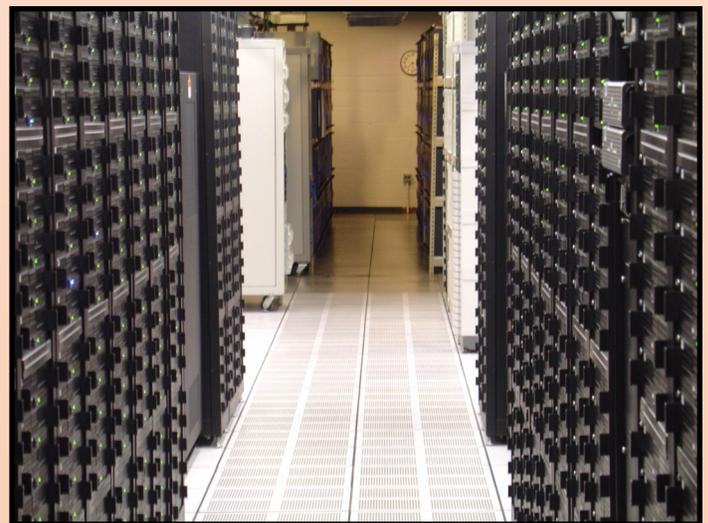


The Fermilab Lattice Computing Center (LCC) has two computer rooms and is sited within the New Muon Laboratory building. Computer Room 108 was constructed in an unused portion of an electronics counting room in 2001. The original design of Room 108 included chilled water CRACs and those were used until 2011 when the room was re-purposed as a test and development computing area with low cooling demands. Room 107 underwent an upgrade project in 2005 that included increased electrical capacity and the addition of a cooling system. Room 107 contains servers, disk storage, and networking which serve the computing needs of the Laboratory's business and research programs. These systems are connected using high-speed networking to other facilities at Fermilab and across the world to collect, archive, process, simulate, and analyze data from global scientific programs.

### Lattice Computing Center

- ◇ Room 107 - 1,763 ft<sup>2</sup> of 12" raised floor space; 300 (lbs/sq.ft.) floor loading
- ◇ Onsite high-reliability 345kv Master Substation delivers single-feed 13.8kv utility power
- ◇ Electrical Capacity: No UPS / ~450kVA total capacity for computing critical load
- ◇ 56 cabinets at <8kW/cabinet (typical)
- ◇ Tap boxes to connect portable generator
- ◇ 92 tons of cooling capacity; air cooled XDC units; and 60 tons of cooling capacity; air cooled DX CRAC units; N+1 cooling is maintained
- ◇ Raised floor cold air plenum supply & top down XDO fan cooling
- ◇ Overhead cable tray systems
- ◇ Hot aisle/cold aisle containment for added energy efficiency
- ◇ Card key security access control & digital video monitoring and recording
- ◇ Fire detection/suppression systems
- ◇ 24x7x365 monitoring of building and environmental alarms
- ◇ Flood Zone: Outside 100 year flood plain; Seismic: Zone 0
- ◇ Room 108 - 1,079 ft<sup>2</sup> of 12" raised floor space; 250 (lbs/sq.ft.) floor loading



Fermi National Accelerator Laboratory (Fermilab) is a U.S. Department of Energy-funded national laboratory whose mission is to advance the understanding of the fundamental nature of matter and energy by providing leadership and resources for qualified researchers to conduct basic research at the frontiers of high energy physics and related disciplines.

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