

J-PARC Hadron Hall : EXPERIMENTAL REPORT on RUN#

		Date(submitted)	2013/03/18
Group	T51	Beam line	K1.1BR
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<b>Summary and Results</b> A calorimeter prototype for the COMET experiment was constructed. The prototype is composed of 7x7 crystals with a dimension of 2cmx2cmx12-15cm each. The array is made in such a way that central 3x3 crystals can be replaced with different type of crystals (GSO or LYSO) to make an evaluation test. Scintillation light is read by APDs with dedicated amplifiers optimized for COMET experiment. The data is recorded using wave-form deigitizers. In this beam time we investigated beam line setup at the beam momentum of ~80-250MeV/c. A NaI detector with 5-inch diameter is located at the exit of K1.1BR beam line; the electron beam energy spread was measured at 3 different beam line settings for beam line energy calibration. We observed non-linear behavior of beam line magnet setting to transport low momentum beam below 100MeV/c; current setting for beam line magnets downstream of D1 had to be set at lower value than expected by linear scaling from the setting at 250MeV/c. Details is being investigated.			
<b>SCHEDULED and EXECUTED MACHINE TIME, BEAM CONDITION, DOWN TIME, Priority etc.</b> We completed the beam line setup for 20 hours. The beam condition was reasonable except short down time that occurred during the test. However the beam time was terminated prematurely due to the problem of the extraction device in the Main Ring.			
<b>Comments/Requests</b> We request continuation of this test in the next SX beam time period.			