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Hall A "LEDEX" RunPlan
1st Low-Energy Beam Period (E_o = 362 MeV): July 24 – Aug. 20, 2006
E05-103

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PROCEDURES FOR PHOTODISINTEGRATION PRODUCTION SEQUENCE

1. Change Spectrometer Settings and Take Pointing Measurements
- <u>Change HRS-L **momentum** & **angle**</u> settings to those specified for the current PRODUCTION Kinematics Point from the Kin-Table (follow Counting House "Whiteboard" instructions from J. Lerose for cycling quads when setting momentum; see "How To" on LEDEX webpage).
- Small collimator on HRS-L (will be already bolted in place).
- Check beam position on BPMs (few-tenths of mm on each);
  set Raster ON: ASK MCC for "6 x 4.5" ($\pm \approx$ 3 mm in X and Y)
- Set prescales T3=low; other prescales set high (65535) for low deadtime.
- Beam current of a few microamps (up to max DAQ rate of 2-3 kHz)
- Set target to following settings, and take 5 minutes of pointing data at each setting (separate run for each target). (Target C "optics" is not the slanted one)

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p_h (GeV/c)	θ_h (deg)	Target	Time (min)
Look up for current Kin. Point in Kin-Table		C "optics"	5
		4 cm Dummy	5
		15 cm Dummy	5

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2. Production Measurement Sequence:
- **FPP Carbon Doors**: place **either** the **3" doors** (if momentum above ~660 MeV/c), **1.5" doors** (if central momentum between ~560-660 MeV/c) **or NO doors** (less than ~560 MeV/c) $\rightarrow$ check FPP Figure of Merit Simulation / runplan document.
- Check beam position on BPMs; ensure RASTER ON (see notes above).
- Set prescales T3=low; other prescales set high (65535) for low deadtime.
- Pre-run estimates are that Beam Currents between 1-4 μA will provide the max DAQ rate of between 2-3 kHz. In each case, the current should be adjusted to give max DAQ rate between 2-3 kHz.
- Set target/radiator to settings indicated in Table below, but:
  - **FIRST**: *TAKE A FEW MINUTES OF DATA AT EACH TARGET/RADIATOR* COMBINATION IN TABLE BELOW IN ORDER TO DETERMINE RATES (AND MAX CURRENT THAT CAN BE USED FOR EACH COMBO) – THEN STEFFEN'S LEXEX WEB-CALCULATOR WILL BE USED TO DETERMINE MODIFIED RUN TIMES FOR EACH RUN TYPE **(the split of times given below is a rule-of-thumb split of luminosity into 50%-25%-25%-short)**.
  - **THEN:** take FPP data for the approximate times indicated below (final run times will come from above running of Steffen's calculator, using rates/currents for each point).

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p_h (GeV/c)	θ_h (deg)	Target	Radiator	DAQ Rate (kHz)	Time (hr)
As set in first step above (1.)		LD_2	IN	2-3 (max)	~6
		LD_2	NONE	2-3 (max)	~3
		LH_2	IN	2-3 (max)	~3
		LH_2	NONE	2-3 (max)	0.2

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