Telemetry Application Usage

The Telemetry systems supported by LBNL RPG help satisfy either EWRP or research needs. The following applications provided by the Telemetry system are supported by LBNL RPG:

- EWRP needs
    a. The Telemetry system provides data for several NESHAP sites, including air flow and pressure data at multiple locations in B70A, the B85 Tritium sites, accelerator and glovebox effluent stack positron dose monitors for B56, and the B85 and B88 caves.
    b. Dose data provided by the neutron detector in the calibration range.
    c. Tank data for the ESG tanks outside B58, including the pump rates and overfill quantity.
    d. The LBNL meteorological station uses the Telemetry system to keep track of atmospheric temperature, dew point, humidity, wind speed and direction, solar radiation, air pressure, and rainfall. The Telemetry system also provides hydrauger tank information for the B51 Firetrail tank.
- Research needs
    a. The Telemetry system is used in B58 to keep track of the neutron dose rates near the neutron generator, and the gamma dose rate near the door.
    b. The Telemetry system can also support four portable devices, primarily utilized by accelerator facilities. These portable devices primarily supply neutron and gamma dose rates and can be configured to the site's needs.

Additionally, the Telemetry system is utilized by the following accelerator facilities at LBNL:

- ALS: uses the Telemetry system to track data output by beamline monitors, including the beam energy and current as well as the dose rate at several beamlines and at the storage ring roof. This facility also uses the Telemetry system to access area monitor data, including gamma and neutron dose rates along all 12 sectors.
- APEX: uses the Telemetry system to monitor gamma dose rates at the roof and at the gate.
- BELLA: uses Telemetry to track gamma and neutron dose rates at several locations, including at all cave walls, roofs, and total exclusion areas, and dose rates along the shield roof, assembly, downstream, and at different target locations. The only non-dose rate metric the Telemetry system keeps track of at BELLA is the beam repetition rate.
- BIF (B56): uses the Telemetry system to track accelerator and glove positron dose, accelerator and glove flow rates, and vault gamma and neutron dose rates.
- B88: uses Telemetry to track neutron dose rates at different location along the cyclotron. It also tracks gamma dose rates at 4 distinct cave sites.
- NDCX-II: uses the Telemetry system to monitor neutron and gamma dose rates located at the target as well as the gamma dose rate at the ion source.

Furthermore, LBNL RPG supports the Telemetry system by providing the following:

- Installation of the equipment on the server – this does not include equipment procurement or hardware installation, only device connectivity to the Telemetry server.
- Mitigating system disruptions within the server.
- Server modification for device relocation, such as modifying the device's properties on the server if the device is moved to a different location.
- General information access, such as units and magnitude information.
- Log data retrieval.

LBNL RPG does not support:

- Equipment purchasing, including monitoring devices or digiboxes,
- Manual troubleshooting, such as device power cycling or LAN connection repair.