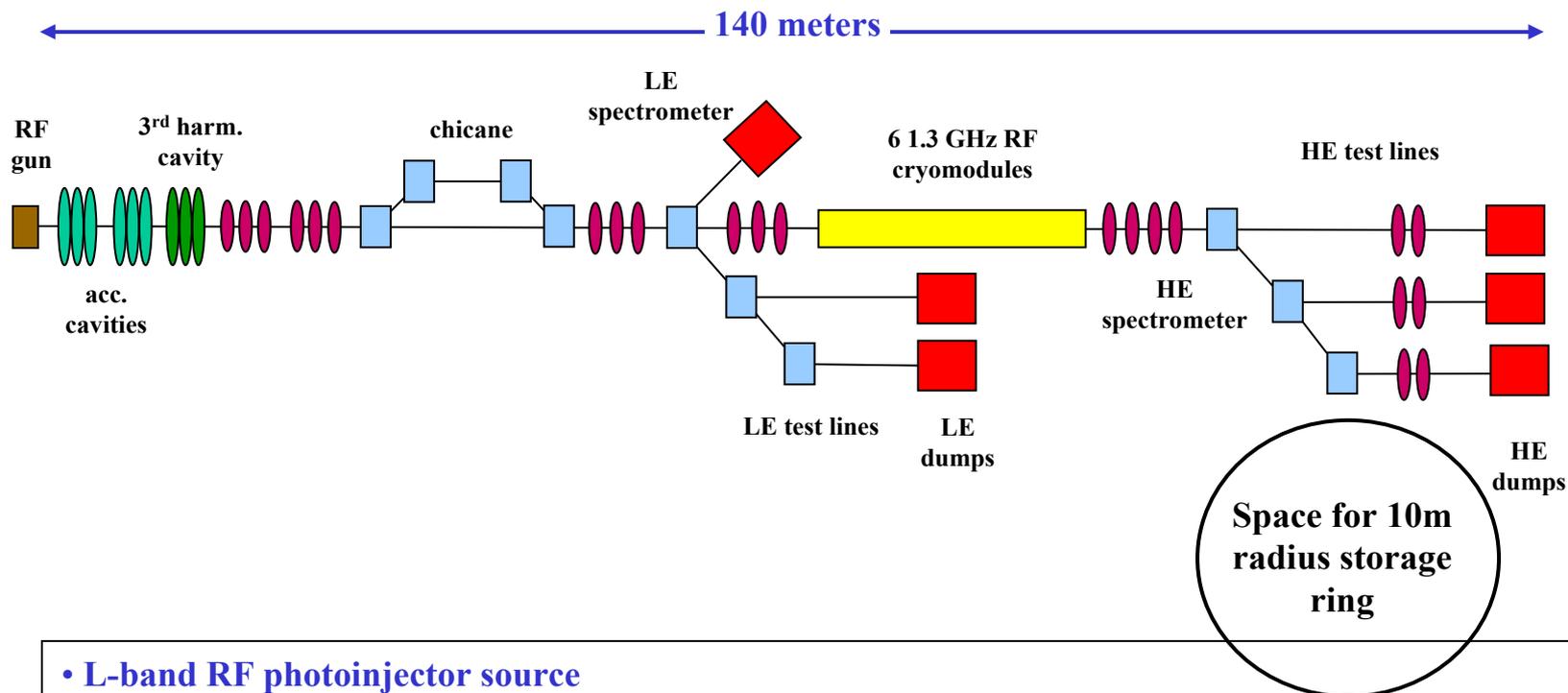


Introduction

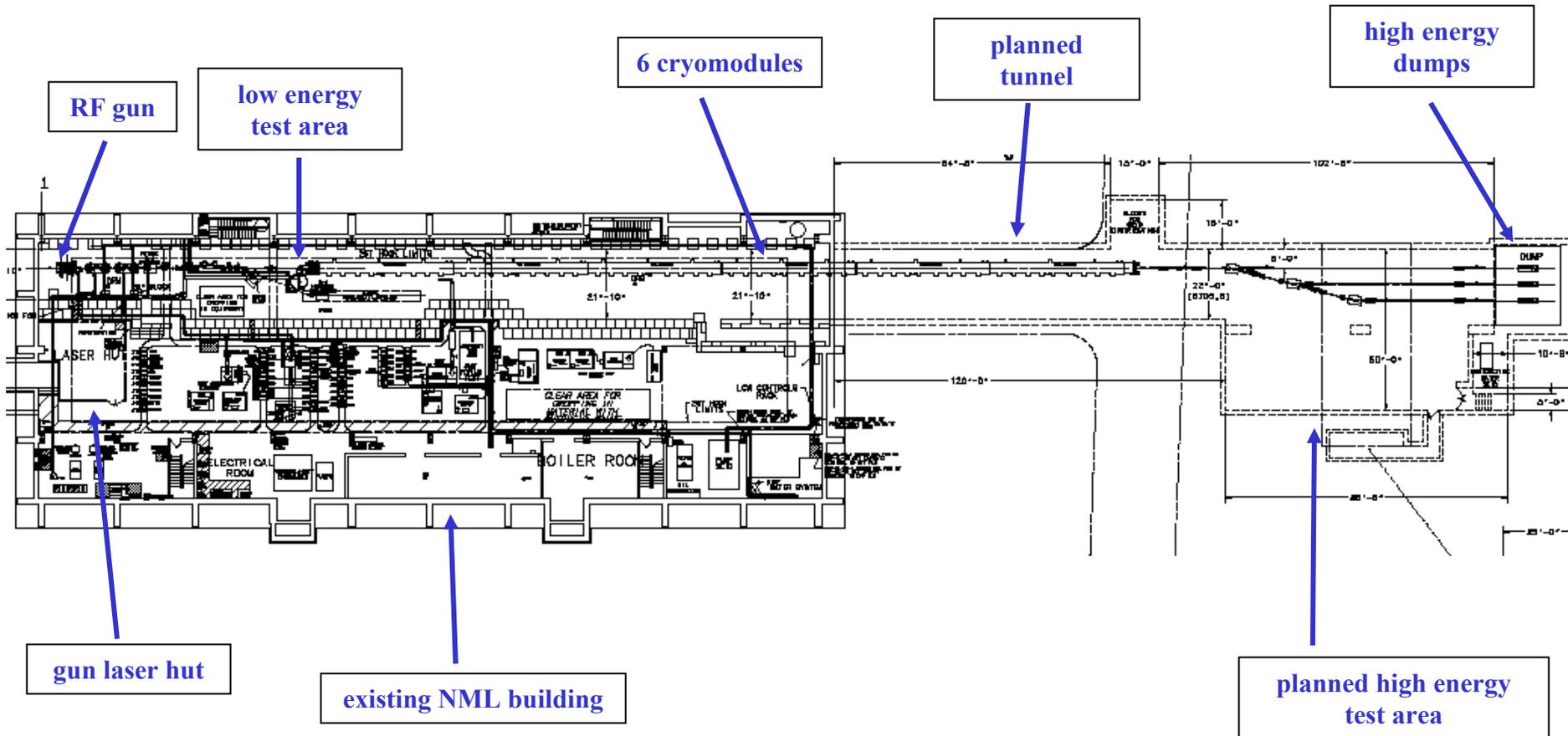
- **The ILC Test and AARD Facility at the New Muon Lab (NML) will be located at an existing building at Fermilab with an extension soon to be built**
- **NML is one of the Fermilab SRF test areas**
 - **Others are the horizontal test stand at the Meson Detector Building and the vertical test stand at Industrial Building 1**
- **The 1st use will be for RF cryomodule tests for Project X and ILC**
- **AARD use will increase with time**
- **Tentative schedule**
 - **Cold RF testing of 1st cryomodule – Summer 2009**
 - **Delivery of 2nd cryomodule – Fall 2009**
 - **Move A0 photoinjector to NML – 2011**
 - **1st beam at NML -- 2012**

Proposed NML Schematic Layout (not to scale)



- L-band RF photoinjector source
- 40 MeV low energy injector energy; up to 1.5 GeV high energy beam
- Capable of ILC-like beam parameters:
 - 3.2 nC/bunch; 3 MHz bunch rate; 1 ms long bunch train; 300 μm RMS bunch length; 5 Hz operation
- normalized transverse emittance $\sim 5 \mu\text{m}$
- Higher bunch rates for Project X cryomodule testing possible
- Peak currents 10 – 15 kA possible
- single bunch intensity over 10 nC possible

Building Layout



NML exterior



Recent Photo of NML interior

