Shot Setup Tool 1.3: Status and Tutorial

Presented to the NIF User Forum

Shot Configuration Team
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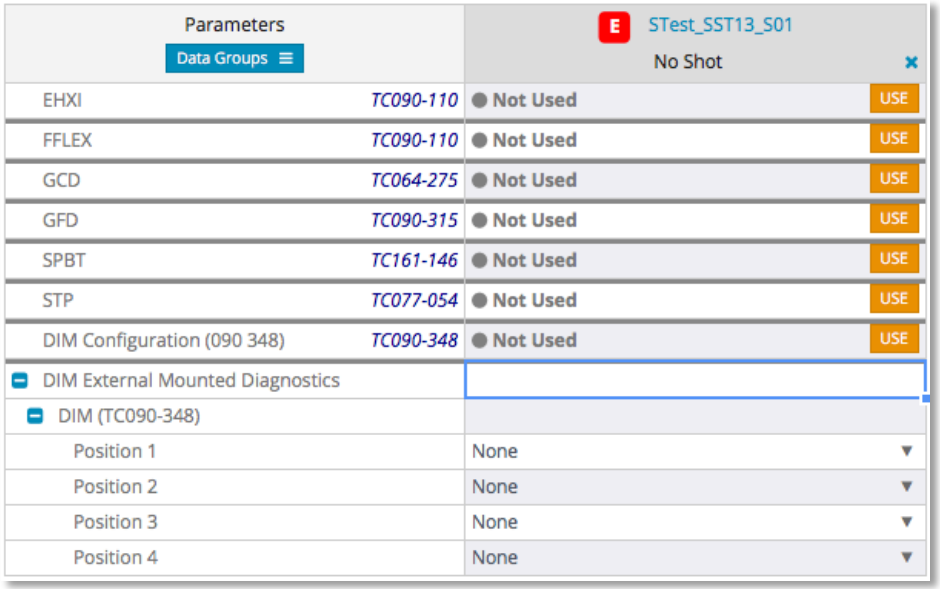
Agenda

- At a glance - Changes since SST-1.0
- Setting data group default values
- Tagging ”Important” templates
- Configuring data group display
- SPBT express setup
- TANDM 90-348 with passive diagnostics
- DIM External Mounted Diagnostics
- Upcoming developments
- Questions for Shot Ris
- Demonstration

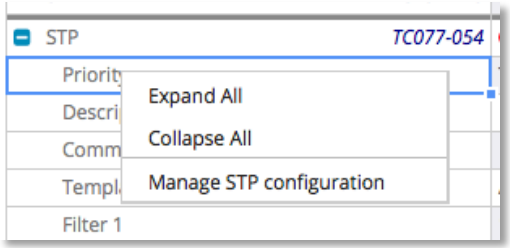
At a glance – Changes since SST-1.0

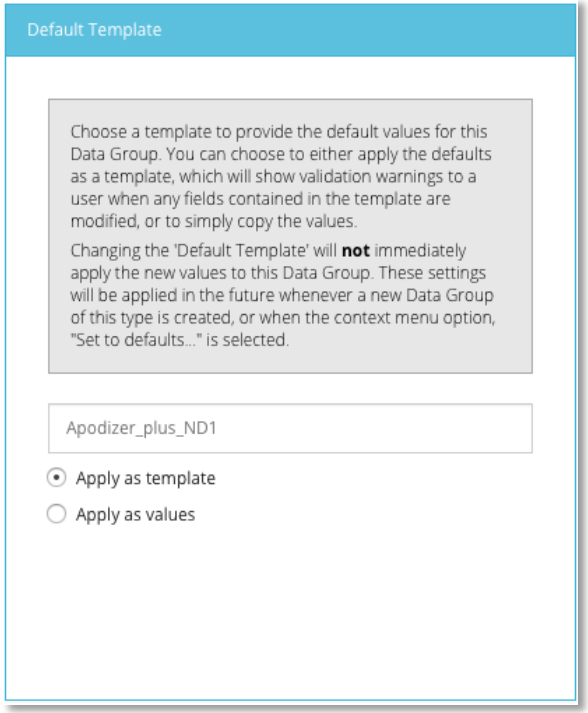
- SST-1.1
  - Migrated SPBT with new express setup
  - Deployed initial setup support for Gas Cherenkov Detector (GCD) and Glint Fast Diode (GFD)
  - Experiment locking controls for Shot RI team
- SST-1.2
  - Deployed initial setup support for TANDM 90-348 with passive TD's
    - Empty Airbox, Passive Snout GXD/HGXD/DISC, External mounted TD's
  - Data group defaults now inherited from a template maintained by RS
  - "Important" template tagging for diagnostic RS'
  - SPBT automated attenuator support
- SST-1.3
  - Deployed initial setup support for Shot Time Photography (STP)
  - Added data group display control to profile settings



Setting data group default values

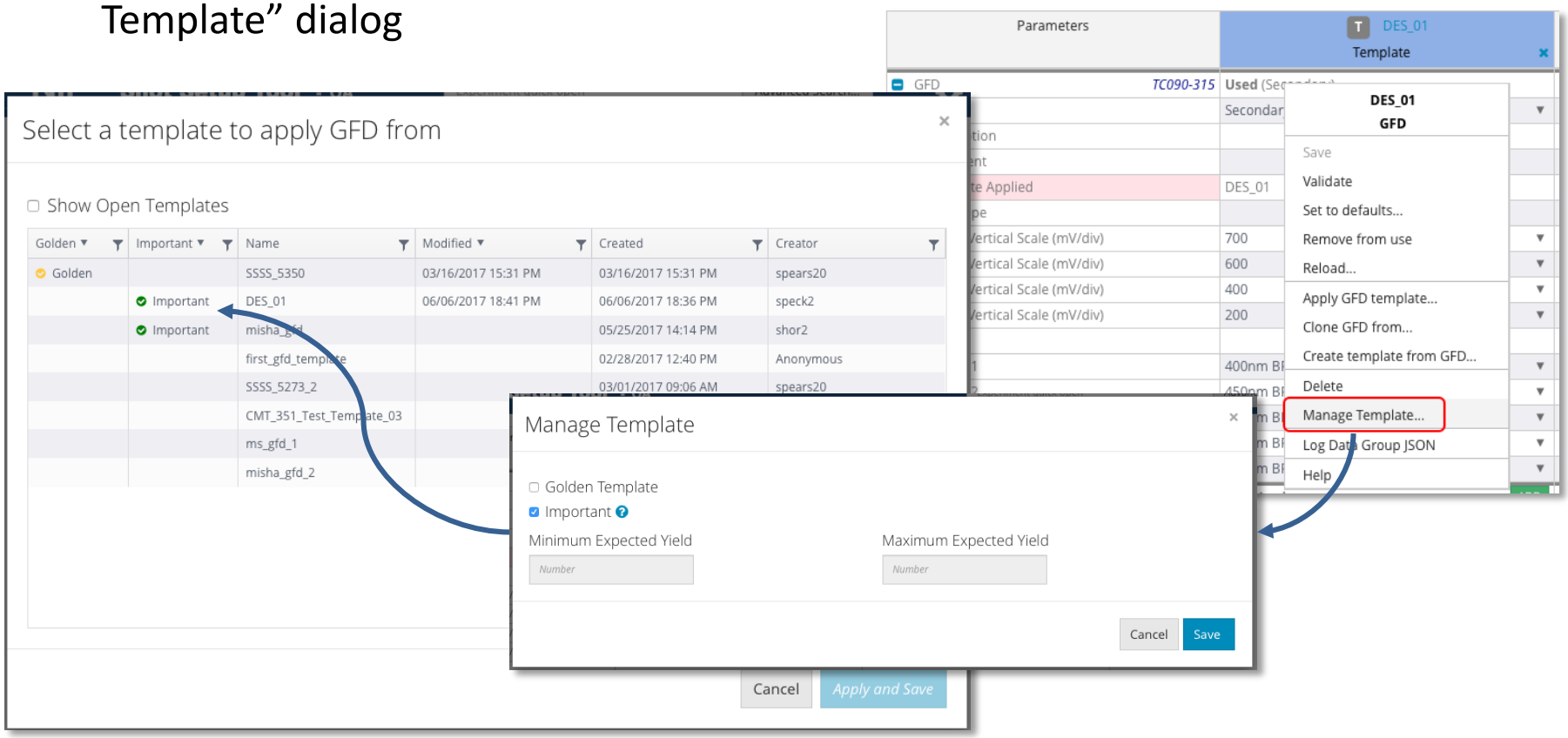
- For Data Group Approvers (i.e., Diagnostic RS')
- Raise the context menu from the Parameters column and select "Manage [data group name] Configuration"
- On the Manage Settings dialog, enter the name of the template to pull default settings from
- Choose "Apply as template" to initialize the data group explicitly as having had a template applied (i.e., especially if the default settings template is golden); choose "Apply as values to populate the settings without explicitly applying a template





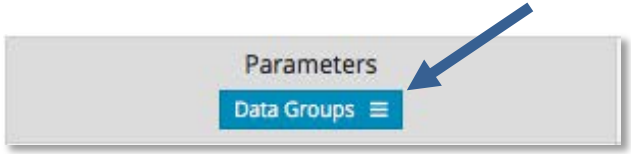
Tagging "Important" templates

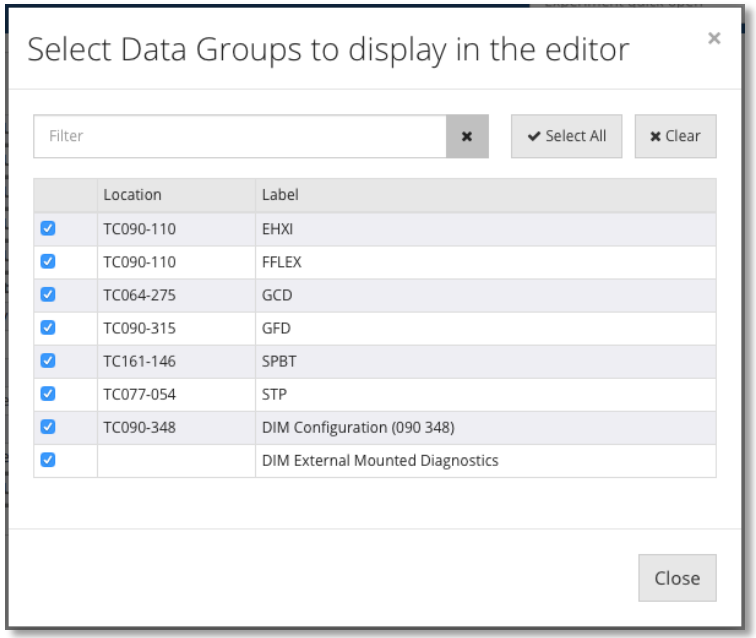
- For Data Group Approvers (i.e., Diagnostic RS')
- Tagging a template as Important gives it higher view priority in the "Apply Template" dialog



Configuring data group display

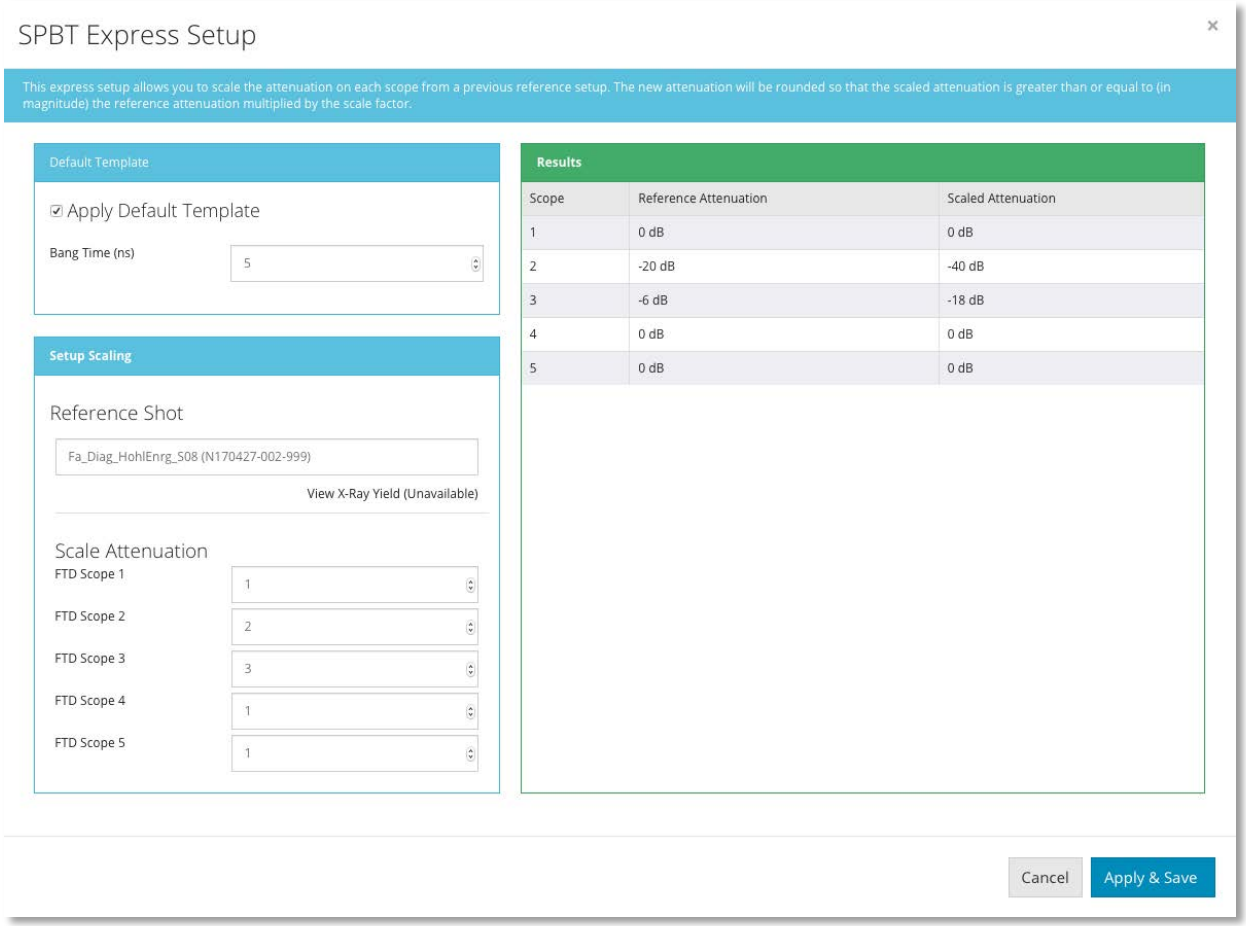
- Launch the data group loader configuration modal from the Parameters header cell
- All data groups displayed by default
- Enter a string in the Filter to sub-select which data groups to operate on (matches anywhere in Location or Label fields; case insensitive)
- Turn off data group display by unchecking the box
- “Select All” and “Clear” operate on the visible data groups
- Configuration is saved per profile





SPBT express setup

- To initialize the entire setup, select “Apply Default Template” and enter an expected bang time (else the express setup will only update the scope attenuations)
- Enter a Reference Experiment ID to provide reference attenuation settings
- Enter a scale factor for each FTD scope attenuation setting
- Review scaled attenuation result then select “Apply & Save” to populate into experiment
- With new automated attenuators, each scope takes a single setting on [-62, 0]

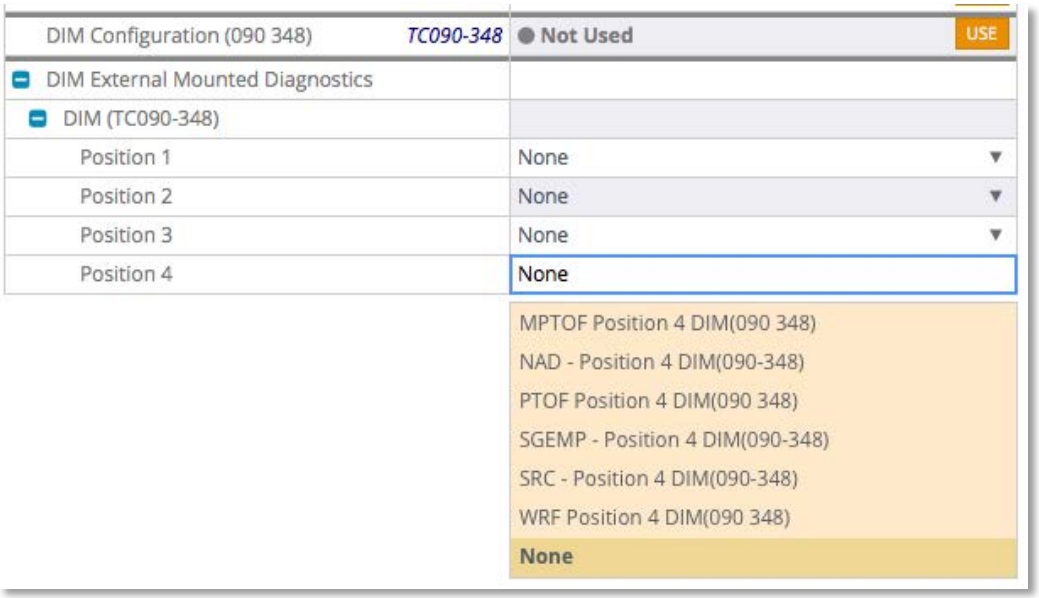


TANDM 90-348 with passive diagnostics

- Like DIM setup in CMT but no active TD selections and no other diagnostics inside the top level folder
- No GXD/HGXD/DISC folder will appear since no active configuration is available
- Default selections for subassemblies are empty – user must select

DIM Configuration (090 348) *TC090-348*	*Draft**
Description	
Comment	
Template Applied	NONE
Aimpoint Coordinates	Cartesian
DIM Load Package	Empty Airbox
DIM Configuration Priority	GXD (Passive)
DIM Configuration	HGXD (Passive)
Snout Selection	DISC (Passive)
Snout Part Number	**Empty Airbox**
Cart Part Number	
Airbox Part Number	
Magnification	
Aimpoint-to-pinhole-plane Distance (mm)	0
Pinhole-plane-to-detector Distance (mm)	0
Aimpoint-to-detector Distance (mm)	0
Snout-tip-to-pinhole-plane Distance (mm)	0
Aimpoint-to-snout-tip Distance (mm)	0
Roll Angle (deg)	
Rotation (deg)	
Nose Cap Assembly (Position 1 - Closest to TCC)	Please select...
Nose Cone Assembly (Position 1 - Closest to TCC)	Please select...
Kinematic Base Assembly (Position 1 - Closest to TCC)	Please select...

DIM External Mounted Diagnostics



- All external mounted passive diagnostics (all positioners) will be configured within the “DIM External Mounted Diagnostics” folder
- Since only passive diagnostics are supported on 90-348, PTOF/MagPTOF recording system is not available

Upcoming developments

- Active diagnostics on TANDM (September)
  - 90-124 enabled first with active diagnostics (GXD, HGXD, DISC)
  - 90-348/active setup capability available also but not planned for shots until later
  - SST will automatically pull in instrument selections from Shot Planner if FLIP Id is present and data exists
- Polar DIM migrated from CMT along with TANDM/Active deployment in early September; 90-78 (incl. ARIANE, DIXI) then 90-315 (incl. NIS, VISAR, MRS) migrations to follow
- Requirements definition ongoing for SLOS, OTS-D, PTOF/MagPTOF, NBI-Q33B (w/ GigE cameras), CBI, 3/2 ω
- Alignment automation - support to access FRL design/metrology datasets from LoCoS to enable direct integration into pointing setups for target positioning, alignment locations, and beampointing
- Approval Manager performance becoming a significant issue; analysis ongoing to assess magnitude of needed changes

Questions for Shot RIs

- Experiment locking controls: have not deployed auto-locking to serialize changes among Shot RI team. Has this been a problem?
- Alignment automation: Given that beam aimpoints are currently editable in the CMT Laser Editor GUI, would it be preferable to leave them there with the laser setup or migrate them to SST to take advantage of the LoCoS dataset integration?

[Demonstration]

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