

SeaQuest Progress and Issues

All Experimenters Meeting

23 April 2012

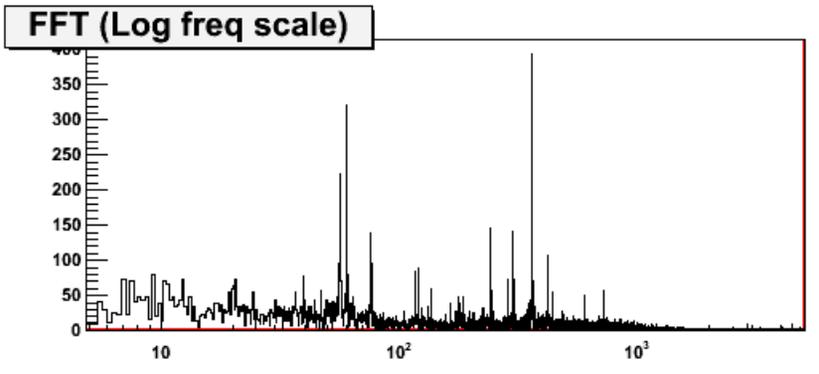
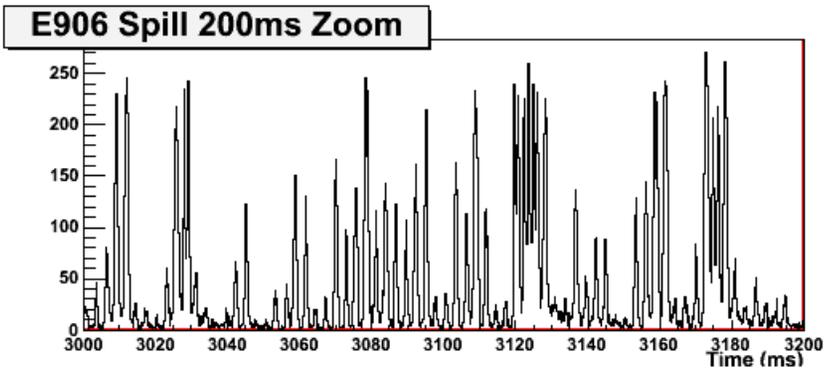
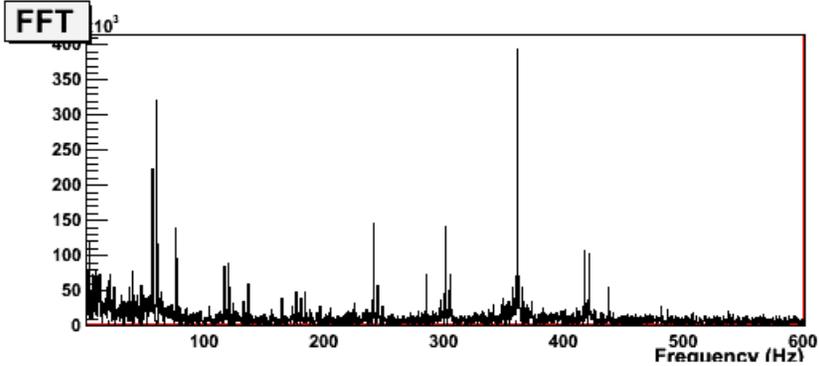
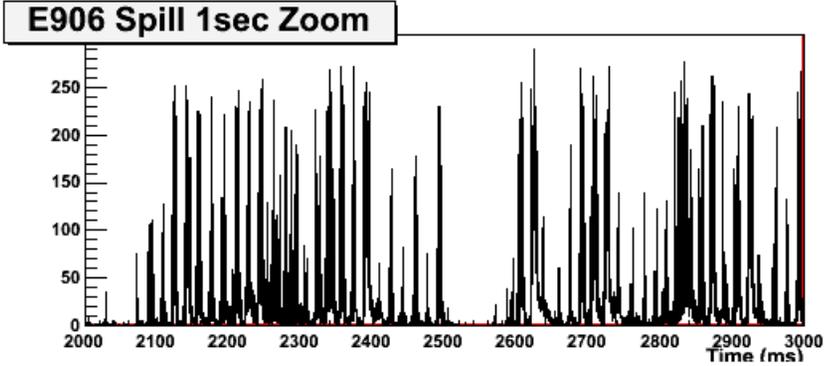
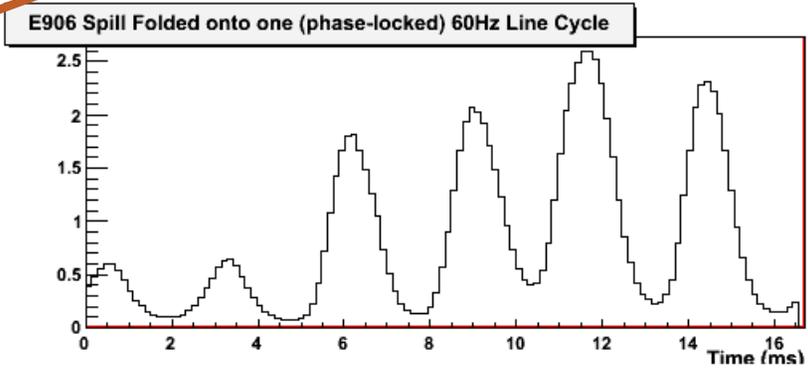
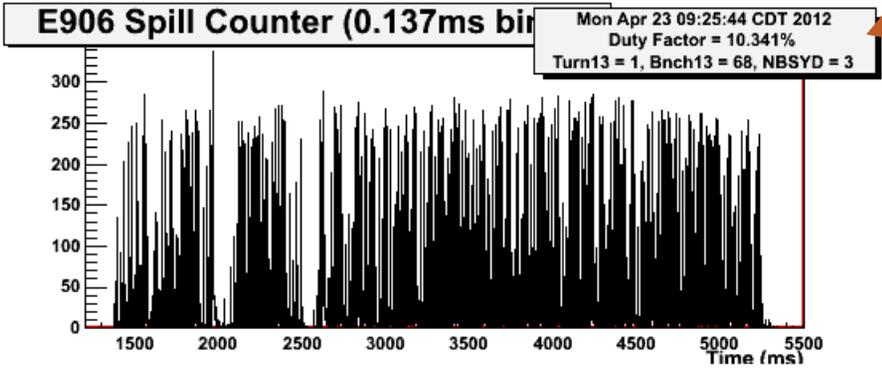
Status

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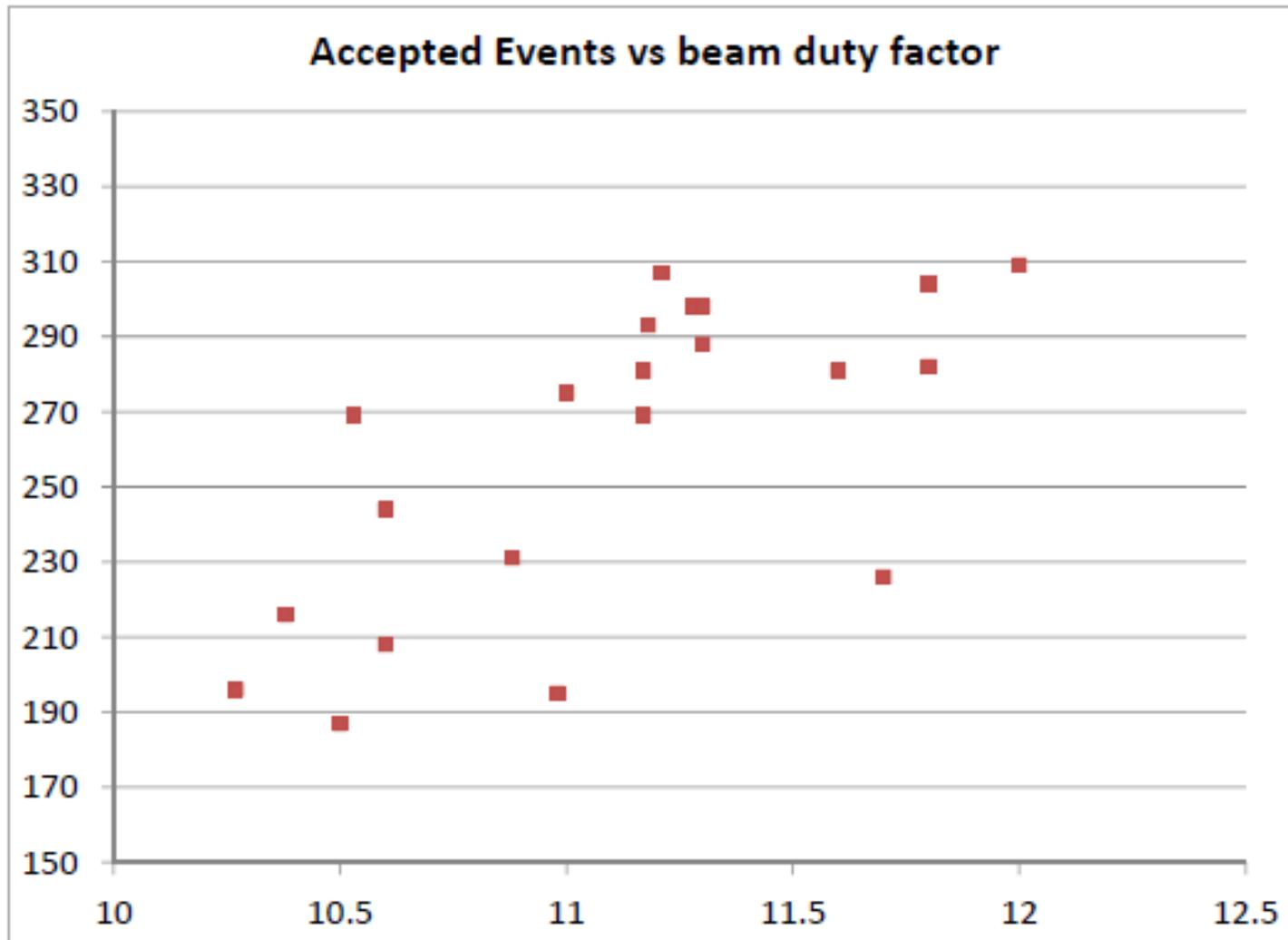
- Apparatus is stable at $9e11$ protons/spill
- Main issue is “SPLAT” events and trigger
- Providing spill by spill monitor of slow spill structure to AD
- Last week Accelerator Division almost immediately was able to significantly reduced 60 Hz structure
- Still 360 Hertz (visible on spill monitor) and ~ 10 MHz structure
- We do not yet have a good monitor of possible structure between 5 MHz and 20 kHz



Spill Monitor (0.137 ms bins) Typically 10-12% Duty Factor



Accepted Event Rate vs Duty Factor



Current efforts

Added a multiplicity filter to trigger to inhibit large multiplicity events

Level 1 trigger forms multiplicity per bucket

Quarknet board integrates over ~ 200 ns and generates inhibit when integral above tuneable threshold.

We believe we have found a trade off between computer live time (87%), beam vetoed by inhibit (10%) and event complexity.

The issue is can we maintain the normalization?

