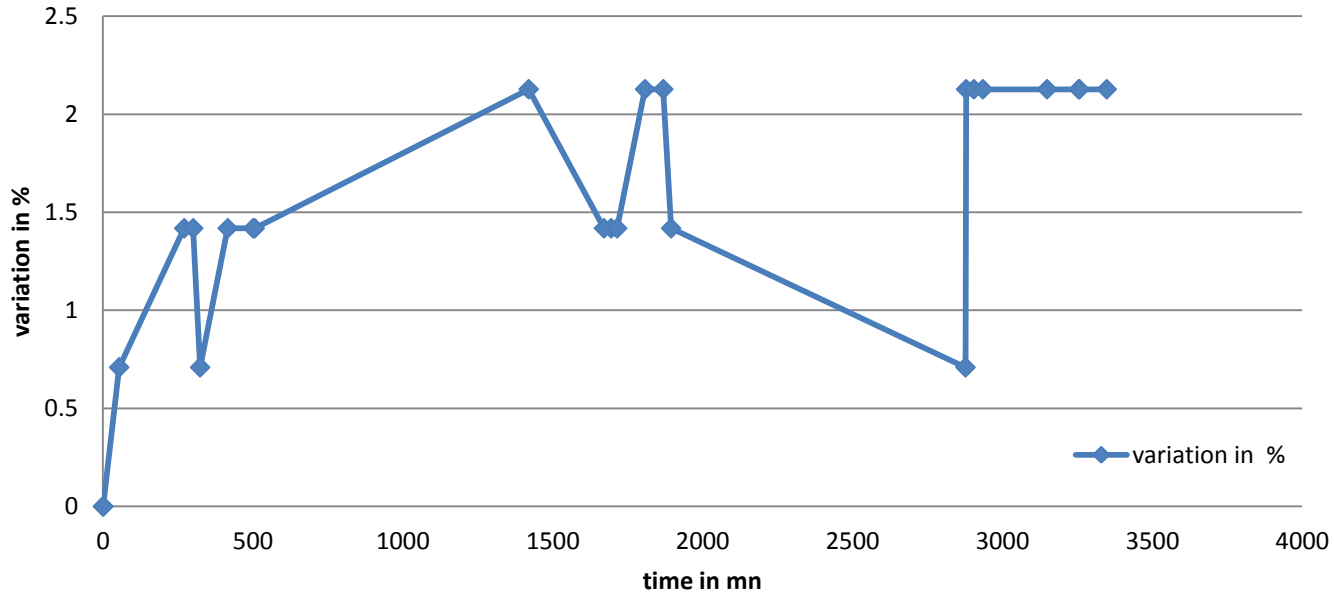


- The test has been done on 3 PMT Hamamatsu R7877
- The measure is issue of a oscilloscope measure : mean of the amplitude of the resulting signal .
- first phase around 4 hours
- Second phase around 14 hours (a night)

# Test bench stability

done with 1 PMT Hamamatsu R7877

## variation of the PMT AB0985 during 3 days



- This PMT never see the blue light .
- **Conclusion:**
  - More tests must be done ??? With more precise measures ???

# Test bench stability

done with 1 PMT Hamamatsu R7877

Time in mn	amplitude in Volt	Variation in %
0	1.41	0.000
1	1.41	0.000
54	1.42	0.709
271	1.43	1.418
301	1.43	1.418
324	1.42	0.709
416	1.43	1.418
501	1.43	1.418
506	1.43	1.418
1420	1.44	2.128
1671	1.43	1.418
1695	1.43	1.418
1715	1.43	1.418
1808	1.44	2.128
1869	1.44	2.128
1895	1.43	1.418
2877	1.42	0.709
2879	1.44	2.128
2905	1.44	2.128
2935	1.44	2.128
3149	1.44	2.128
3255	1.44	2.128
3257	1.44	2.128
3348	1.44	2.128

variation of the PMT AB0985 during 3 days

