

Short Summary of the Phone Meeting (11Dec. 2007) for the LP1 Cosmic Trigger Counter

Dear All,

This is a short summary of the phone meeting for the LP1 cosmic trigger counter on 11 December, 2007. The attendants were Klaus Dehmelt, Paul Colas, Thomas Chaminade (Saclay), Ron Settles, Stephen Turnbull (Saclay), Yuri Kudenko and me.

If any important issue discussed is missed here, please could you let us know?

(1) As you have seen in Yury's mail and photos of December 10, he has make one counter with the U-shape fiber readout. (We all thank Yury very much for his efforts.) I insert here his mail dor the details and photos at the end of this summary:

We made first counter with U-shape grooves. For fiber/sensor connection, optical connectors from Takeshi were used. Two 400 pixel MPPC's are now used for readout. Some photos are attached. The slab length is 875 mm, the width 167 mm and the thickness 7.11 mm. The scintillator is covered by a chemical reflector of 50-70 micron thickness. It is also wrapped in one layer of 100 micron TYVEK reflector. First/preliminary tests with cosmic muons at room temperature of 21-22C with a trigger cosmic counter $6 \times 8 \text{ cm}^2$ was done:

Position of cosmic counter	Light yield/MIP (sum of 2 sensors)
Mid point	about 39 p.e.
Far end from sensors	about 40 p.e.

Each sensor gives the signal of about 20 p.e./MIP.

Best regards, Yury

(2) We confirmed the result and agreed to proceed with the current design of the counter with the U-shape groove.

(3) Yury hoped to finish all 15 counters by 20 December, but some works including the simple test of the counters may slip to the beginning of January. Then, we agreed that the all 15 counters were to be shipped to Saclay at once by the end of January. The invoice will be sent to Paul when all the costs including the shipping cost are known after the shipping. The payment from Saclay may take 4 weeks after the invoice arrives.

(4) Paul reported that the design of the MPPC box to be mounted at the end of the scintillator slab is underway. He will obtain necessary light reflector such as TYVEK. He will try to find at CERN proper pieces of scintillator for MPPC test next week. In principle he can do all necessary tests of MPPC with photo diodes.

(5) Klaus told that the support table of PCMAG is in a delay, and at the beginning of operation we may need to set our bottom trigger counter by making a space between the current concrete base for PCMAG and the floor. We discussed that it is preferable to have no space between the scintillator slabs (along the long ends). We need to see the design of the MPPC box to design the support/container of the top and the bottom counters.

(6) Next phone meeting is schedule in the week from 21st January (Monday), probably on 21st Monday at 18:00 in the Japanese local time. (I find the date of January 20 in my memo, but it is Sunday.)

Best regards, Takeshi

Photos of the first test sample of the scintillator slab with the U-shape fiber readout (From Yury):







