

NEW VISUAL ALIGNMENT SEQUENCER TOOL IMPROVES EFFICIENCY OF SHOT OPERATIONS AT THE NATIONAL IGNITION FACILITY (NIF)

16th International Conference on Accelerator & Large Experimental Physics Control Systems
(ICALEPCS)

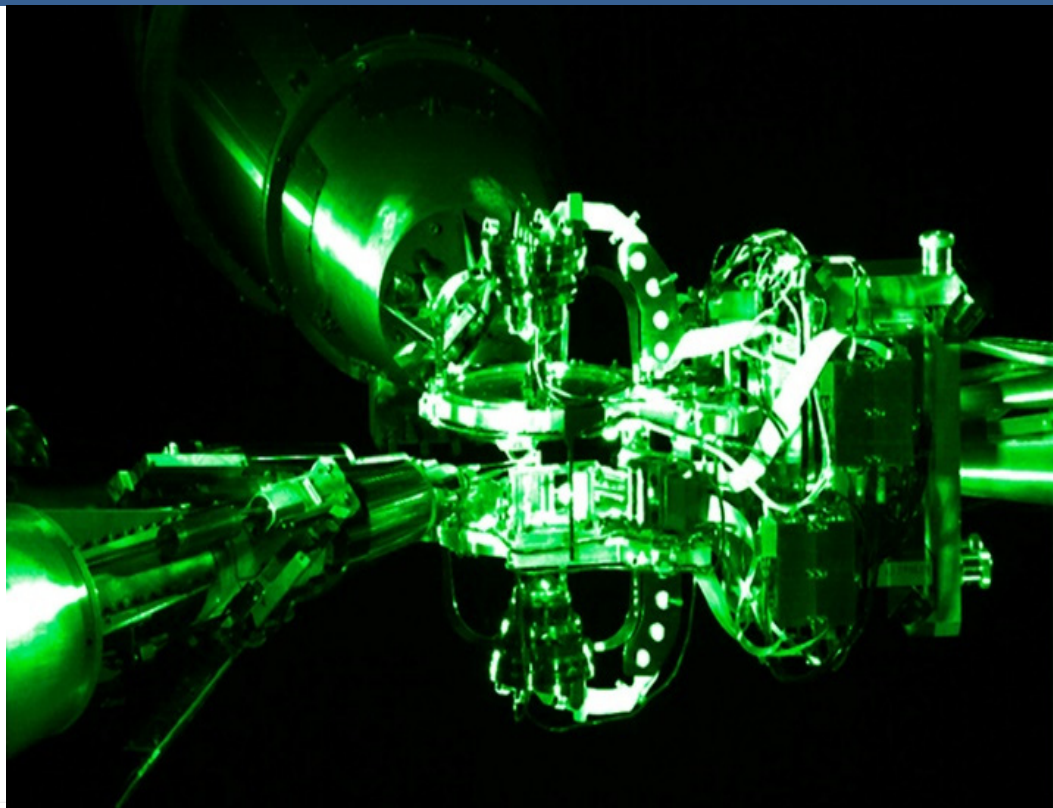
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NIF Integrated Computer Control System (ICCS)



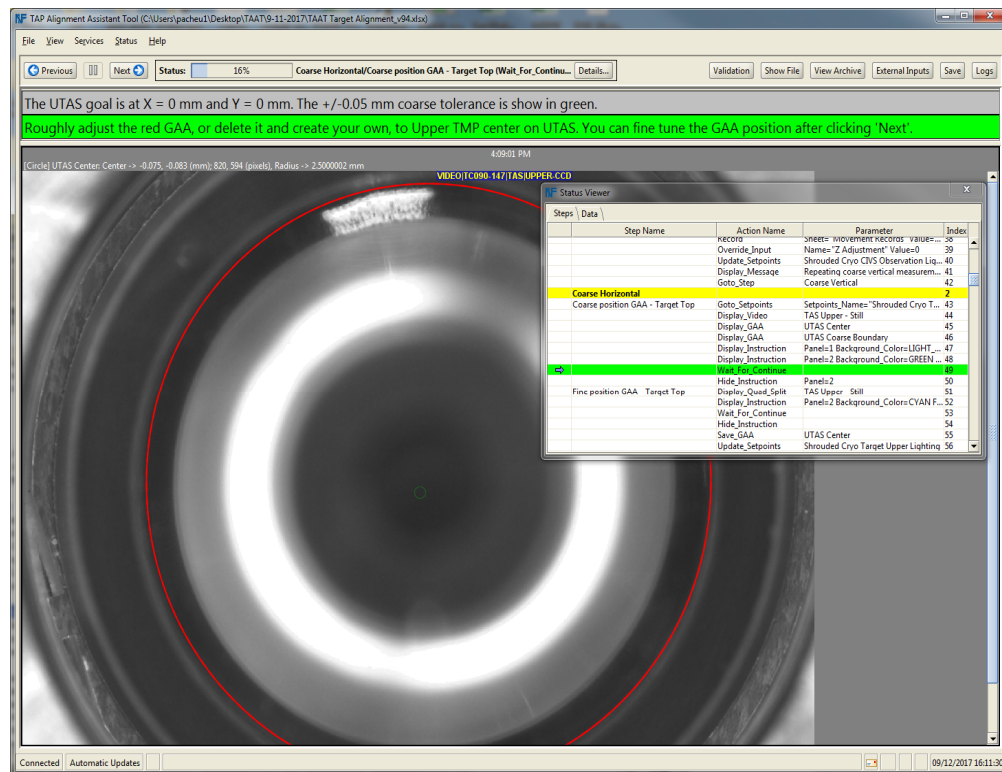
Need for Target Alignment Assistant Tool (TAAT)

- Eleven positioners
- Tens of microns accuracy
- Long manual alignment procedure
- Hundreds of steps
- Visual feature identification requires a human operator
- Repetitive mundane operations should be automated



Key features of Target Alignment Assistant Tool (TAAT)

- Hybrid man-machine solution
- Automated checklist
- Spreadsheet programming
- Integrated data interfaces
- Task-supporting UI
- Interfaces to motion control and laser tracking measurement system



Benefits of Target Alignment Assistant Tool (TAAT)

- Streamlined alignment operations
- Contributed to NIF efficiency goals
- Saves 30 minutes on average
- Reduced or eliminated manual steps

	Manual	TAAT	Savings
Measurements	1413	763	46%
Moves	130	34	74%
Data entries	83	0	100%
Choice review	26	0	100%

