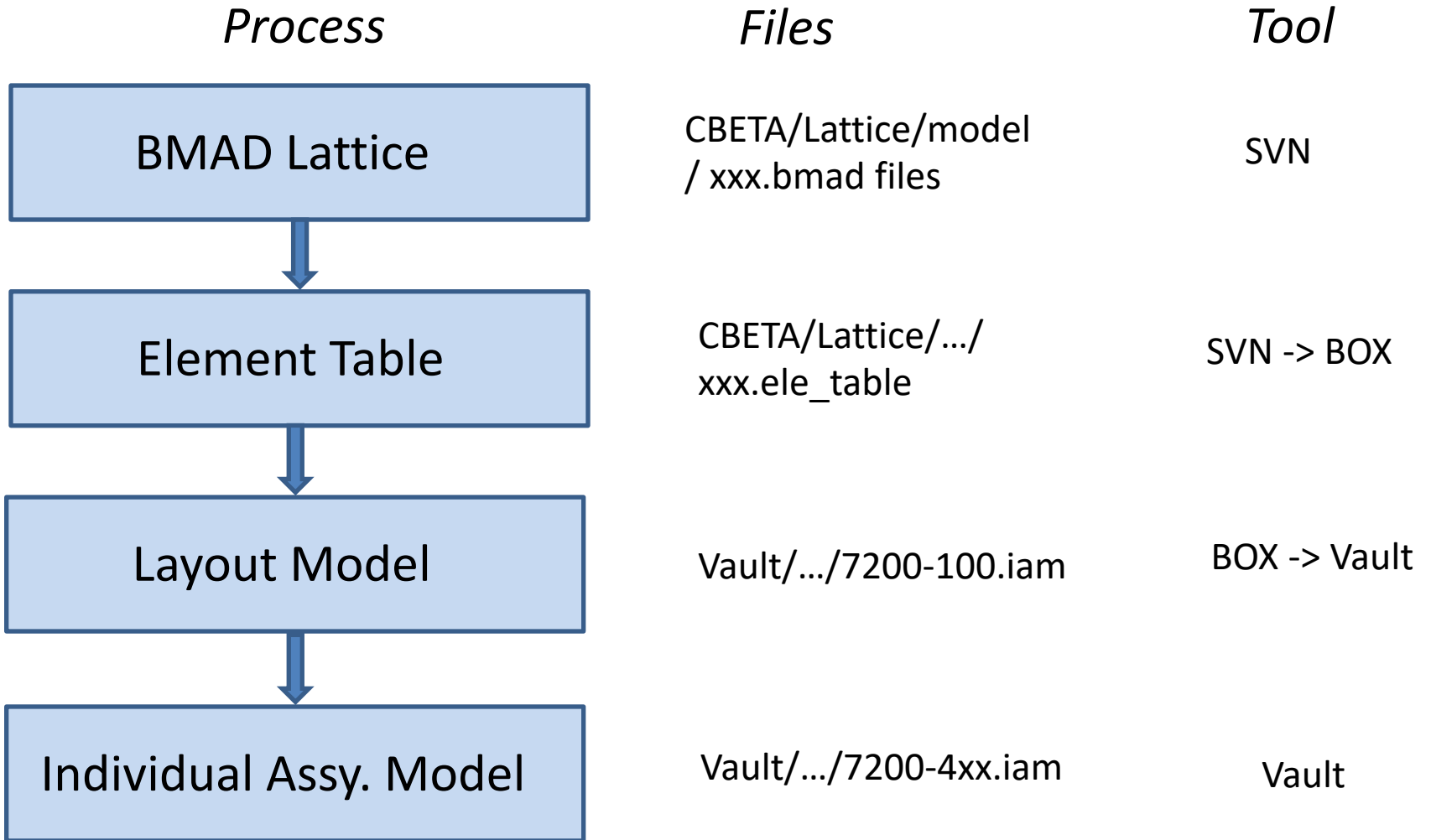
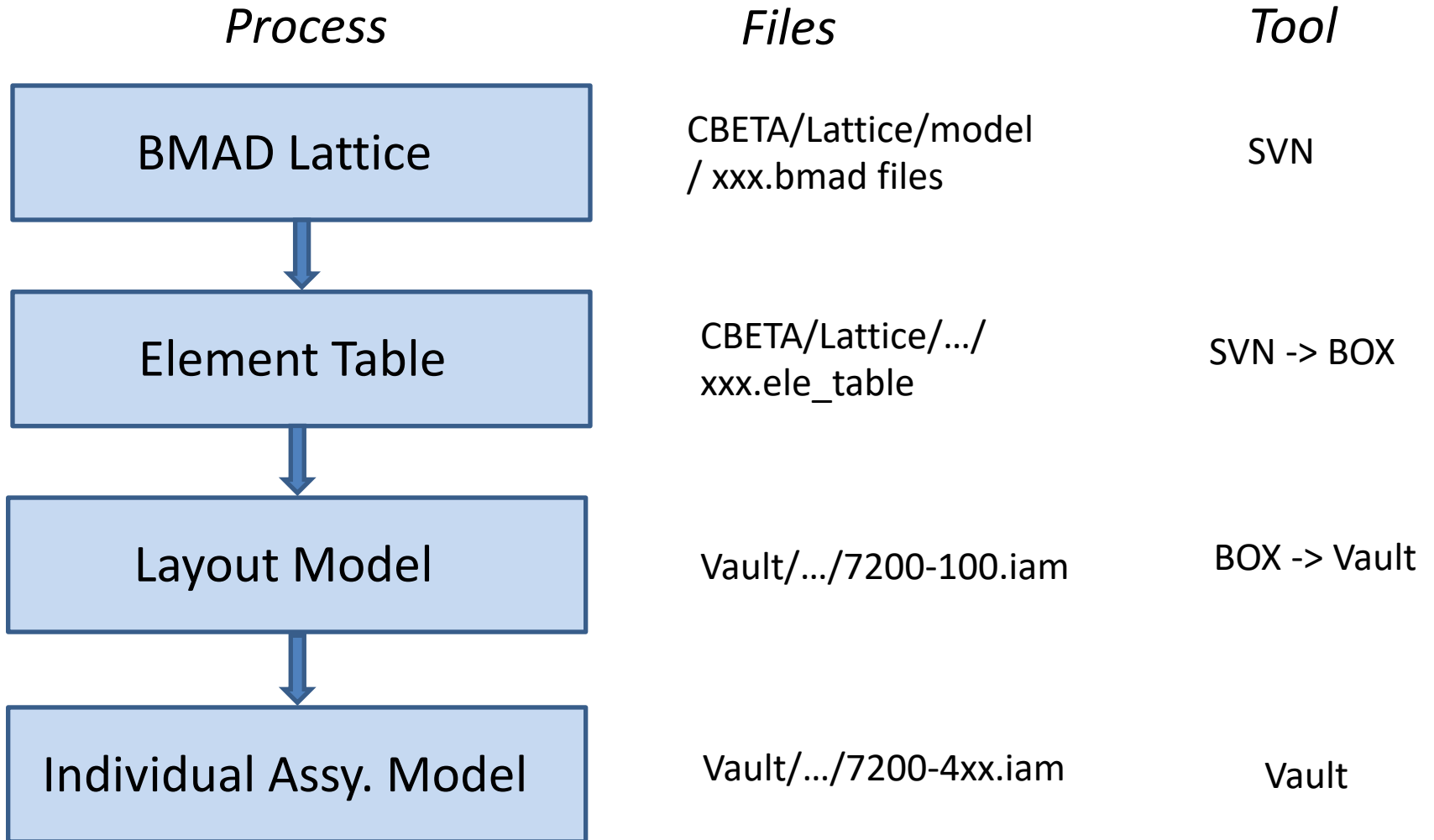


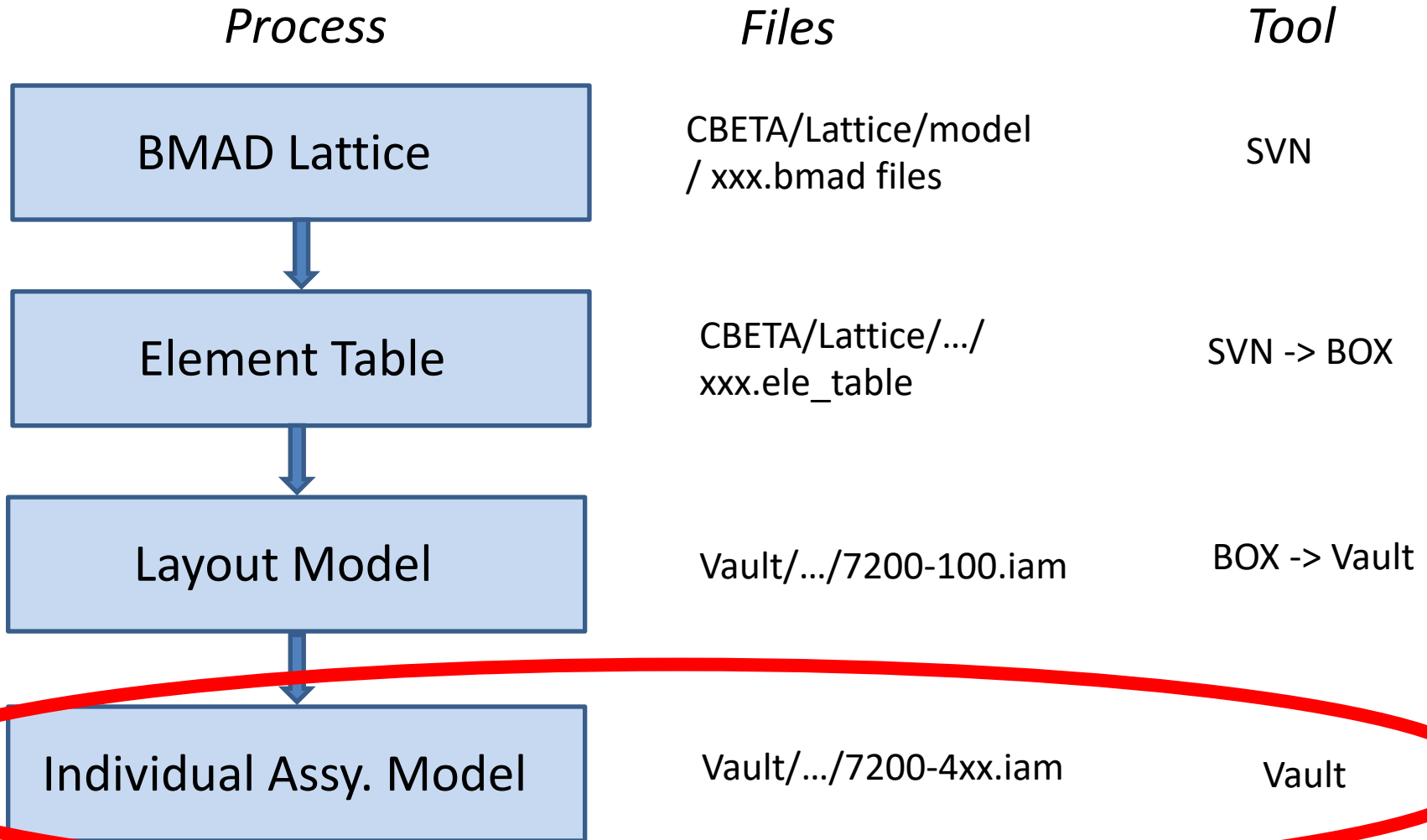
Configuration Control



Physical Configuration Control



Physical Configuration Control



SVN for BMAD Files (Model)

File Edit View History Bookmarks Tools Help

https://accserv.lepp.cornell.edu/cgi-bin/view.cgi/trunk/CBETA/lattice/model/

Repository: ACC Go

Index of /trunk/CBETA/lattice/model

Files shown: 5
Directory revision: 39619 (of 39628)
Sticky Revision: Set

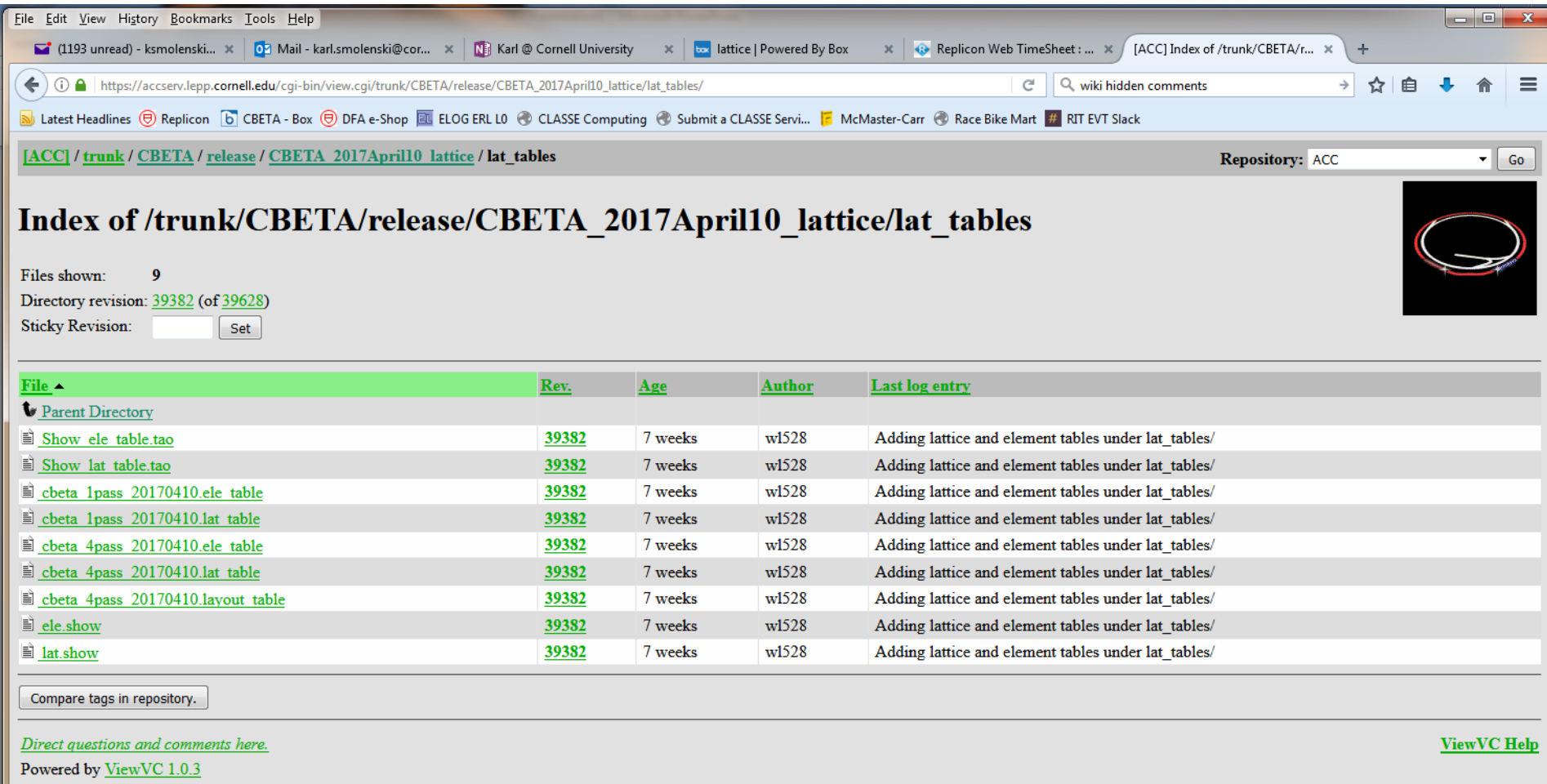
File	Rev.	Age	Author	Last log entry
Parent Directory				
beginning/	39302	8 weeks	cem52	main lattice files
du/	39355	7 weeks	cem52	name changes, bperms
fx/	39430	5 weeks	jsberg	Place BPM instruments in the BPM blocks where they belong. Also remove extraneo...
in/	39305	8 weeks	cem52	fixed tao.init files for gfortran
la/	39070	2 months	cem52	Initial DU and LA sections
rx/	39619	2 days	jsberg	Moved [RS]2.QUA0[27] 185 mm toward center Matched to have same beta/alpha/eta/a...
scripts/	39366	7 weeks	cem52	better process_ps script
sx/	39619	2 days	jsberg	Moved [RS]2.QUA0[27] 185 mm toward center Matched to have same beta/alpha/eta/a...
tx/	39430	5 weeks	jsberg	Place BPM instruments in the BPM blocks where they belong. Also remove extraneo...
zy/	39430	5 weeks	jsberg	Place BPM instruments in the BPM blocks where they belong. Also remove extraneo...
building_wall_init	39302	8 weeks	cem52	main lattice files
eri_bmad	39355	7 weeks	cem52	name changes, bperms
eri_1pass_lat_bmad	39356	7 weeks	cem52	April 10, 2017 1-pass and 4-pass lattice
eri_4pass_lat_bmad	39356	7 weeks	cem52	April 10, 2017 1-pass and 4-pass lattice
tao_init	39356	7 weeks	cem52	April 10, 2017 1-pass and 4-pass lattice

[Direct questions and comments here.](#) [ViewVC Help](#)

Powered by [ViewVC 1.0.3](#)

<https://accserv.lepp.cornell.edu/cgi-bin/view.cgi/trunk/CBETA/lattice/model/>

SVN for Lattice Element Files (Lattice Tables)



The screenshot shows a web browser window with the following details:

- Address bar: https://accserv.lepp.cornell.edu/cgi-bin/view.cgi/trunk/CBETA/release/CBETA_2017April10_lattice/lat_tables/
- Repository: ACC
- Index of **/trunk/CBETA/release/CBETA_2017April10_lattice/lat_tables**
- Files shown: 9
- Directory revision: [39382](#) (of [39628](#))
- Sticky Revision: Set

File	Rev.	Age	Author	Last log entry
Parent Directory				
Show ele table.tao	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/
Show lat table.tao	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/
cbeta 1pass 20170410.ele table	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/
cbeta 1pass 20170410.lat table	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/
cbeta 4pass 20170410.ele table	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/
cbeta 4pass 20170410.lat table	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/
cbeta 4pass 20170410.layout table	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/
ele.show	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/
lat.show	39382	7 weeks	w1528	Adding lattice and element tables under lat_tables/

Compare tags in repository.

[Direct questions and comments here.](#)

Powered by [ViewVC 1.0.3](#)

[ViewVC Help](#)

https://accserv.lepp.cornell.edu/cgi-bin/view.cgi/trunk/CBETA/release/CBETA_2017April10_lattice/lat_tables/

BOX holds a duplicate of the lattice element files (and historical data). These are not the BMAD input files, but the resulting element tables (xxx.ele_table) (which define components and locations)

The screenshot shows a web browser window displaying the Box.com interface. The address bar shows the URL <https://cornell.app.box.com/folder/8970704782>. The page title is "Cornell" and the search bar contains "Search Files and Folders". The breadcrumb navigation shows "All Files > CBETA > Release". The main content area displays a table of files and folders:

Name	Updated	Size
CBETA_2016Nov17	Jan 19, 2017 by Christopher Mayes	51 Files
CBETA_2016Sept1	Nov 16, 2016 by Christopher Mayes	19 Files
CBETA_2017April10	May 19, 2017 by William Lou	59 Files
Current	Feb 7, 2017 by Christopher Mayes	5 Files

On the right side, there are sharing and upload options. The "Sharing" section lists several users with their roles: Ritchie Patterson (Owner), Karl Smolenski (Editor), David Rice (Viewer Uploader), Bruce Dunham (Viewer Uploader), and Ivan Bazarov (Viewer Uploader). There is also a "+56 People" link and a "Share this Folder" button. The "Upload" button is visible at the top right.

This is done for broad accessibility / ease

Box > CBETA > Release

BOX holds a duplicate of the lattice element files (and historical data). These are not the BMAD input files, but the resulting element tables (xxx.ele_table) (which define components and locations)

The screenshot shows a web browser window displaying the Box file management interface. The address bar shows the URL <https://cornell.app.box.com/folder/23889922237>. The interface includes a search bar, a navigation sidebar on the left, and a main content area displaying a list of files and folders. The breadcrumb path is "All Files > ... > Release > CBETA_2017April10 > ☆ lattice".

Name ^	Updated	Size
lat_tables	May 19, 2017 by William Lou	0 Files
lat_tables_May19_2017_BPMS_fixed	May 19, 2017 by William Lou	7 Files
cbeta_1pass_20170410.ele_table	Apr 11, 2017 by William Lou	336.1 KB
cbeta_1pass_20170410.lat	Apr 11, 2017 by William Lou	234.8 KB
cbeta_1pass_20170410.lat_table	Apr 11, 2017 by William Lou	1.2 MB
cbeta_4pass_20170410.ele_table	Apr 11, 2017 by William Lou	433.9 KB
cbeta_4pass_20170410.lat	Apr 11, 2017 by William Lou	310.5 KB
cbeta_4pass_20170410.lat_table	Apr 11, 2017 by William Lou	8.3 MB
cbeta_4pass_20170410.layout_table	Apr 11, 2017 by William Lou	173.7 KB
erl_4pass.lat.layout_table_unstaggered	May 19, 2017 by William Lou	173.7 KB

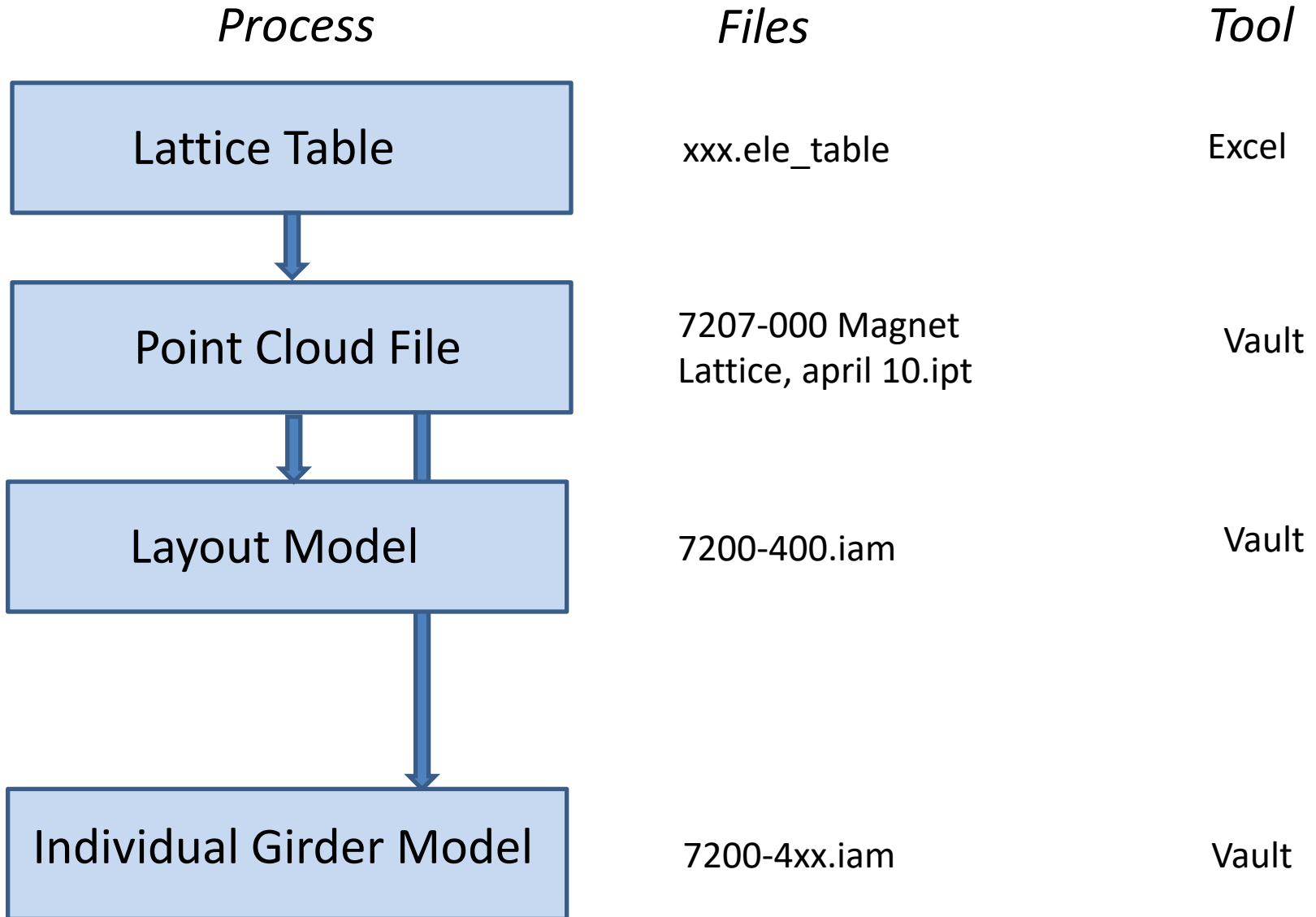
On the right side of the interface, there is a "Sharing" section with a list of users and their roles:

- Ritchie Patterson (Owner)
- Karl Smolenski (Editor)
- peggs (Editor)
- Stephen Brooks (Editor)
- J. Scott Berg (Viewer Uploader)
- +56 People

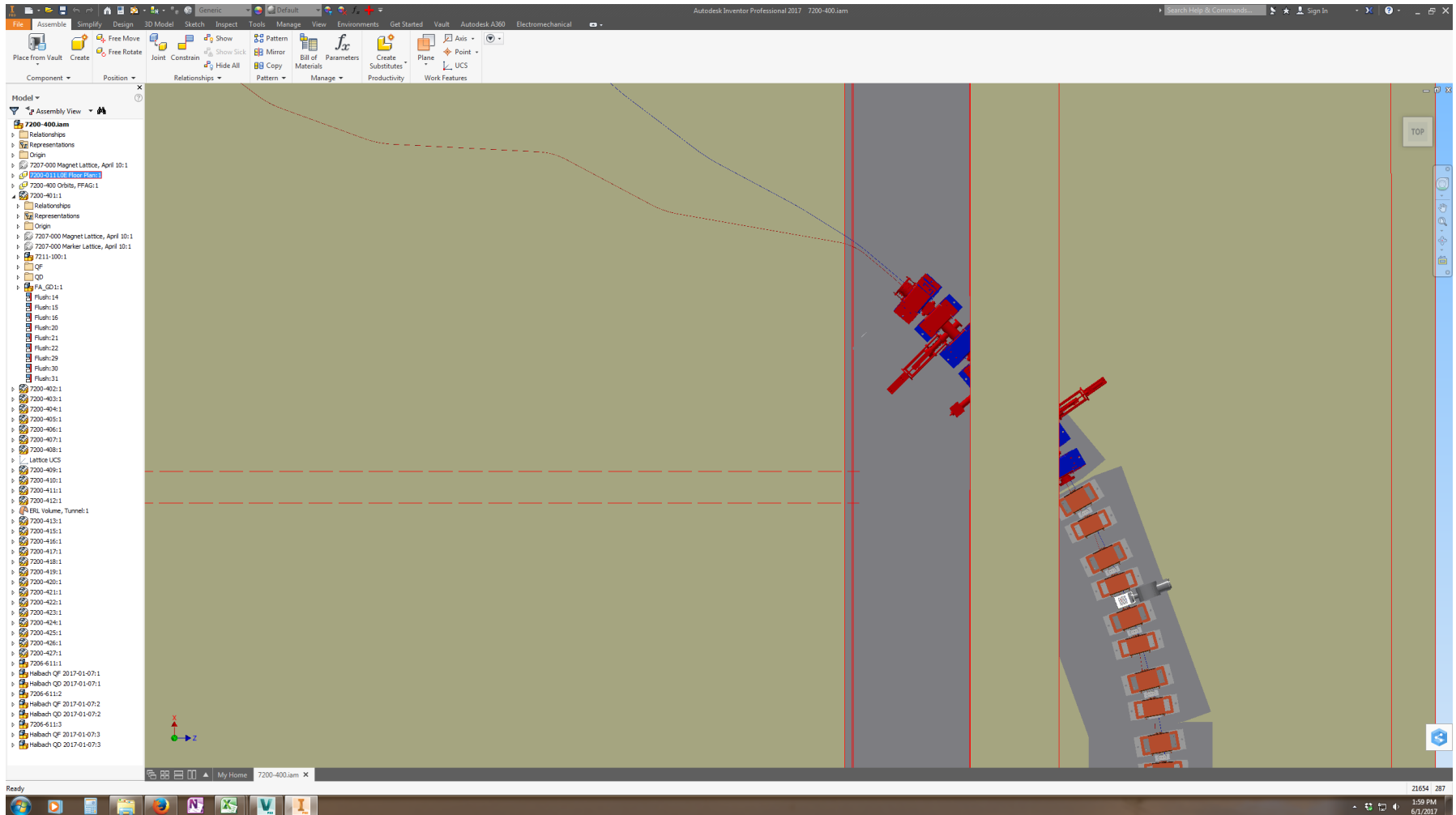
There is also a "Share this Folder" button at the bottom of the sharing section.

Box > CBETA > Release > CBETA_2017April10

Physical Layout Process



xxx.ele_table files are then used to drive the machine layout via Magnet's and other marker's coordinates are used to drive the CAD model



Box > CBETA > Release > CBETA_2017April10

File Assemble Simplify Design 3D Mod

Place from Vault Create Free Move Free Rotate Joint

Component Position

Model

Assembly View


- 7200-400.iam
 - Relationships
 - Representations
 - Origin
 - 7207-000 Magnet Lattice, April 10:1
 - 7200-011 LOE Floor Plan:1
 - 7200-400 Orbits, FFA:1
 - 7200-401:1
 - Relationships
 - Representations
 - Origin
 - 7207-000 Magnet Lattice, April 10:1
 - 7207-000 Marker Lattice, April 10:1
 - 7211-100:1
 - QF
 - QD
 - FA_GD 1:1
 - Flush:14
 - Flush:15
 - Flush:16
 - Flush:20
 - Flush:21
 - Flush:22
 - Flush:29
 - Flush:30
 - Flush:31
 - 7200-402:1
 - 7200-403:1
 - 7200-404:1
 - 7200-405:1
 - 7200-406:1
 - 7200-407:1
 - 7200-408:1

- Not everything is in BMAD (pumps, stands, girders, etc.)
- While BMAD drives the layout and models, its input (via the lattice point cloud file) is infrequent. After the input the configuration is controlled by Vaulted design models, using revision control procedures.

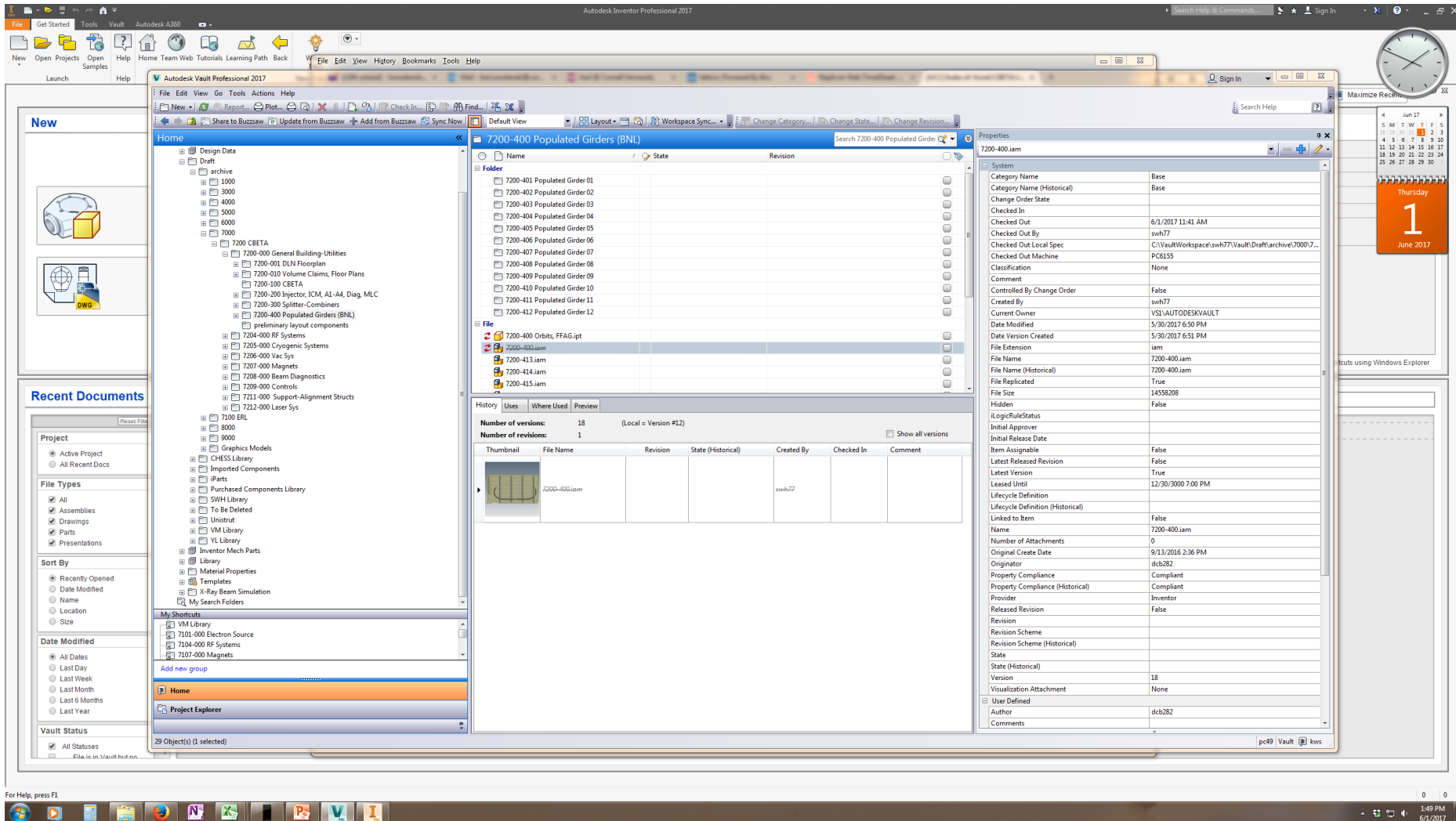
Configurations

- MLC Test Configuration (2017)
- FAT Test Configuration (2018)
- 4-pass Installation (2019)
 - 1 pass run
 - Multipass run
- Each Configuration would be a separation drawing number

Expected Layouts

- 7200-000 – Entire Room Layout
 - 7200-100 – Master Machine Layout
 - 7200-200 – Injector
 - 7200-300 – Splitter
 - 7200-400 – FFAG Arcs (shown previously)
- 
- ```
graph BT; A[7200-200 – Injector] --> B[7200-100 – Master Machine Layout]; C[7200-300 – Splitter] --> B;
```

Ultimately Engineers use Vault as the configuration control  
(can be used for anything: drawings, models, vendor drawing and documentation,  
etc.)



Non-public system, available only to Autodesk seats

Autodesk Vault Professional 2017

File Edit View Go Tools Actions Help

Home

Design Data

Draft

- archive
  - 1000
  - 3000
  - 4000
  - 5000
  - 6000
  - 7000
- 7200 CBETA
  - 7200-000 General Building-Utilities
    - 7200-001 DLN Floorplan
    - 7200-010 Volume Claims, Floor Plans
    - 7200-100 CBETA
    - 7200-200 Injector, ICM, A1-A4, Diag, MLC
    - 7200-300 Splitter-Combiners
    - 7200-400 Populated Girders (BNL)
    - preliminary layout components
  - 7204-000 RF Systems
  - 7205-000 Cryogenic Systems
  - 7206-000 Vac Sys
  - 7207-000 Magnets
  - 7208-000 Beam Diagnostics
  - 7209-000 Controls
  - 7211-000 Support-Alignment Structs
  - 7212-000 Laser Sys
- 7100 ERL
  - 8000
  - 9000
- Graphics Models
  - CHESS Library
  - Imported Components
  - iParts
  - Purchased Components Library
  - SWH Library
  - To Be Deleted
  - Unistrut
  - VM Library
  - VL Library
- Inventor Mech Parts
- Library
- Material Properties
- Templates
- X-Ray Beam Simulation
- My Search Folders

My Shortcuts

- VM Library
- 7101-000 Electron Source
- 7104-000 RF Systems
- 7107-000 Magnets

Add new group

Home

Project Explorer

29 Object(s) (1 selected)

7200-400 Populated Girders (B)

Name

Folder

- 7200-401 Populated Girder 01
- 7200-402 Populated Girder 02
- 7200-403 Populated Girder 03
- 7200-404 Populated Girder 04
- 7200-405 Populated Girder 05
- 7200-406 Populated Girder 06
- 7200-407 Populated Girder 07
- 7200-408 Populated Girder 08
- 7200-409 Populated Girder 09
- 7200-410 Populated Girder 10
- 7200-411 Populated Girder 11
- 7200-412 Populated Girder 12


File

- 7200-400 Orbits, FFAG.ipt
- 7200-400.iam
- 7200-413.iam
- 7200-414.iam
- 7200-415.iam

History Uses Where Used Preview

Number of versions: 18

Number of revisions: 1

| Thumbnail                                                                           | File Name    |
|-------------------------------------------------------------------------------------|--------------|
|  | 7200-400.iam |

New

Recent Documents

Project

- Active Project
- All Recent Docs

File Types

- All
- Assemblies
- Drawings
- Parts
- Presentations

Sort By

- Recently Opened
- Date Modified
- Name
- Location
- Size

Date Modified

- All Dates
- Last Day
- Last Week
- Last Month
- Last 6 Months
- Last Year

Vault Status

- All Statuses

File is in Vault but no...

For Help, press F1

- Not everything is in BMAD (pumps, stands, girders, etc.)
- While BMAD drives the layout and models, its input (via the lattice point cloud file) is infrequent. After the input the configuration is controlled by Vaulted design models, using revision control procedures.