

## **HALL C PLC TASKS REPORT (11/08/2018 – 11/14/2018)**

- Upgrading of 1756-IF4FXOF2F/A high speed module firmware from 1.4 to 3.5 in progress.
  - ★ Firmware 1.4 allows a RTS of 400  $\mu$ s compared with firmware 3.5 that allows a RTS of 300  $\mu$ s.
  - ★ Found issues during the upgrade; communication error status displayed.
  - ★ Contacted Rockwell support, debugging in progress.
- Writing Python code on SBC card to keep checking for lock if the NMR PT2026 unit loses its present lock.
  - ★ With code implemented noticed that lock maintained fine at ~1.65 T, but couldn't get an automatic lock at ~1.8 T (not sure of exact number) despite scanning up/down pulse width & amplitude.
    - So far only been able to get a lock manually at the higher fields.
  - ★ Code didn't handle not having PLC tags present (when trying to debug "fast" ADC module the controller was reset) very gracefully, i.e. threw an exception.