RHIC Status

V.Ptitsyn

Polarized Proton Run-6 Machine Set Up

- **Cool-Down Mode : 2 weeks (02/01-02/13)** -> completed
- **StartUp Mode: 2 weeks (02/13-02/28)** *(3 shifts per day)*
- Injection setup (02/13-02/17) -> completed
- Ramp development (02/17-02/23) -> completed

  6 bunch ramps with up to 1e11 p/bunch. Rotator ramp.
- Store development (02/23-02/28) -> completed

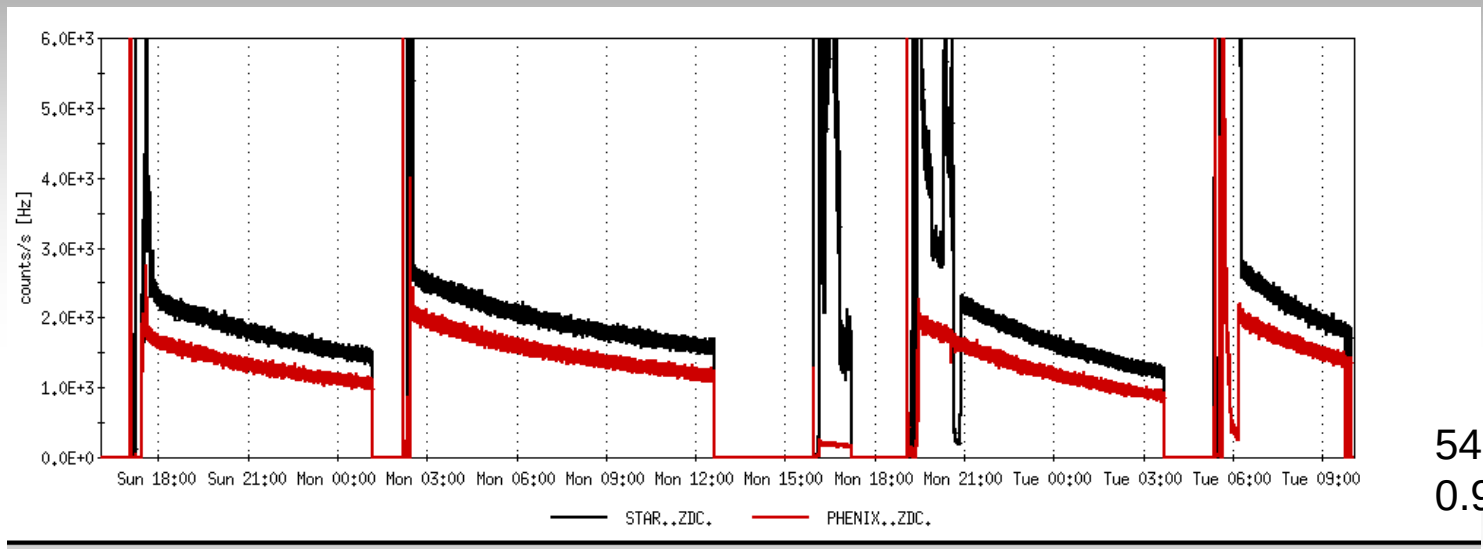
  6-56 bunch ramps; up to 1.5e11 p/bunch
- **RampUp Mode: 1 week** (03/01-03/07) (*Owl shift for experiment setup)*

  111 bunch development completed
- **Physics Running** -> started on Mar 5

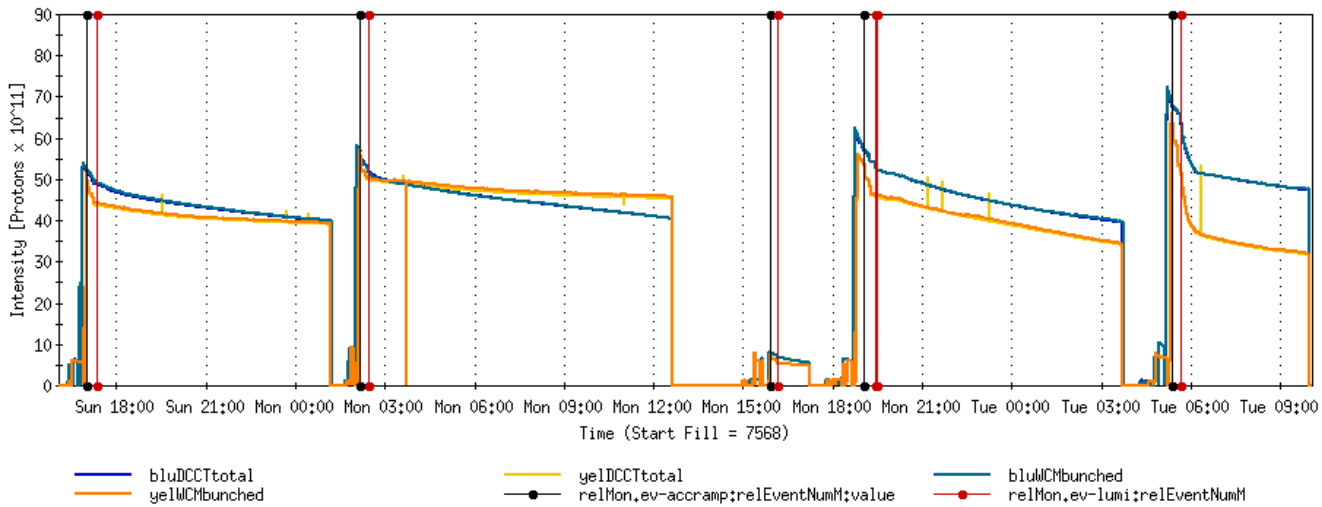
Present Status of Machine Setup

- Main achievements during the last week:
  - Collimation setup completed. Fast collimation mode (~few minutes). (Angelika)
  - 54 bunch stores for the detector setup overnight continued. (With rotators off)
  - 109 ramp and store tests with 1-1.3e11 p/bunch.
  - Polarimeter setup for 109 bunches. (Sandro)
  - Beam polarizaton measurement using polarization profile method (Sandro)
  - Vertical polarization profile measurements at the injection and the store. (Mei)
  - Start of the Physic Running: from store 7568 (Mar 5, Sunday, Evening).

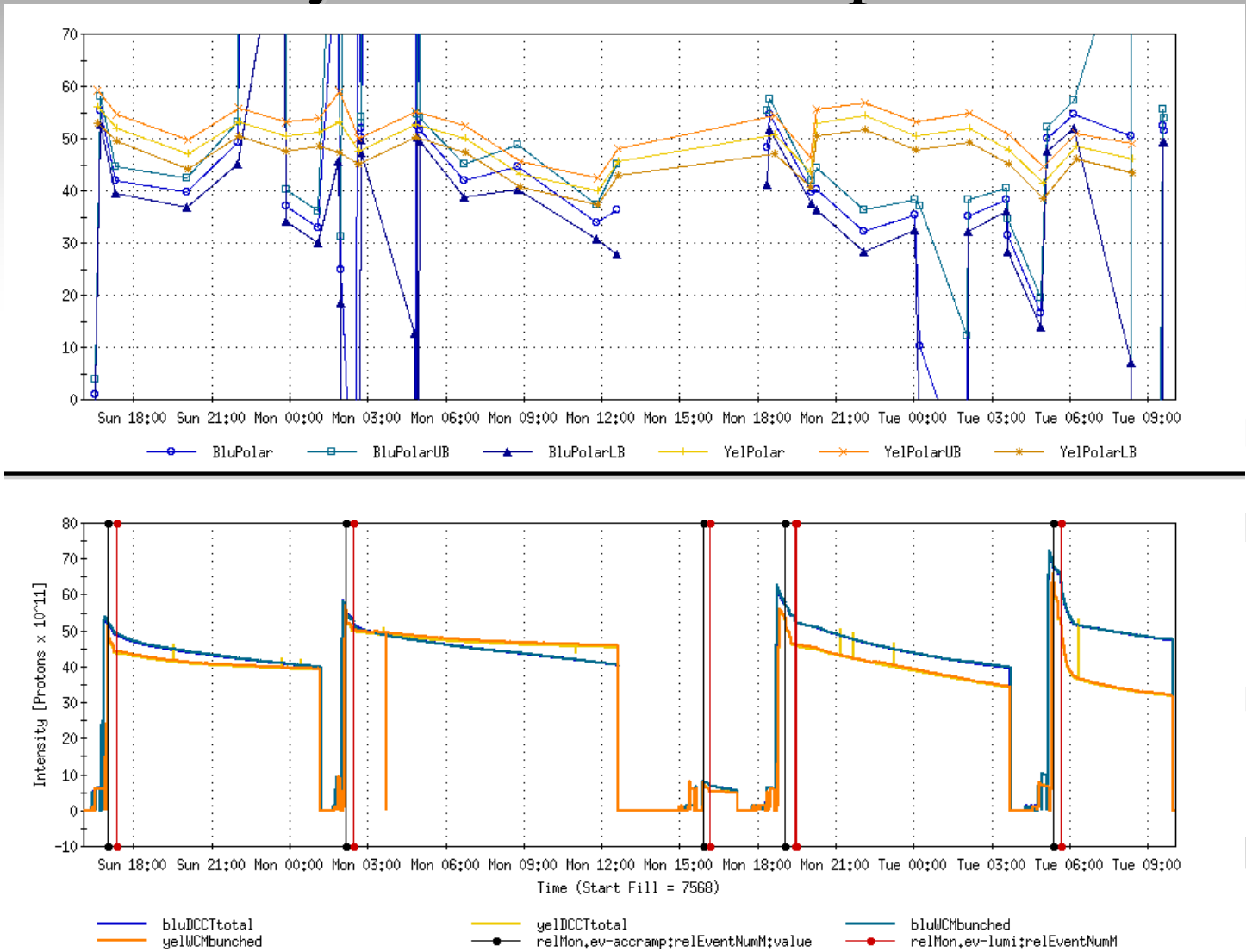
First Physics Run stores: collision rates



54 bunches
0.9-1.1e11p/bunch

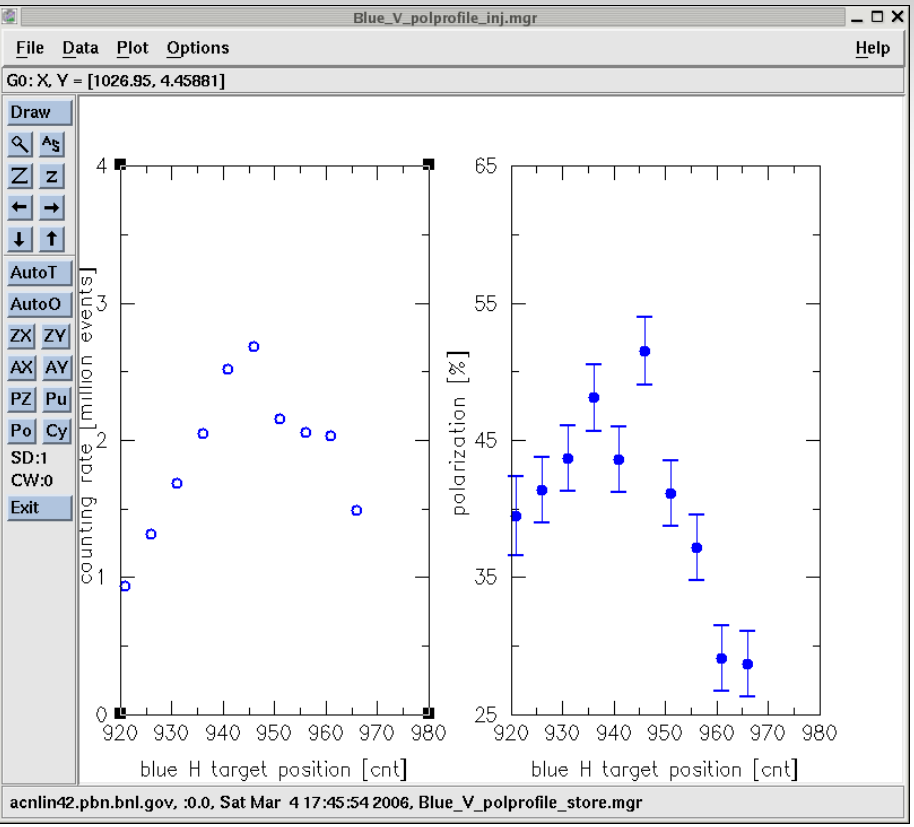


First Physics Run stores: polarization

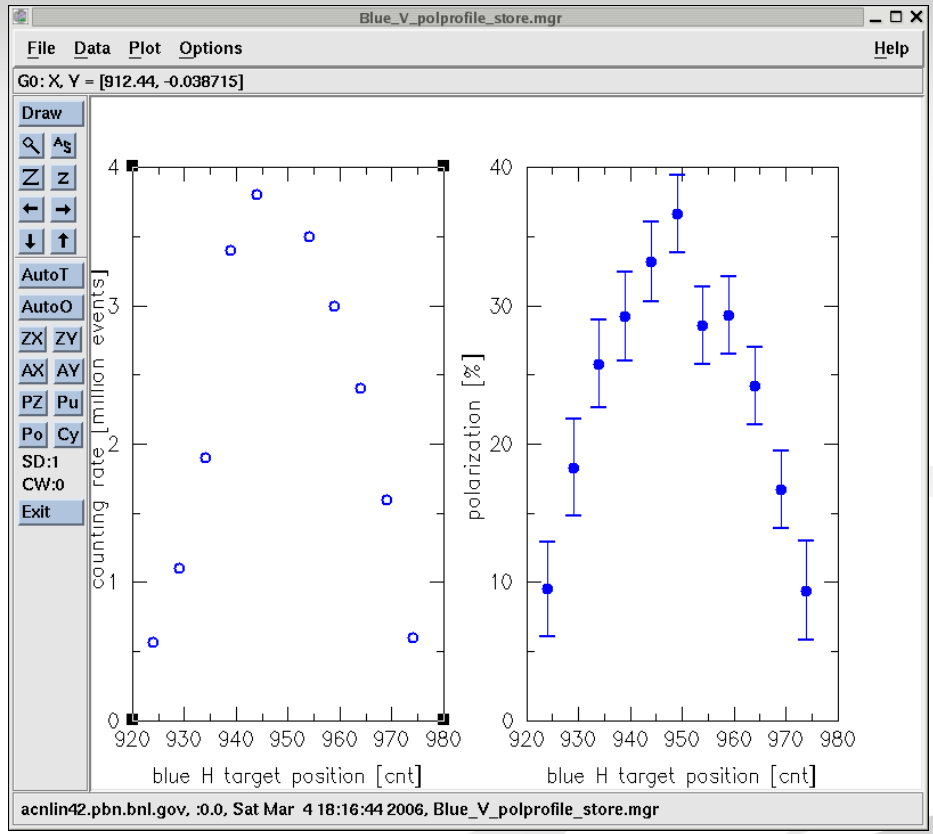


Vertical Polarization Profiles

As measured by Mei



injection



store

Working items

- Improvement of the collision vertex:
  - Usage of storage cavities
  - Smaller longitudinal emittance with quad pumping technique
- Improvement of the Blue polarization
- Increasing the luminosity by (gradually) switching to 109 bunch operation mode