



ATF REVIEW on MAGNET COMPRESSOR

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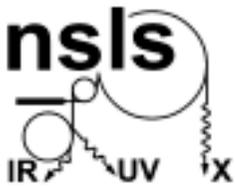
Brookhaven Accelerator Test Facility

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- **WHY**
- **WHAT**
- **WHO**
- **WHEN**



WHY

- Many ATF experiments will benefit.
- Many interesting physics.
- Photo-injector not only good for transverse emittance, but also good for longitudinal emittance.

Magnet compressor is unique because it is part of facility, and also is a user experiment. **We can not afford any mistake.**

- Do no harm! - ATF must be able to operate as now when magnet is off.
- Physics issues:
 1. Assumptions.
 2. R_{56} operating range.
 3. Nonlinear effects
 4. Jitter and phase stability requirements
 4. Matching optics
 5. Emittance growth
 6. Beam diagnostics
- Technical issues:
 1. Layout - interference.
 2. Magnet design
 3. Magnet measurements.
 4. Vacuum chamber
 5. Support and alignment system.
 6. Installation