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Crystal structure and texture changes during thermal cycling of TATB

PI: John Yeager (WX-9)

Funding Agency: C1 (\$29K)

Goals:

- Understand crystal structure and micro-structure changes during thermal cycling
- Understand reasons for ratcheting of TATB during thermal cycling
- Support of B61 LEP

Deliverables Achieved:

- Completed in situ thermal cycling of loose powder and pressed pellet TATB on HIPPO
- Quantified preferred orientation of pressed pellet
- Quantified relative change of each of the six lattice parameters

Proposed Work for Fy'16: (optional)

- Repeat test with extended temperature range
- Repeat test with more cycles/less intermediate steps
- Study texture evolution during compaction

