



## What is New in VCollab 24.2

**VCOLLAB**

Visual Collaboration Technologies Inc.

# VCollab 24.2 Enhancements

## VCollabPro

- Cutaway
  - Interface is provided to have Cylindrical, Sphere and Box section
- Export HTML
  - Retain WCAX option is provided
  - Option is provided to add/remove the mesh modes in HTML/WCAX
- Adams Support
  - Enhanced to synchronize the Adams Animation and Adams Plot
  - Enhanced to load multiple results into Adams Plot
  - Enhanced to do Arithmetic operations on Adams curves in Adams Plot
  - Enhanced to add Annotations to Adams Plot
- Nodeset Manager
  - Enhanced with ProbeMask, ShowMaskInfo and User Info features
- Vector Plot
  - Invert option is introduced
- Symbol Plot
  - Reverse option is introduced

## VCollabPro

- Python version is upgraded to 3.8.19
- Python APIs Updates
  - xSetConstantResultValue - Ability to set constant value to all nodes in multiple parts
  - xCreateElementalResult – Ability to create an elemental result from existing nodal result
  - xShowPartFeatureEdge – Ability to set the Feature Edge for the required parts
  - API is provided to change the mouse mode
  - Video Creation issue with cut-section in viewpoint is fixed

# VCollab 24.2 Enhancements

## VMoveCAE

- Enhanced LS-Dyna key file interface to read i10 format files
- Fixed a bug that is assigning wrong names to parts
- Enhanced support for loading ds.dat files
- Support for ANSYS-bodies part grouping for ds.dat files
- Support for no averaging across zones for Nastran input and op2 results
- Fixes for Ansys 23R2 reading crash

## VMoveCAD

- Supported saving cax with Unicode path
- Fixed the issue with relative input and output path with VMoveCADBatch
- Fixed --tess-tolerance option issue with VMoveCADBatch
- Handled the duplicate data in metadata in CadInfo

## VCollabWeb

- Fixed the display mode issue with hidden lines.
- Fixed transient interpolation animation with reverse play issue.
- Fixed the legend transparency issue.

## VMoveAdams

- Added the missing FLEX body curve data.

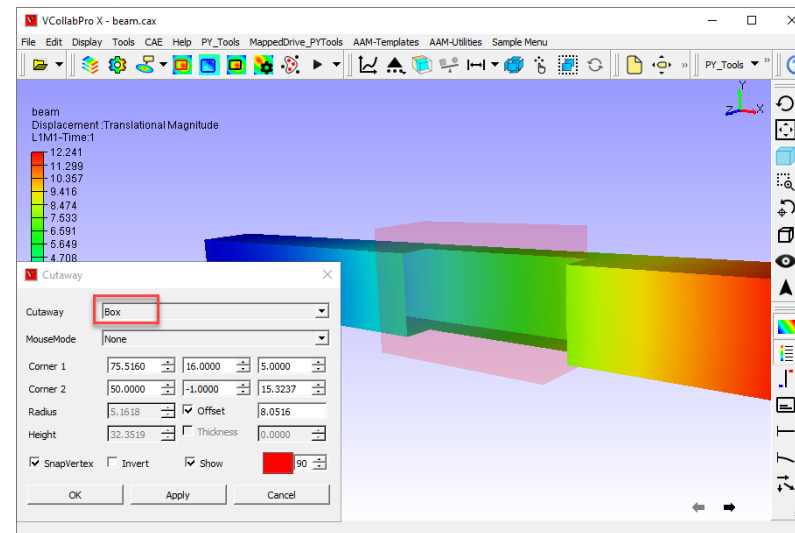
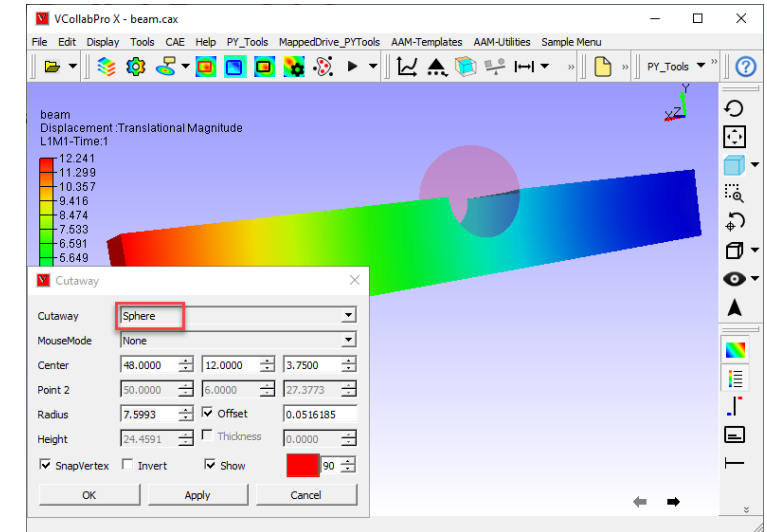
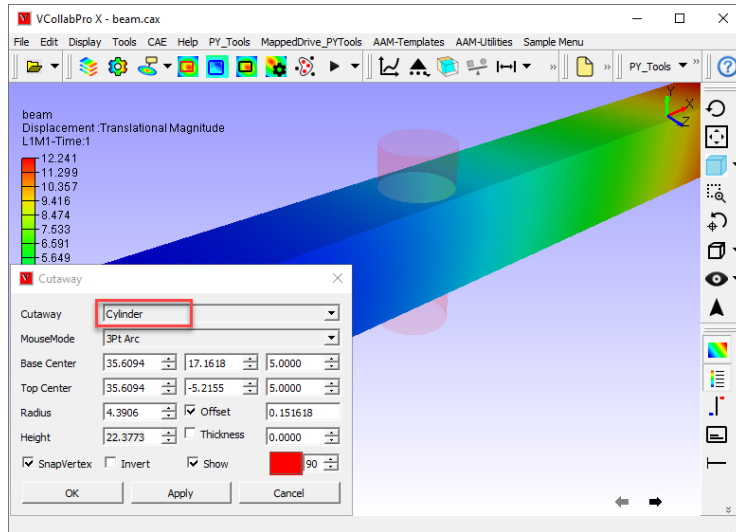
## VMoveCST

- Fixed the results name issue

# VCollabPro 24.2

## Cutaway

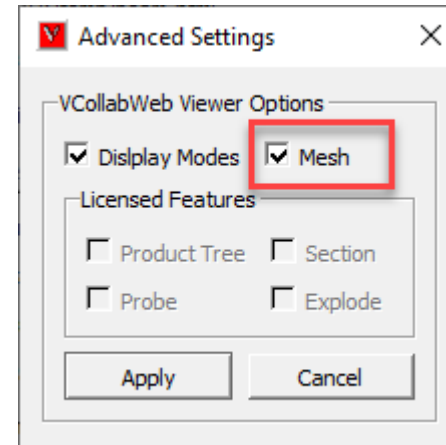
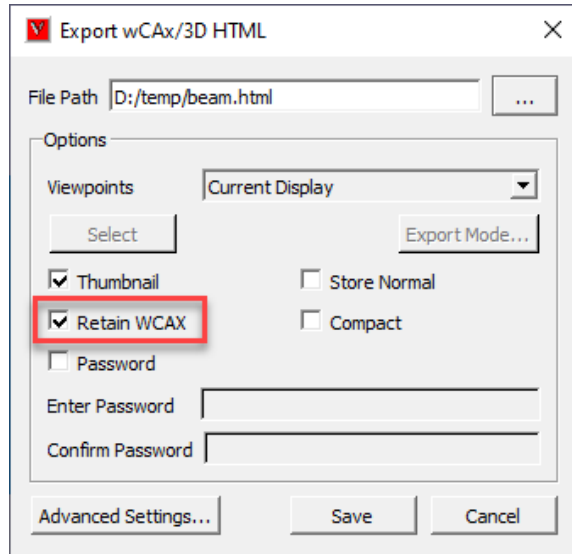
- Interface is provided to have Cylindrical, Sphere and Box section



# VCollabPro 24.2

## Export HTML

- Retain WCAX option is provided



-Option is provided to add/remove the mesh modes in HTML/WCAX

# VCollab 24.1 Enhancements

## VCollabPro

- Vector Plot
  - Filtering option is introduced to control distribution of vectors
  - Uniform Length options is added
  - Exporting vector plots to Web Viewer is supported (recommended to reduce number of vectors using filter option)
- Symbol Plot
  - User Color option is added
- Axis in Viewpoint: Axis position is saved into Viewpoint and CAX
- Import csv file Result: Overwrite option is supported
- Hotspot compare dialog is provided with new options in Compare field : Position Min and Position Max. This will help to create compare labels with simple probe.
- Display enhancements:
  - Flat color check box is provided in Part color material editor to get actual color plot without any shading effect based on light position.
  - Display (shading) brightness is enhanced (for certain orientations)
- New Python APIs added to support new vector plot and symbol plot options

# VCollab 24.1 Enhancements

## VMoveCAE

- Support for Abaqus 2024
- Support for CFX 2024
- Enhanced Hypermesh components support for Abaqus .INP and Nastran .BDF files
- Enhanced Ansys component support while reading ds.dat files
- Fixed the LS-Dyna key file issues with a large integer format
- Fixed the Abaqus input file loading issues with Latin characters
- Fixed the Nastran OP2 issue with the mixing of Bearing and Solid stresses
- Fixed the file loading issue with cdb files
- Provided functionality to the user to specify temporary files folder through VMoveCAESubmit
- Fixed the LS-Dyna strain extraction issue that is resulting in zero strains.
- Fixed the LS-Dyna issue that is ignoring the data from d3plot99 files.

## VMoveCAE (contd.)

- Fixed the Stress computations issue related to the mixed solid, shell and bearing stress.
- Fixed the issue related to the missing contact names while reading Ansys RST and ds.dat files.
- Added support to extract prescribed velocities from VELX, VELY and VELZ SPC constraints for Ansys input files.
- Fixed the bug related to reporting of zero frequency values for real datasets of complex results.

## VCollabWeb

- Support for Visualizing the Vector Plot
- Enhanced probed label value (precision) display option

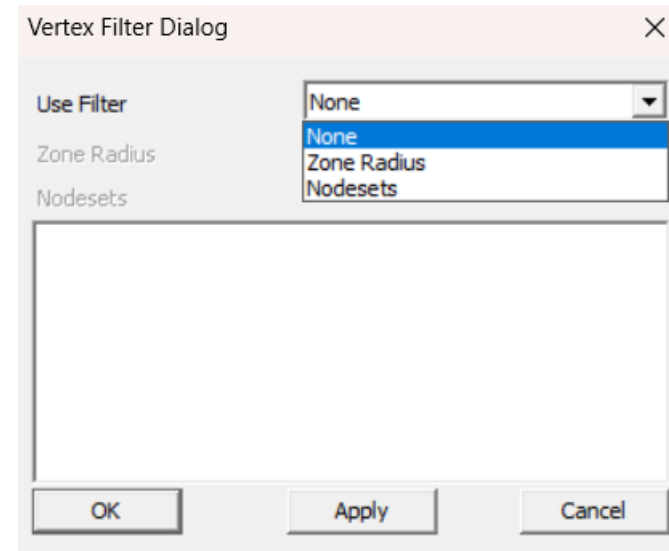
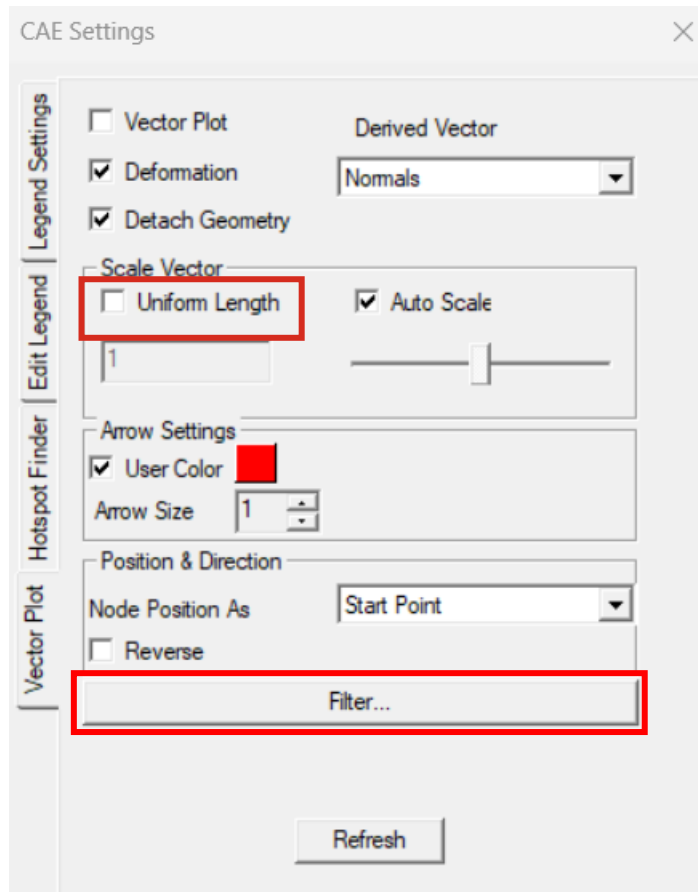
## VCollab Presenter

Fixed the loading issue with the CAX file that contains Unicode information

# VCollabPro 24.1

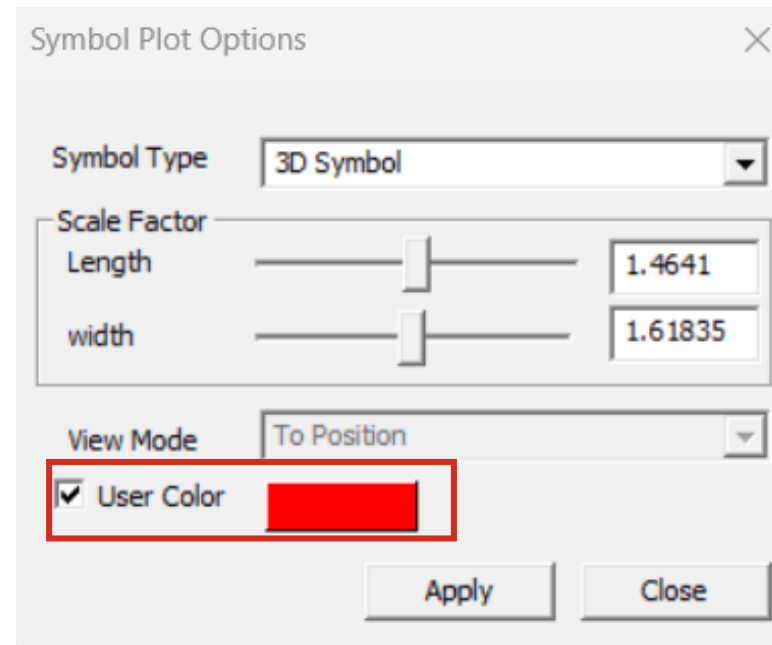
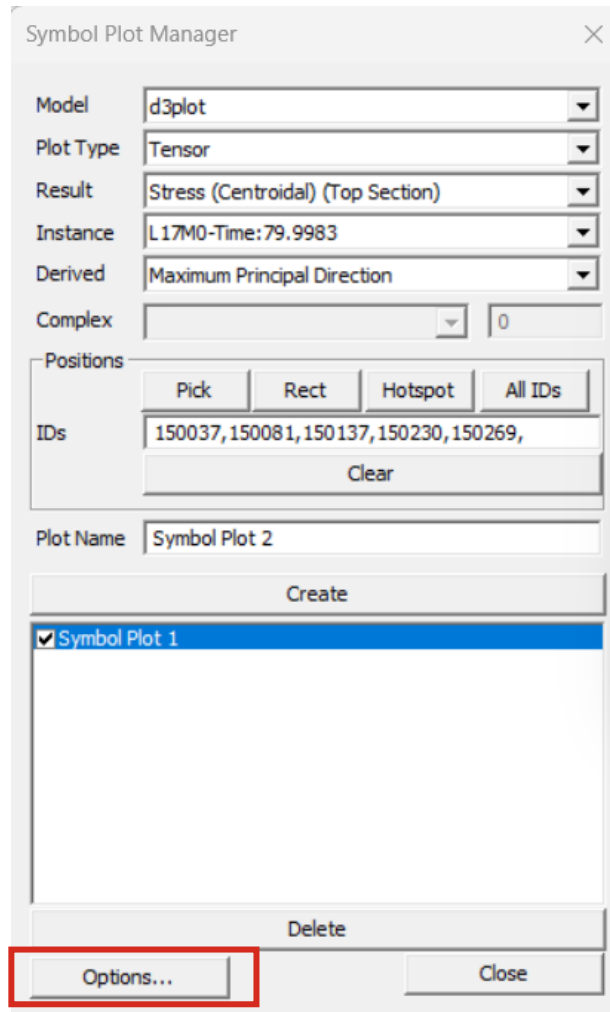
- Vector Plot

- Uniform Length : Allows user to specify uniform length of the vector symbol
- Vertex filtering options are included to exclude the nodes for which vector plot is not plotted



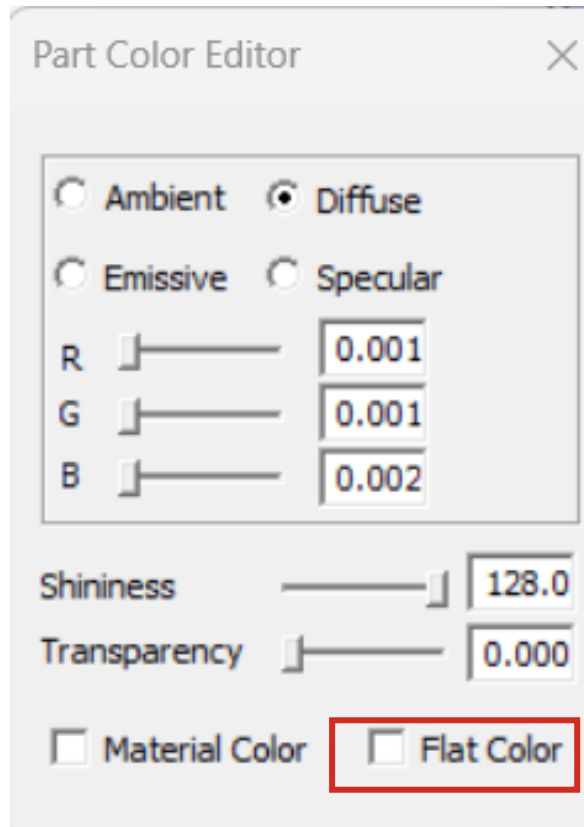
# VCollabPro 24.1

- Symbol plot user colour interface



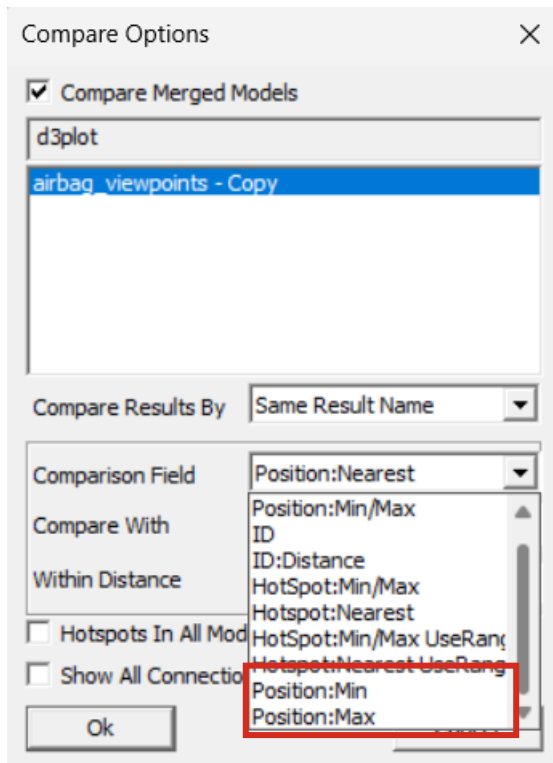
# VCollabPro 24.1

- Flat color check box is provided in Part color material editor to get actual color plot without any shading (black) effect based on light position



# VCollabPro 24.1

- Hotspot compare dialog is provided with new options to Compare field :
  - Position Min : Min value with in the sphere
  - Position Max : Max value with in the sphere
  - Position Min/Max : Max or Min is based on Top/Bottom hotspot. Will not work for simple probe.



# VCollabPro 24.1: PythonAPI Enhancements

- `xSetSymbolPlotUserColorMode` : Sets user color or contour color the plot.
- `xGetSymbolPlotUserColorMode` : Gets User Color mode of symbol plot.
- `xSetCAEVectorPlotUniformLength` : Sets uniform length for all vectors.
- `xGetCAEVectorPlotUniformLength` : Gets the true or False if all vectors are with uniform.

# VCollab 23.3 Enhancements

## VCollabPro

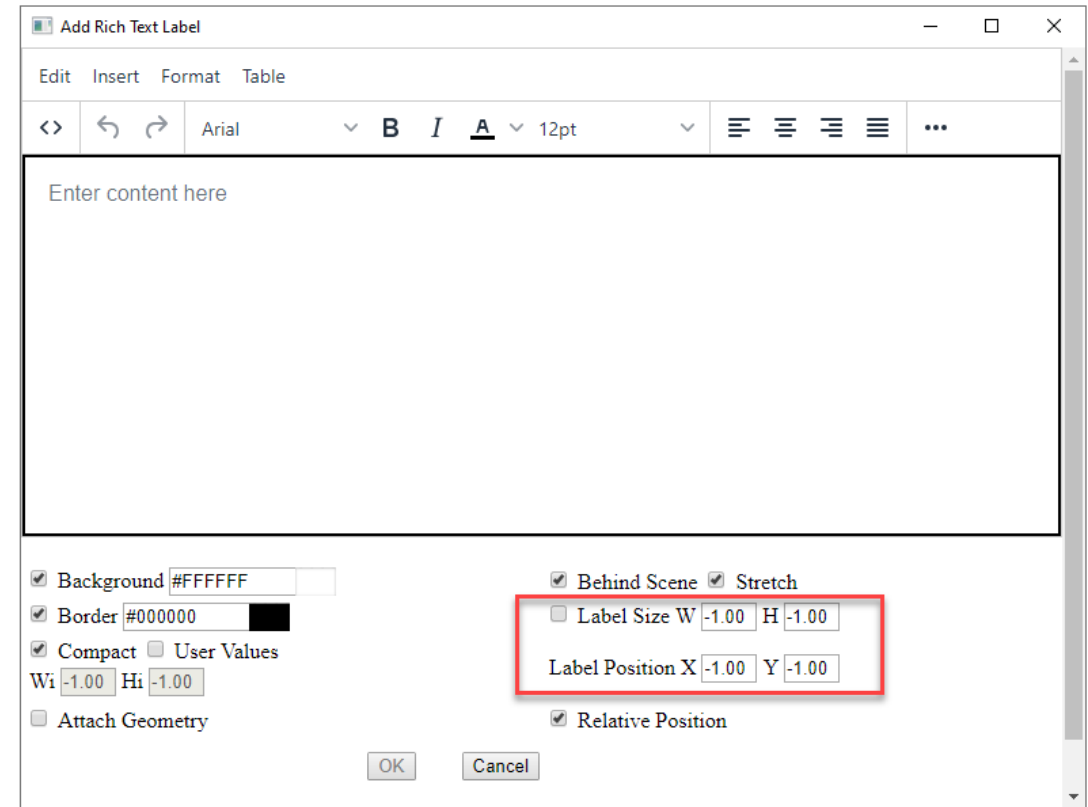
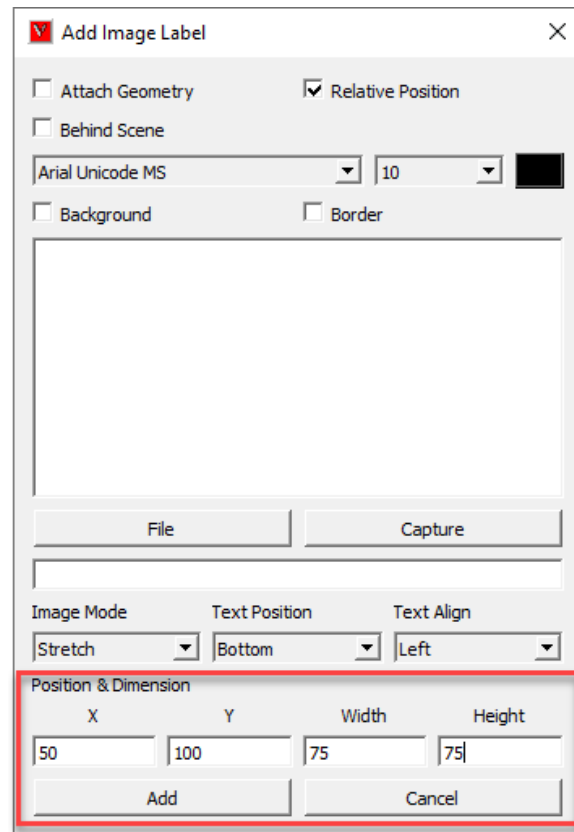
- Rich text Label Functionality is enhanced
- Added option to set the position and dimension for
  - Image and Rich Text Labels
- Enhancements in Adams History Plot capabilities
  - Option to merge plot data from multiple Adams iterations
- Pivot state of CAE Animation settings is saved in viewpoint
- Header Name of legend is saved in Profile
- Measurement Labels are updated based on deformation (need to use snap vertex)
- More APIs are included
- PyTools Enhancements
  - Import Image Views : option to select specific images
  - Export CSV: Dump Option to support duplicate nodes
  - Blank View: option to set white background
  - - PPTExport => Option to Add Editable 2D labels/Tables, Select Viewpoints,
  - Multiple VPs per Page, GUI Change

## VMoveAdams

- Batch mode is enhanced to convert the multiple iterations of data in a folder to multiple CAX files

# VCollabPro 23.3

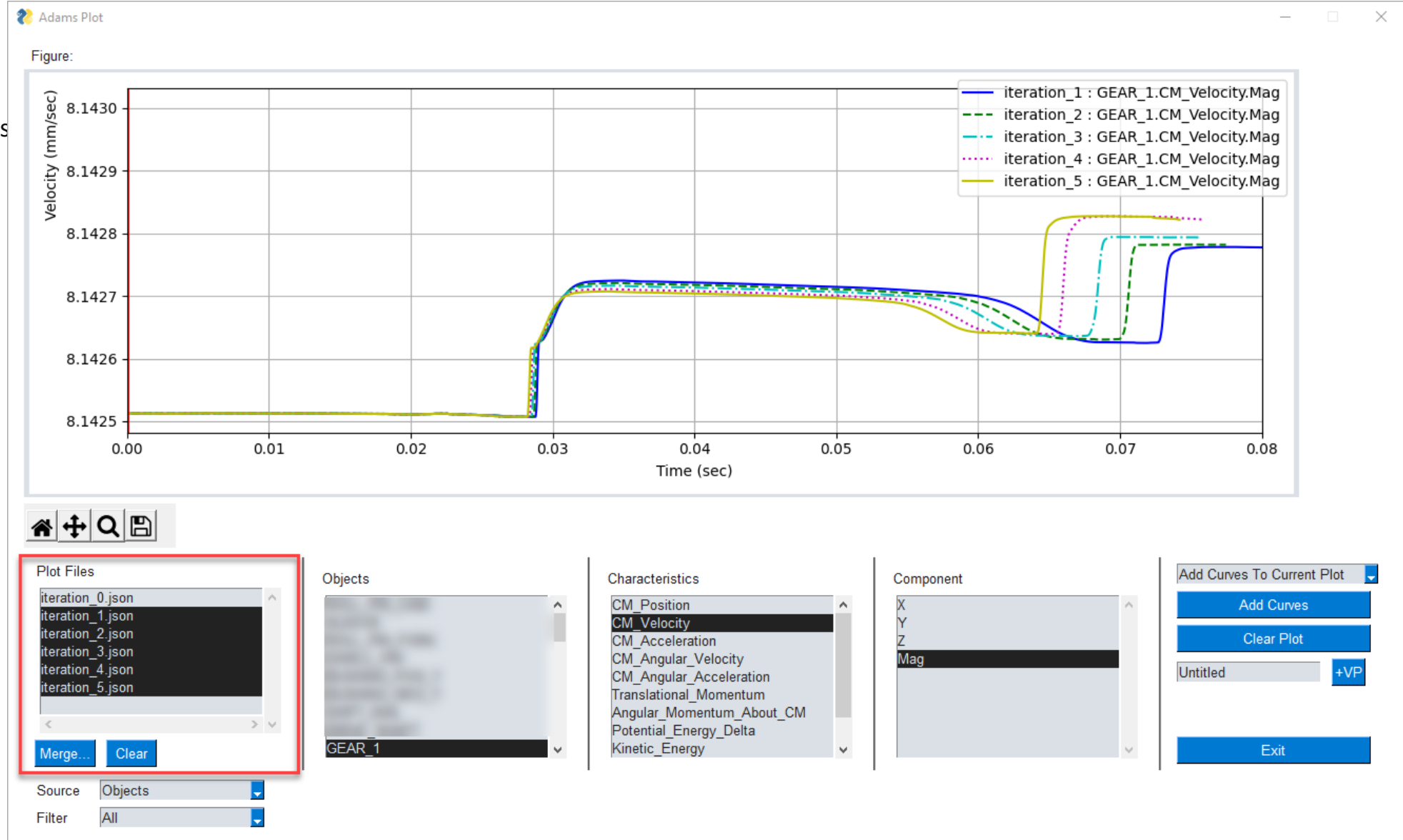
- Added option to set the position and dimension for
  - Image Labels
  - Rich Text Labels



# VCollabPro 23.3

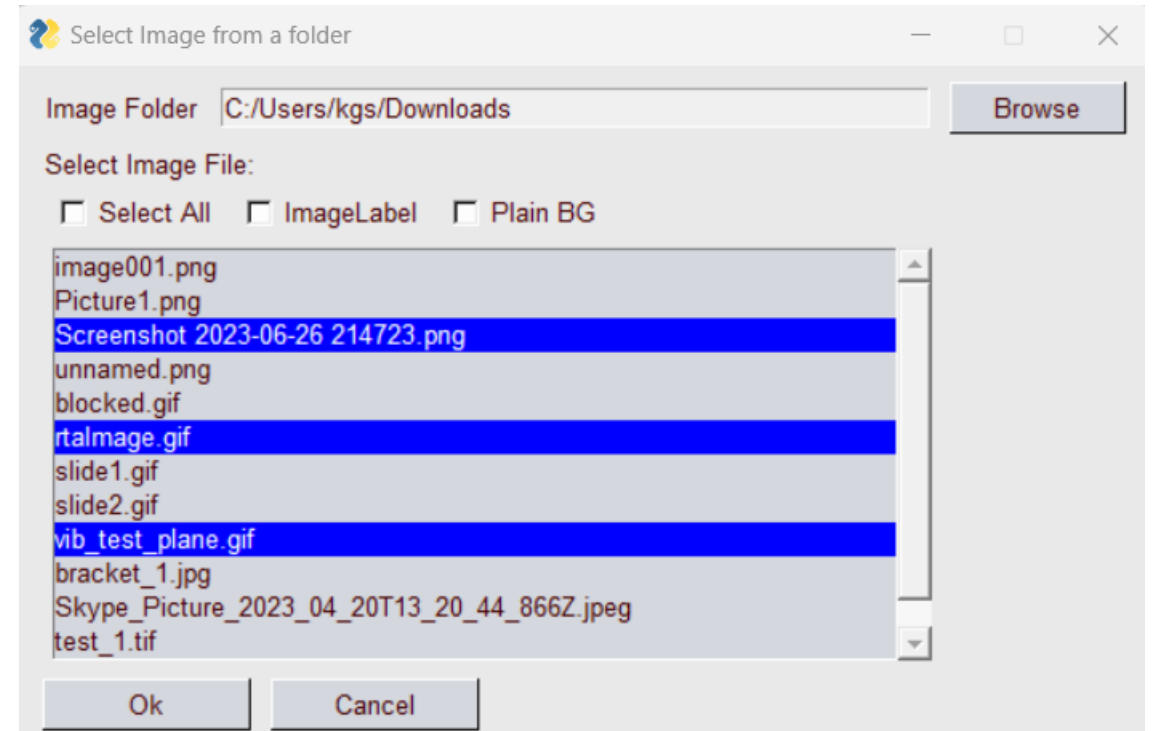
## Enhancements in Adams History Plot capabilities -

Option to merge plot data from multiple Adams iterations



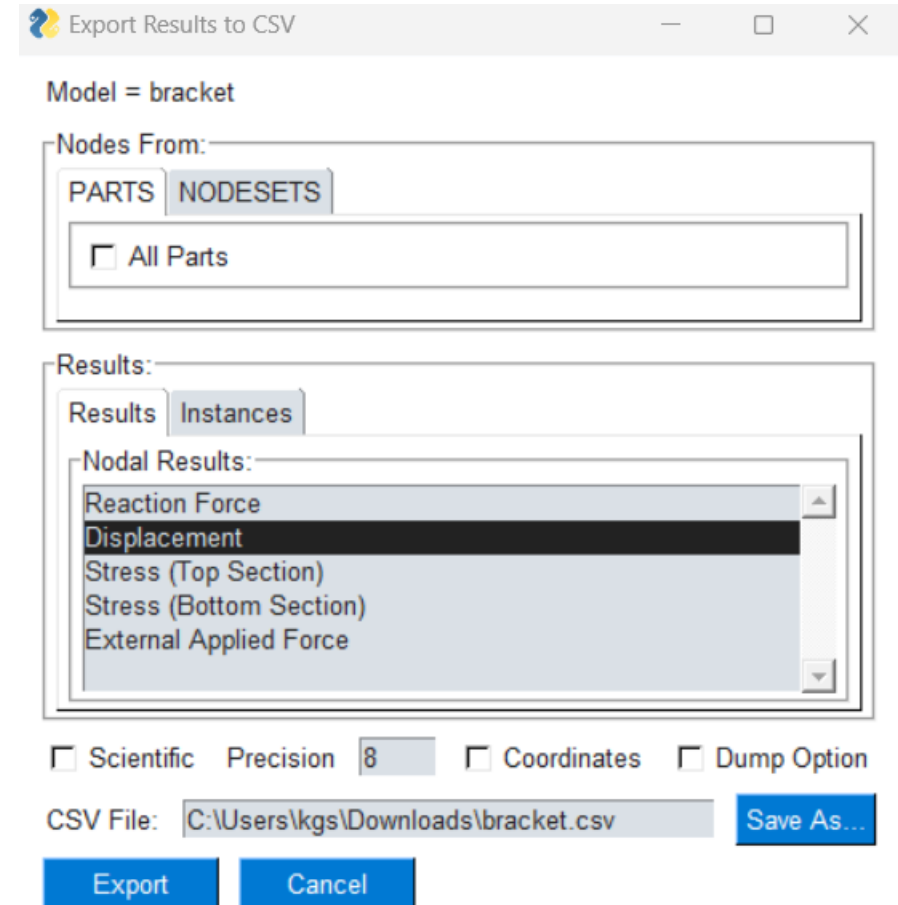
# PyTools: Import Image Views

- All the images in the folder is displayed in a dialog
- User can select required images to be imported
- Image can be inserted as background or as image label



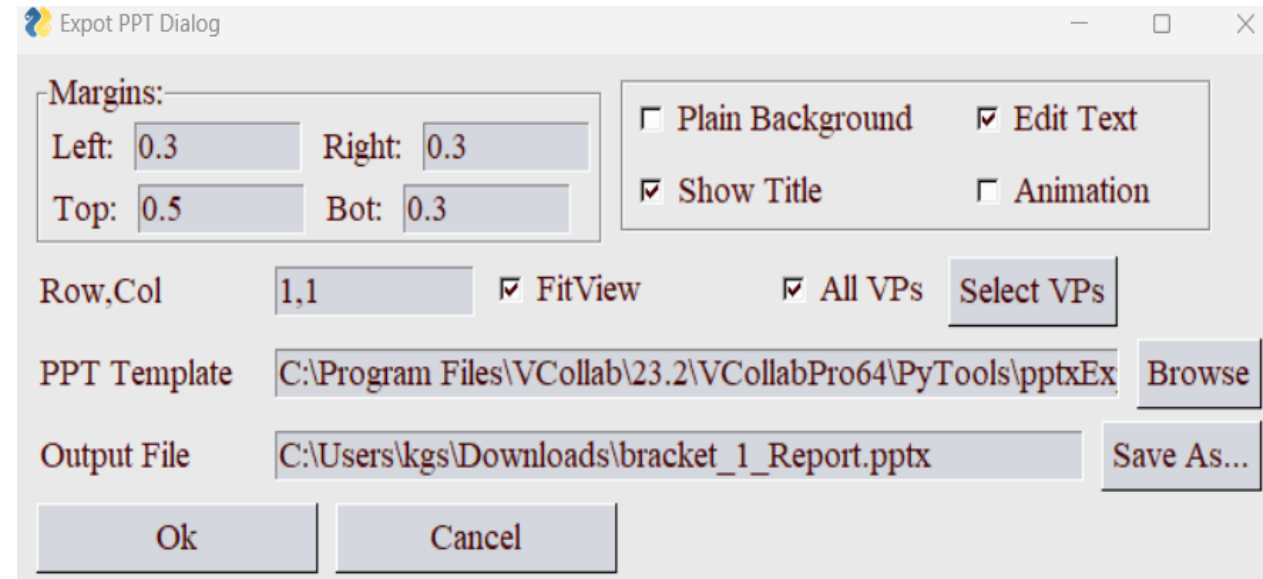
# PyTools: Export CSV

- Added Dump Option to support same node id in multiple parts



# PPTx Export

- Edit Text Option: 2D labels will be exported as editable text in PPT
- Row,Col: Multiple viewpoints in same slide
  - 1,2 => 1 row, 2 column arrangement of two viewpoints
- FitView => Aspect ratio is not critical
- Select VPs => select viewpoint to be exported
  
- Note: To append slides to existing PPT, specify existing PPT as template file



# VCollab 23.2 Enhancements

## VCollabPro

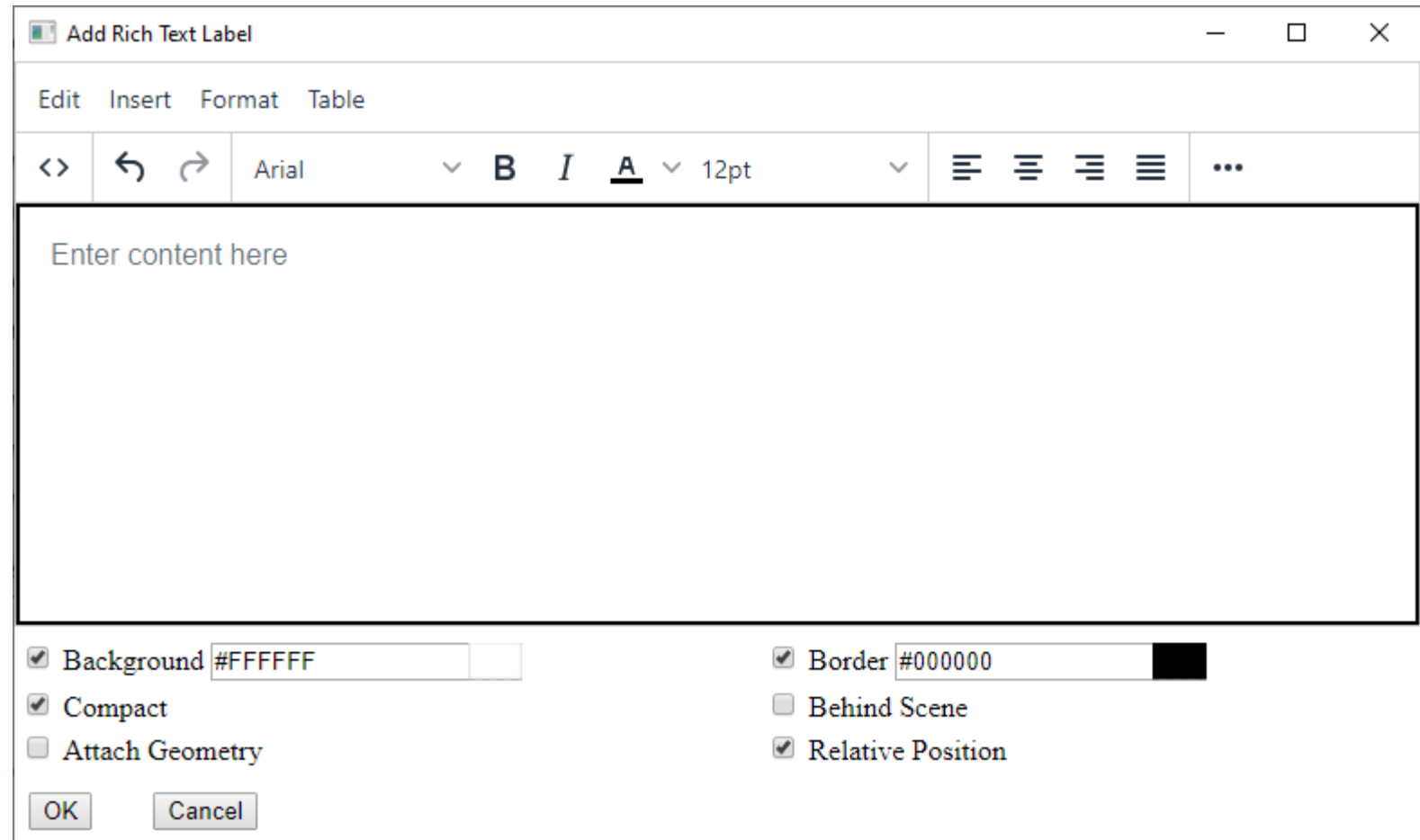
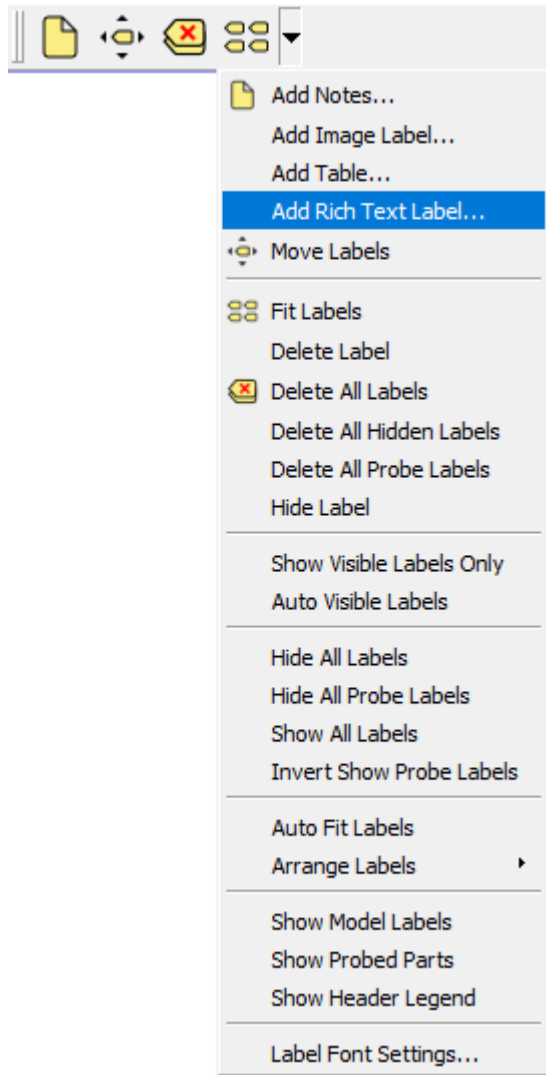
- Option is provided to add Rich Text Labels
- 'Exclude Section' option is enabled in Product Explorer to exclude the selected part from the cut-section
- Enhancements in Adams History Plot capabilities

## VMoveCAE

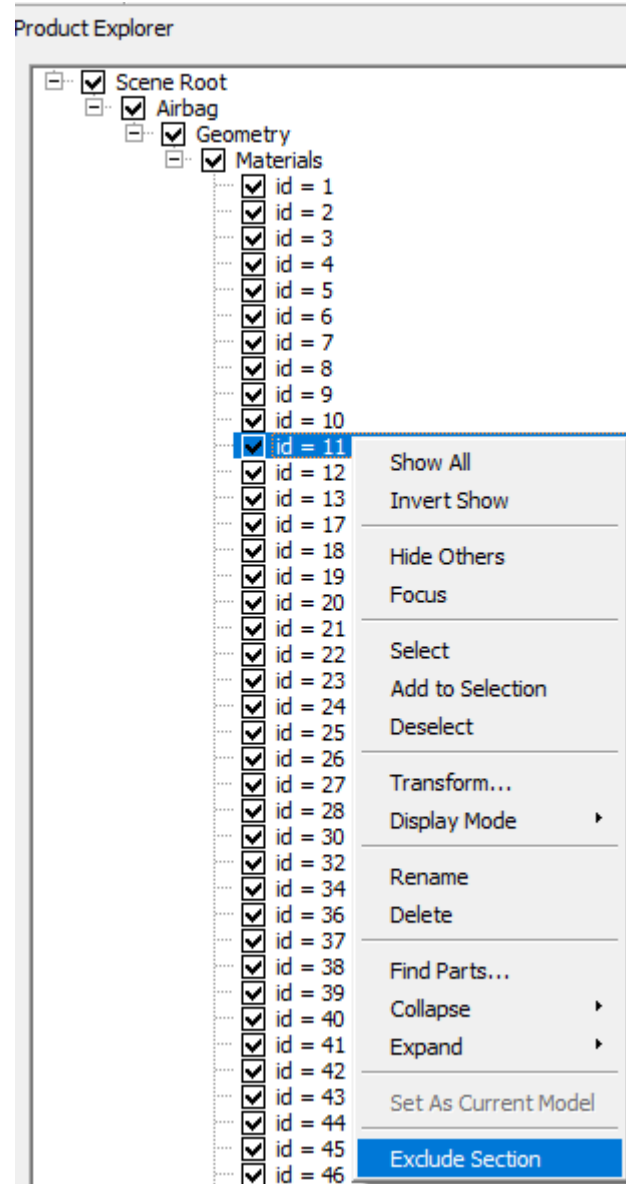
- Added support for NPZ files
- The input file format of VMoveCAESubmit is enhanced

# VCollab 23.2 Enhancements

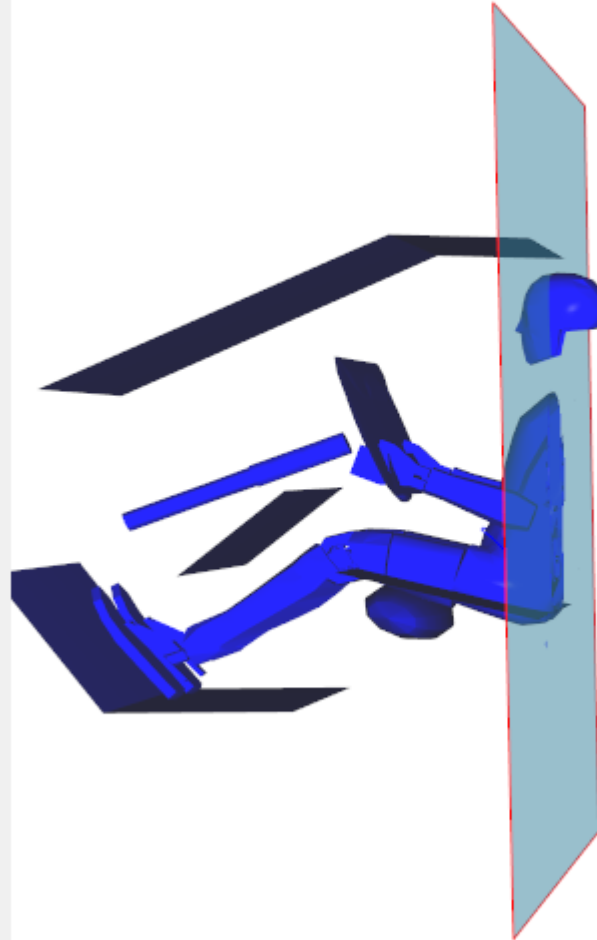
## Rich Text Label



# VCollab 23.2 Enhancements



## Exclude Section



# VCollab 23.1 Enhancements

## VCollabPro

- Behind Scene option for 2D Labels
- Python Menus Customization
- Enhancements to MSC.Adams Support
  - Performance Improvement in Adams Animation
  - Option to draw the 2D Plots for Adams History data
- WCAX/3D HTML Export – Option to export the CAE animations as movie
- Unicode support for all file operations
  - Default Font is set as 'Arial Unicode MS'
- New APIs are provided

## PyTools

- Instance Browser tool
  - Option to delete instances
- Set Legend tool
  - Option to save and load legends

# VCollab 23.1 Enhancements (contd...)

## **VMoveCAE**

- Support for Abaqus 2023
- Support for CFX 2023

## **VCollabWeb**

- Product Tree Enhancements
- Support to view the CAE animation as movie

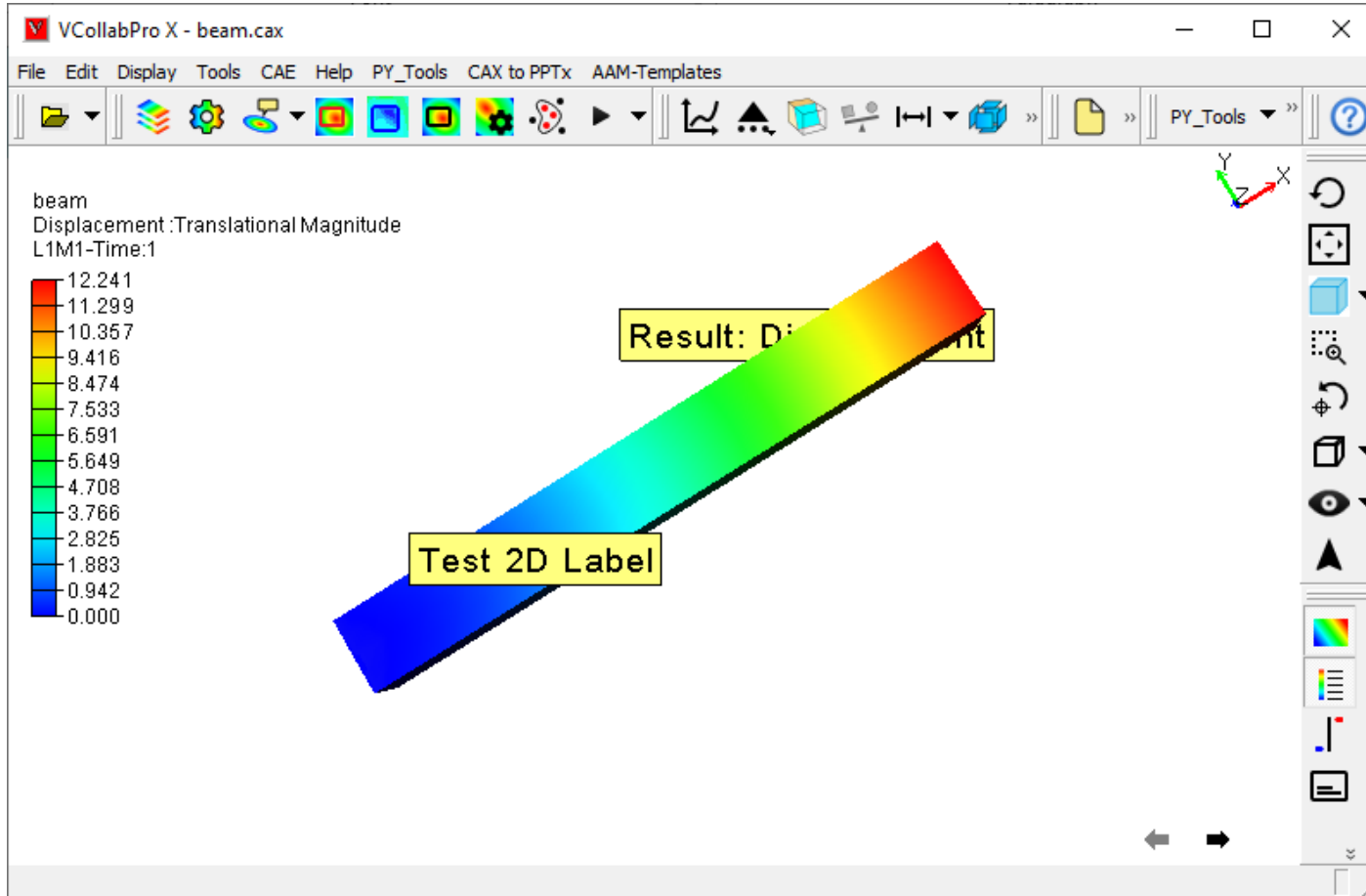
## **VMoveAdams**

- Optimized to reduce the CAX file size for FLEX data
- Enhanced to read the History data
- GUI application is provided for VMoveAdams

# VCollabPro 23.1 Enhancements

## Behind Scene

- Option is provided to move the 2D labels behind the scene



Add Notes

Attach Geometry  Relative Position

Behind Scene

Arial Unicode MS 20

Background  Border

Add Cancel

Add Table

Attach Geometry  Relative Position

Behind Scene

Model: beam  
Part: 1  
Node ID:

Rows: 4 Columns: 3

	1	2	3
1	R1C1	R1C2	R1C3
2	R2C1	R2C2	R2C3
3	R3C1	R3C2	R3C3
4	R4C1	R4C2	R4C3

OK Clear Cancel

Add Image Label

Attach Geometry  Relative Position

Behind Scene

Arial Unicode MS 10

Background  Border

File Capture

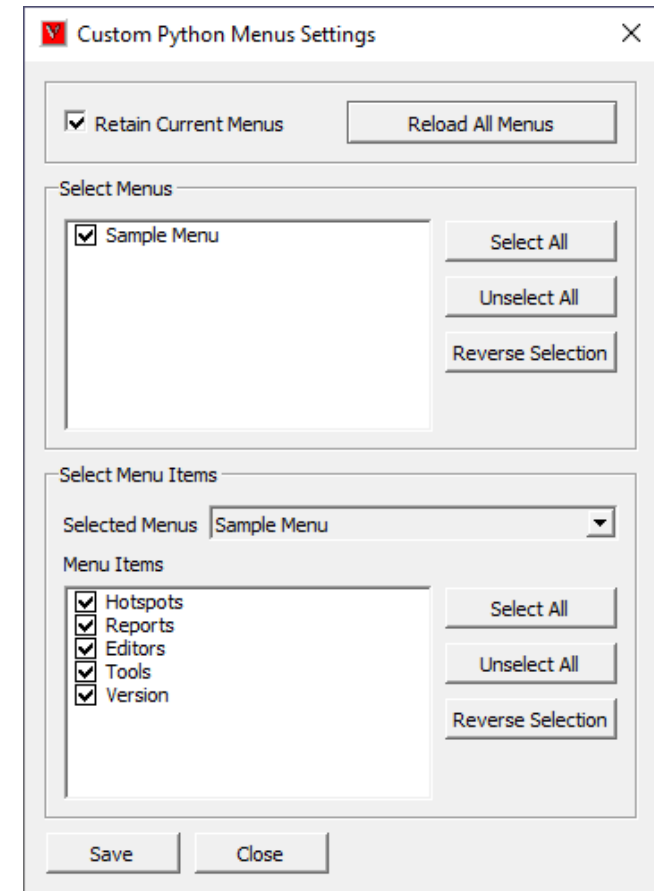
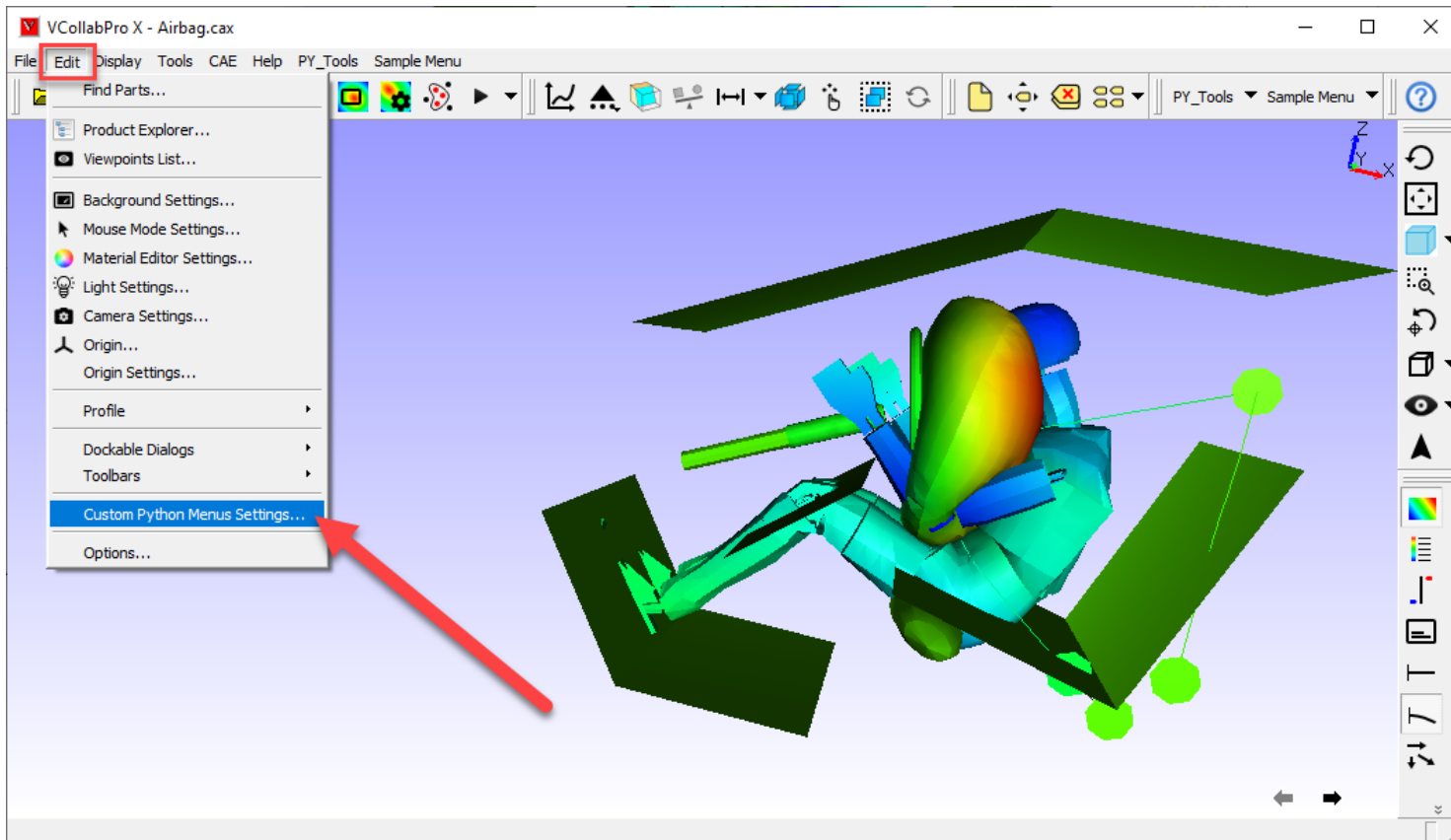
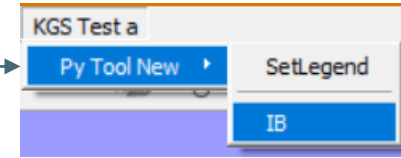
Image Mode: Stretch Text Position: Bottom Text Align: Left

Add Cancel

# VCollabPro 23.1 Enhancements

## Python Menu Customization (option supported only in ProX)

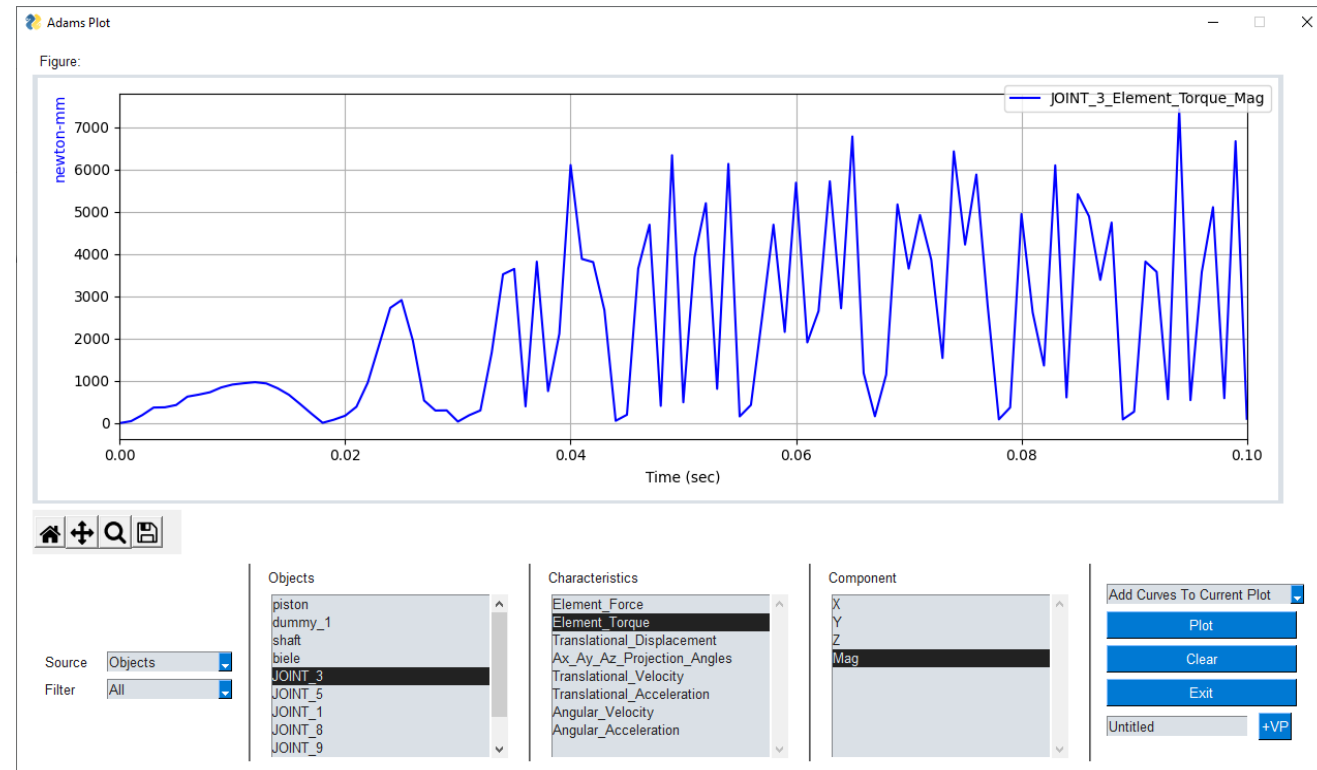
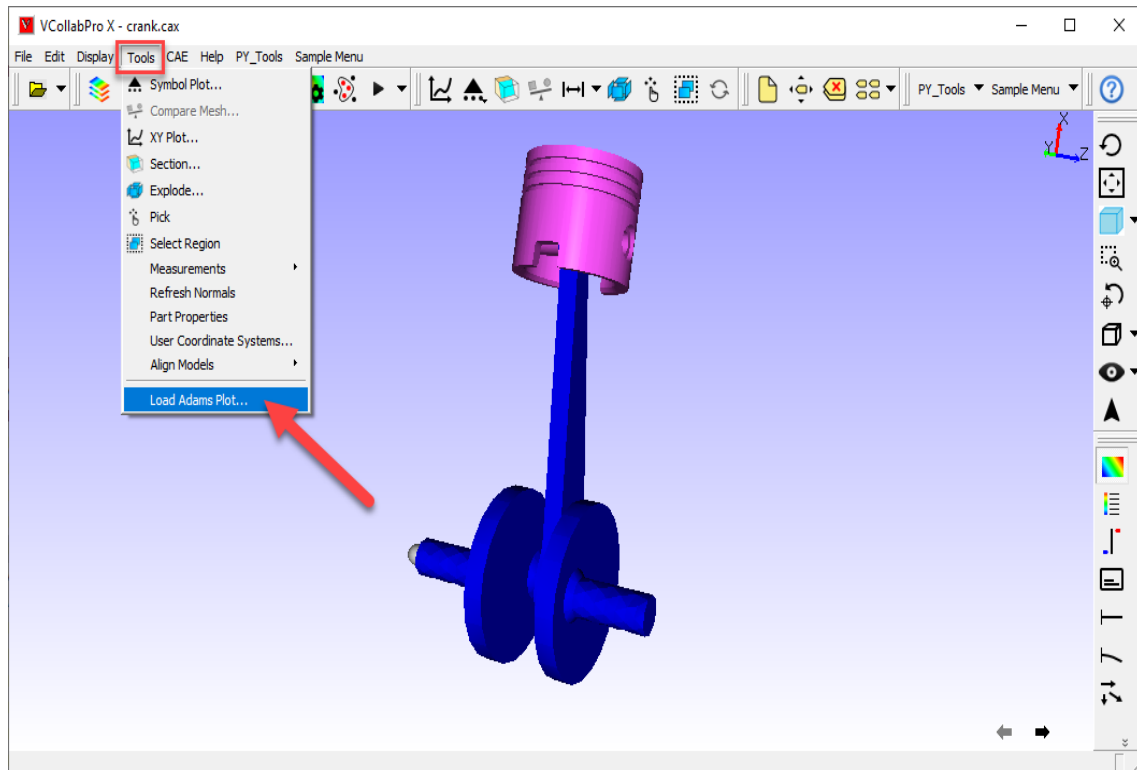
- The custom Python menus are loaded from JSON files that are placed in the folder referred to by the environment variable VCOLLAB\_PLUGIN\_PATH.
- Support sub menus
- Allows users to dynamically load and unload the custom Python menus.



# VCollabPro 23.1 Enhancements

## Support for Adams History data (option supported only in ProX)

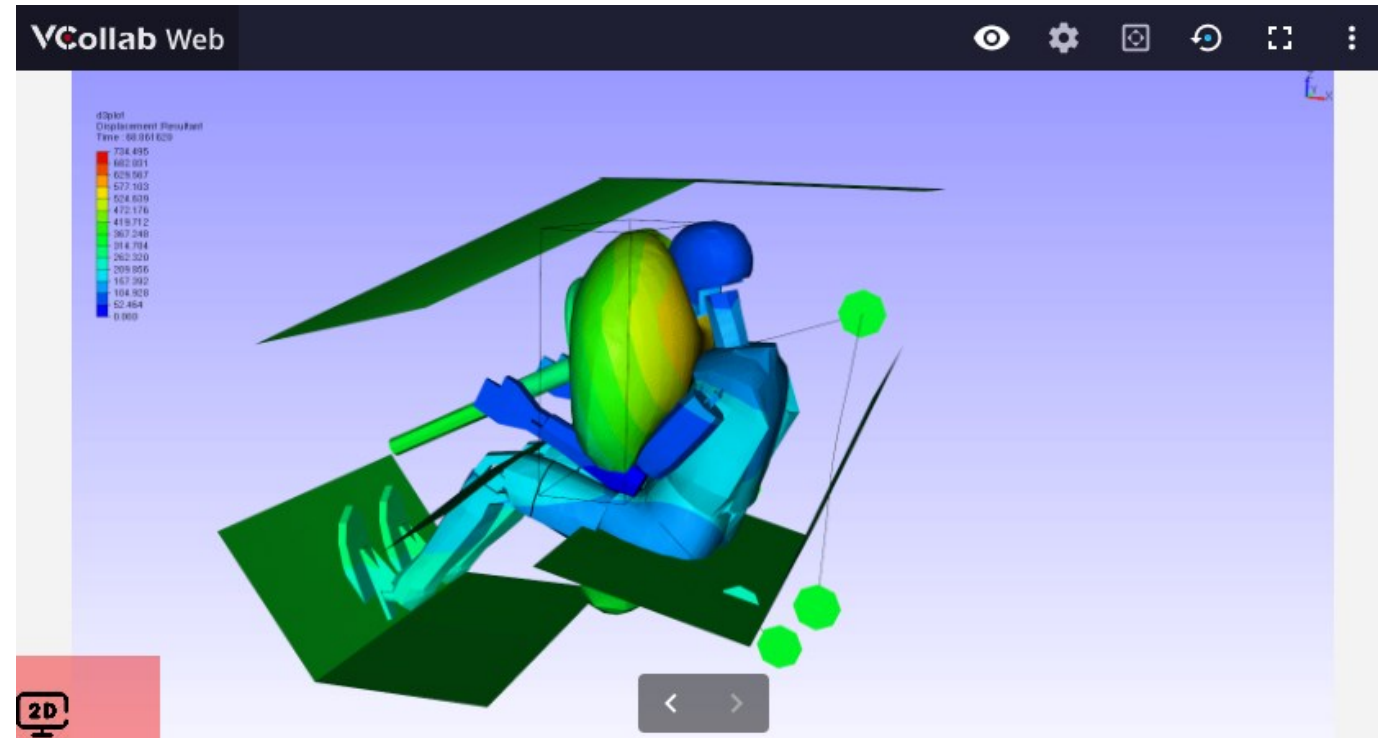
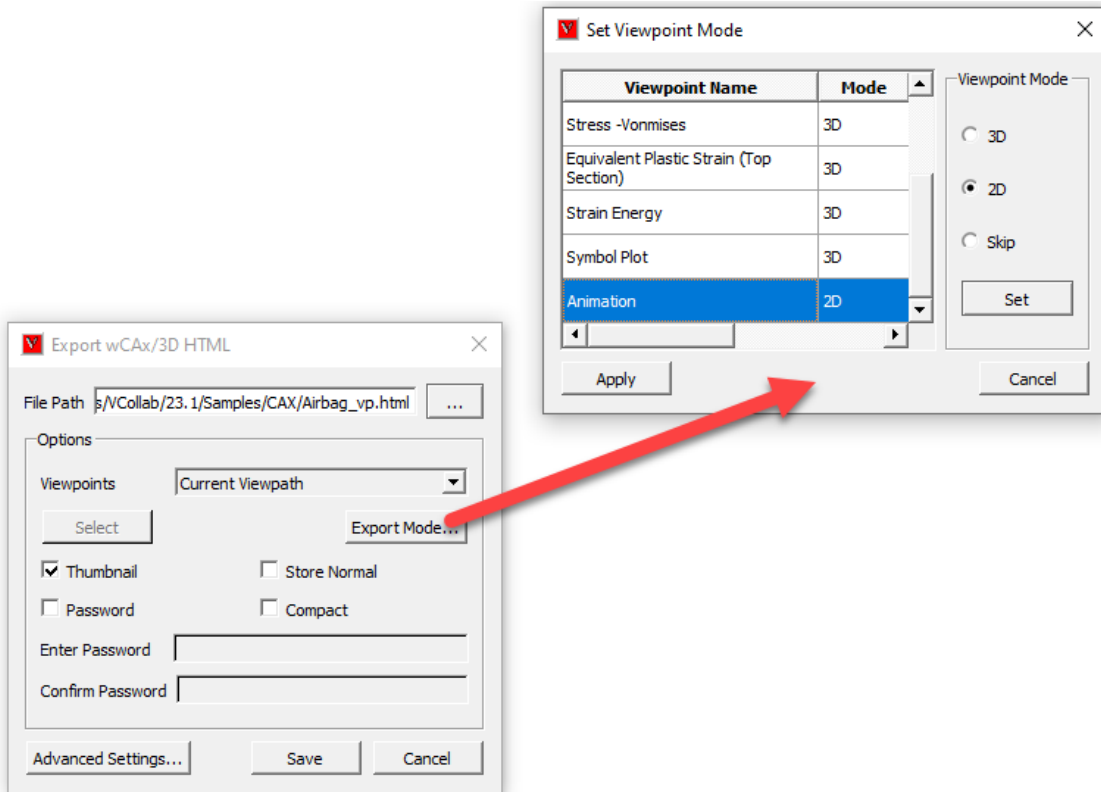
- VCollabProX is enhanced to draw the curves for Adams History Data
- Performance improved while loading and playing the Adams simulation



# VCollabPro 23.1 Enhancements

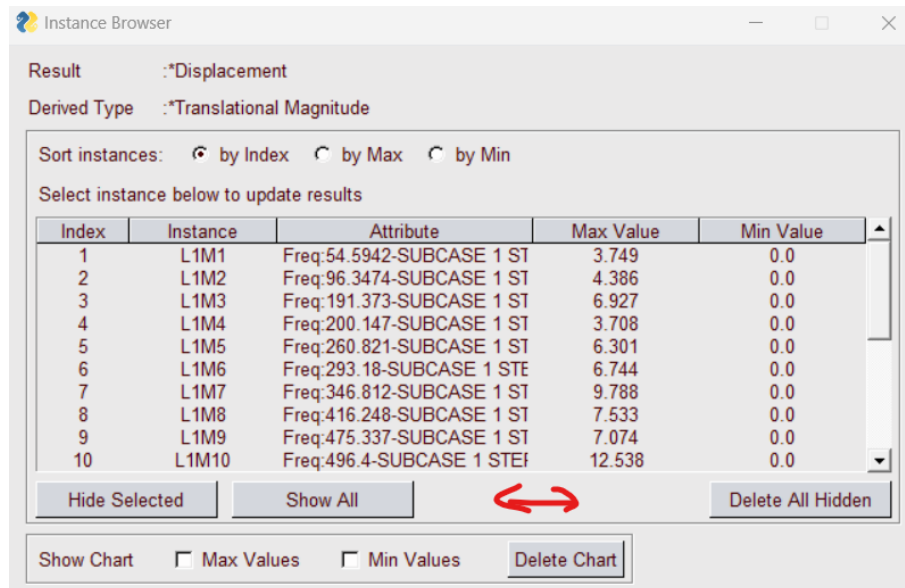
## Export HTML

- WCAX/3D HTML Export – Option to export the CAE animations as movie
- This option can be used to reduce html file size
  - (when viewpoint with transient animation is present)

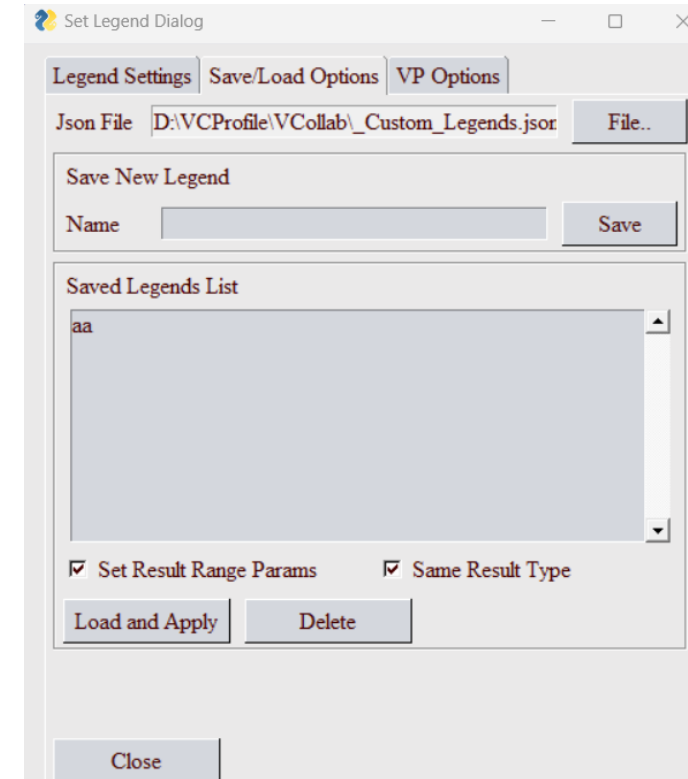


# VCollabPro 23.1 – PY-Tools Enhancements

- Instance Browser tool
  - Option to delete instances



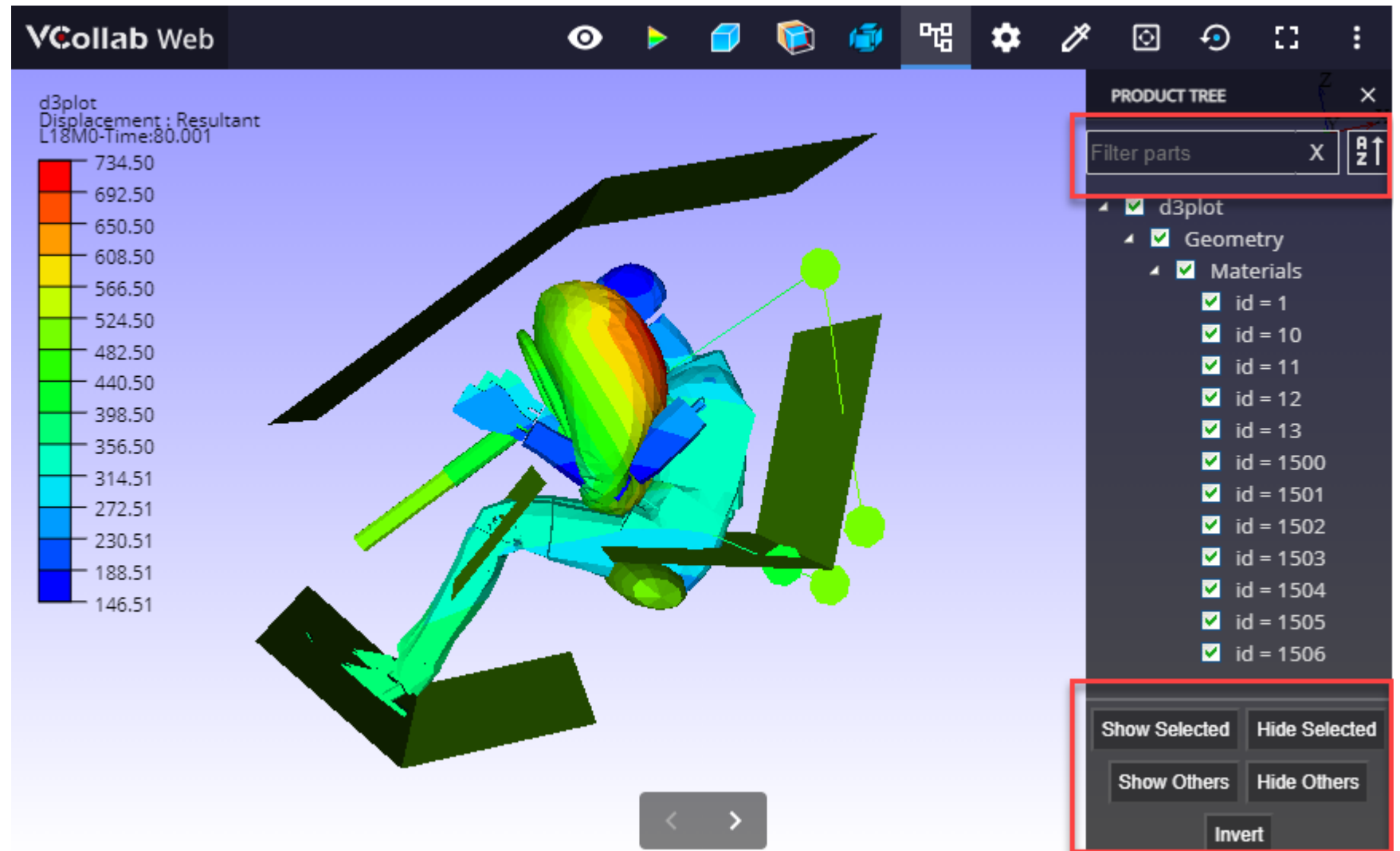
- Set Legend tool
  - Option to save and load legends
  - Option to apply a legend settings to multiple viewpoints



# VCollabWeb 23.1 Enhancements

## Product Tree Enhancement in VCollabWeb Viewer

'Filter Parts' option is provided in the Product Tree



# VCollab 22.x Enhancements

# VCollab 22.x Enhancements

## VCollabPro

- WCAX Export – Premium Features
- Mouse Settings: Reversing Mouse Wheel Zoom-in and Zoom-out
- Exporting the results of Nodesets into CSV
- NodeSet manager: Show & Hide Parts
- Compare Mesh: Sign Option is introduced in Compare Mesh dialog
- Find Dialog: Wild Card option is autodetected
- Probe ID – Multiple probe labels when multiple parts have same id
- Merge : If viewpath names are same, new suffix will be added
- Set Working Directory (for all save dialogs)
- Prompting user with warning message to save modified CAX with viewpoints while reloading and closing the application.

- XYPlot : Minor Grid option, Display enhanced
  - Titles supported in CSV import/export,
  - Plots for Rigid Body Transformation (Adams Data) Results
- Image Label: Function is enhanced. Default texture mode is set to Actual/FitView
- Python version upgraded to 3.8
- Envelop for selected instances using Python API
- Key (name) is added to Labels/Tables , which can be used to search for a specific type of labels (only using API)

## PyTools

- Set Legend => Enhanced GUI
- Instance Browser => New Function
- Export CSV Results => Nodesets Option
- CreateCAX (VMoveSubmit)

# VCollab 22.x Enhancements (contd...)

## **VMoveCAE**

- Abaqus history plot extraction enhancements
- VMoveCAESubmit functionality is enhanced
- Dev scripts updated / enhanced
- Support for Abaqus 2022
- Support for CFX 2022
- Support for ANSYS 2022
- Gasket element result transformations bug is fixed
- Issues related to Ansys 2021 format changes are fixed

## **VCollabWeb**

- Advanced Viewer: Support provided for ProductTree, Explode, Section and Probe
- Bug fixes and Enhancements

## **VMoveCAD**

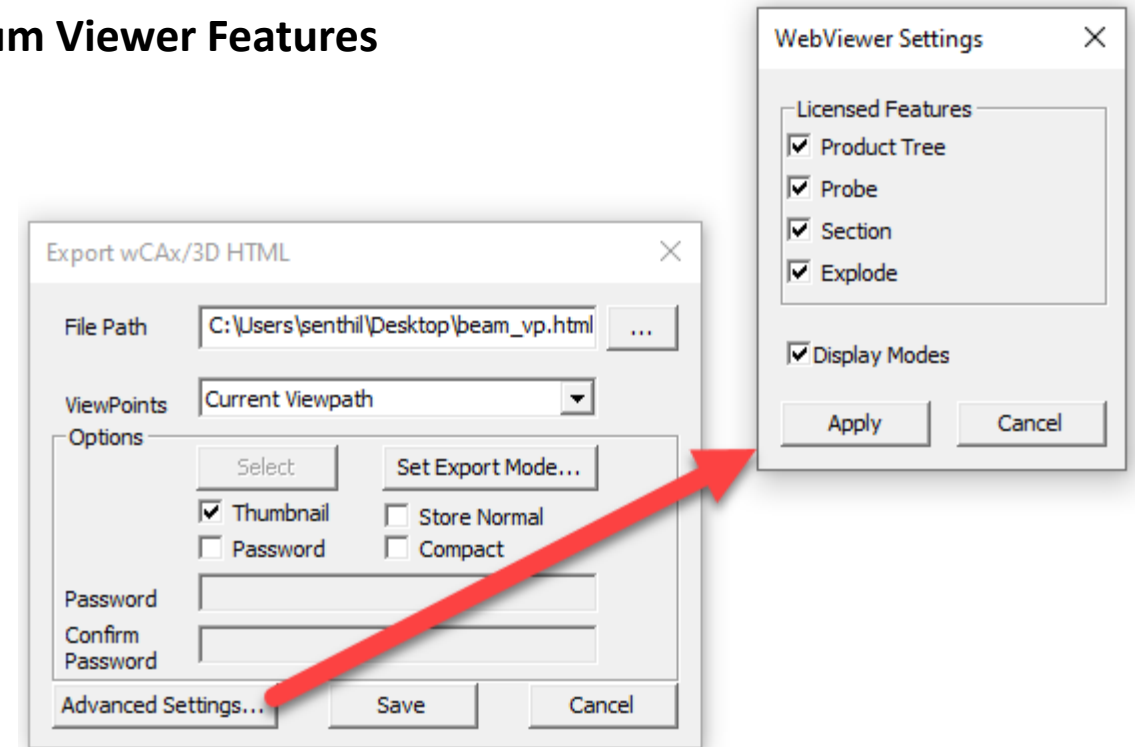
- 3D Experience (Catia V6) is supported up to 2022x
- Catia V5 is supported up to R32(V5-6R2022)
- Pro/E is supported up to Creo Parametric 9.0
- Inventor is supported up to 2023
- UG NX is supported up to UGNX2206
- ACIS is supported up to 2021 1.0
- Parasolid is supported up to v34.1
- SolidWorks is supported up to 2022
- SolidEdge is supported up to 2022

# VCollabPro Enhancements

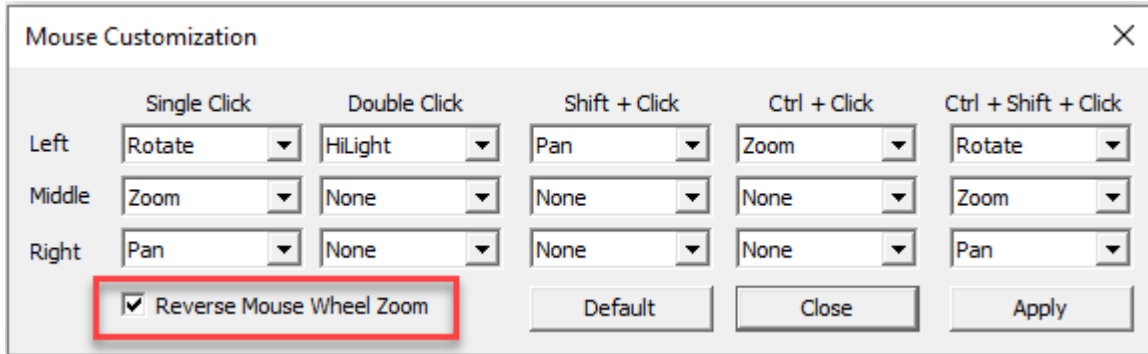
## WCAX/HTML Export – Premium Viewer Features

- Option is provided in VCollabPro to export the WCAX data with
  - Product Tree
  - Probe
  - Section
  - Explode
- VCollabWeb Viewer is supported to view these data

Note: These 4 options are premium features and need license to export it.

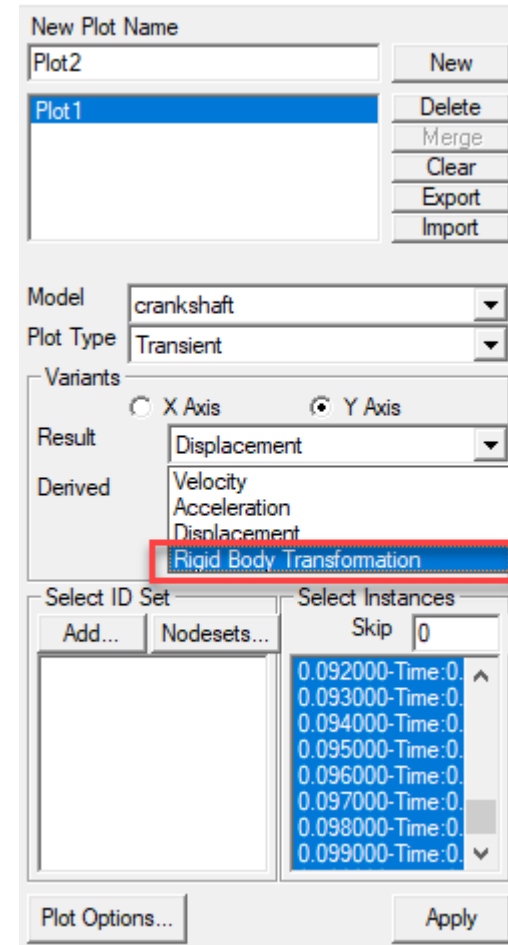


# VCollabPro Enhancements



## Reverse Mouse Wheel Zoom:

Zooming direction can be customized for forward as well as backward scroll

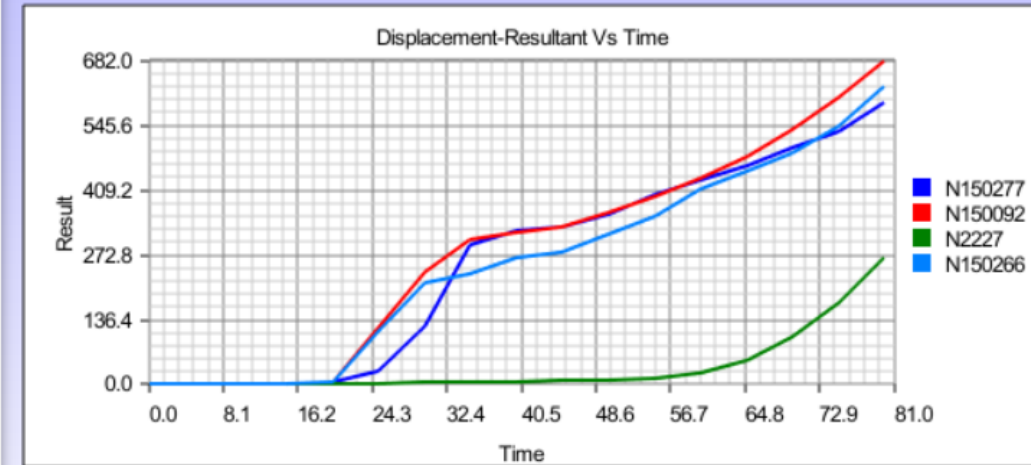
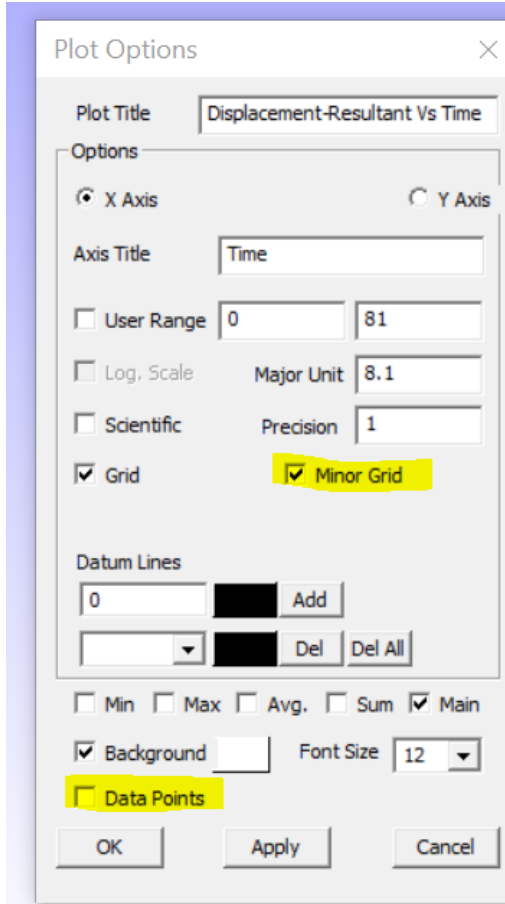


**XYPlot:** Supported for RigidBodyTransformation (Adams Data) Results

# VCollabPro Enhancements

- XY Plot Enhancements

- Minor Grid option
- Enhanced Display
  - Option to suppress markers for Data points
  - Line thickness based on line size in options dialog
- Titles supported in CSV import/export
  - Format changed

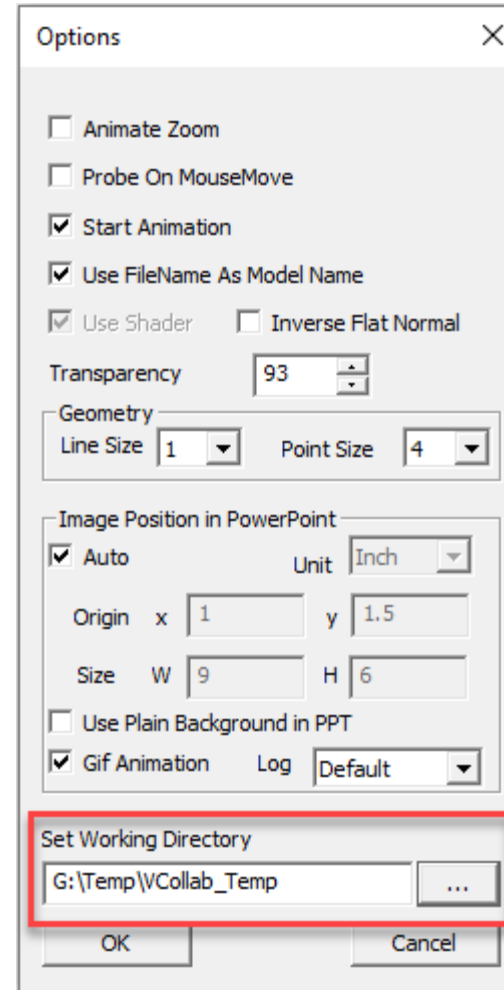
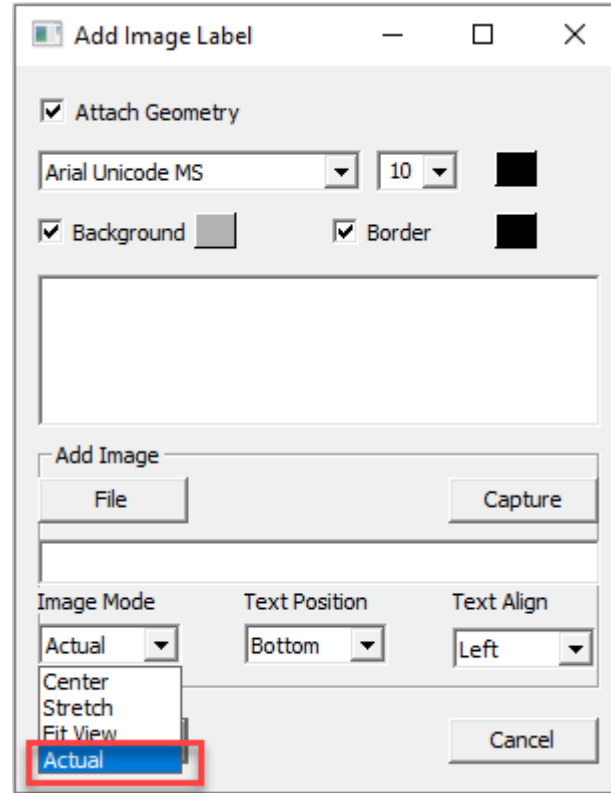


	A	B	C	D	E	F
1	VCOLLAB_XYLOT_FILE_CSV_X_SINGLE_ATTRIBUTE					
2	#Titles	Displacem	Time	Result		
3	Time	Time	N150277	N150092	N2227	N150266
4	0	0	0	0	0	0
5	4.99443	4.99443	0.000252	0.000261	0.124359	0.000311
6	9.99323	9.99323	0.002075	0.001531	0.534401	0.001549
7	14.9916	14.9916	0.048939	0.067748	1.28159	0.071102

# VCollabPro Enhancements

## Add Image Label :

- Functionality is enhanced
- Option is introduced to attach the image with actual size



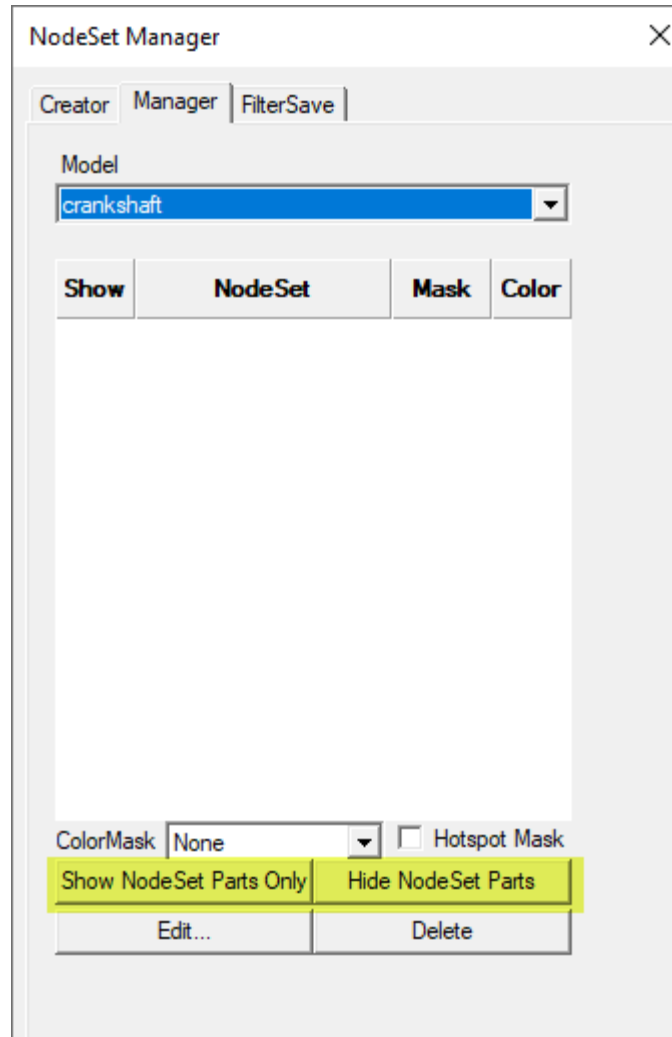
## Set Working Directory:

- The directory from which the CAX file was loaded is the default working directory. The working directory can be edited and set by the user. All file dialogs will pop with the working directory that is set.

# VCollabPro Enhancements

## Nodeset Manager:

- Displays or Hides parts associated with the nodesets

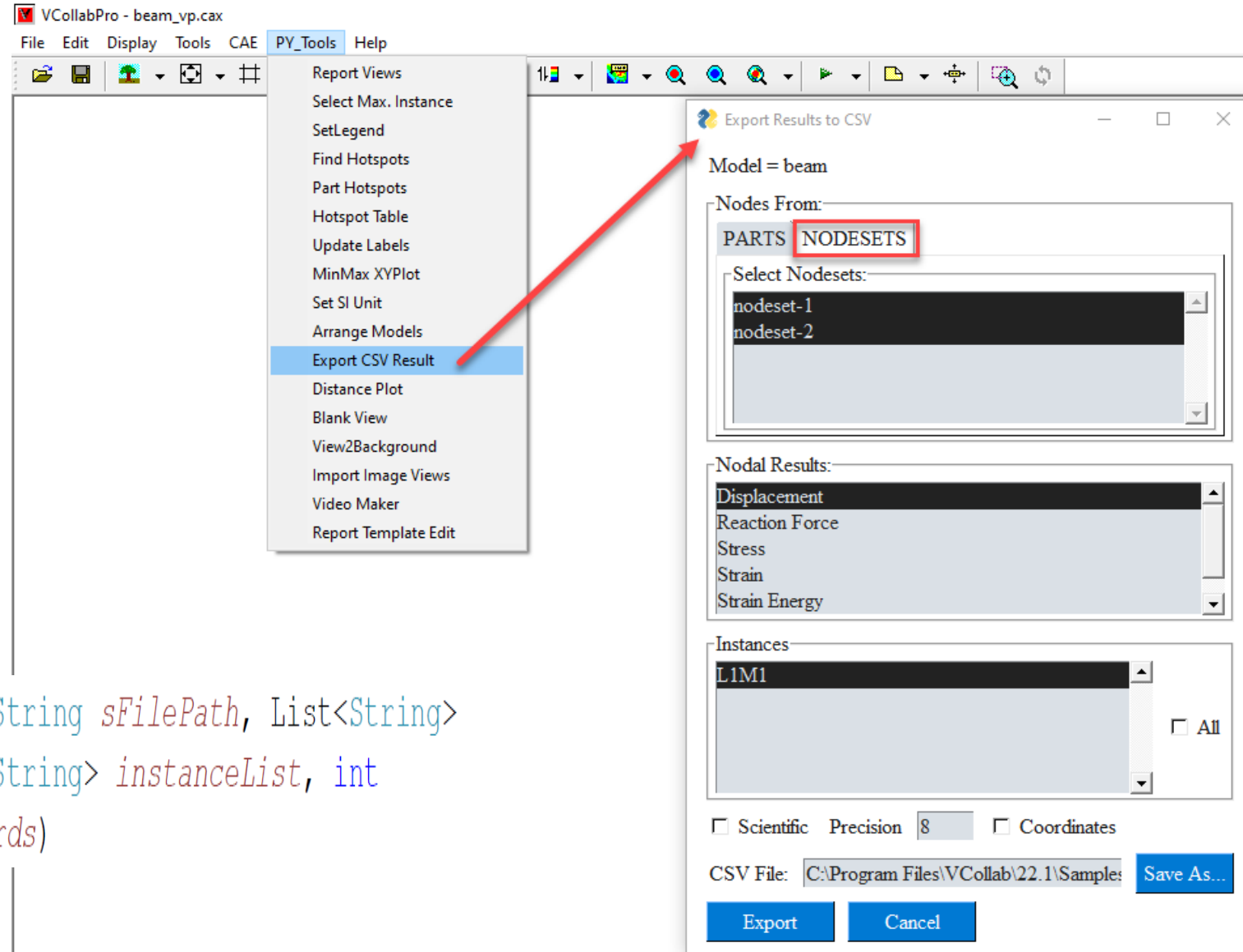


# PyTools => Export CSV Results => Nodesets Option

Interface for exporting the results of Nodesets into CSV

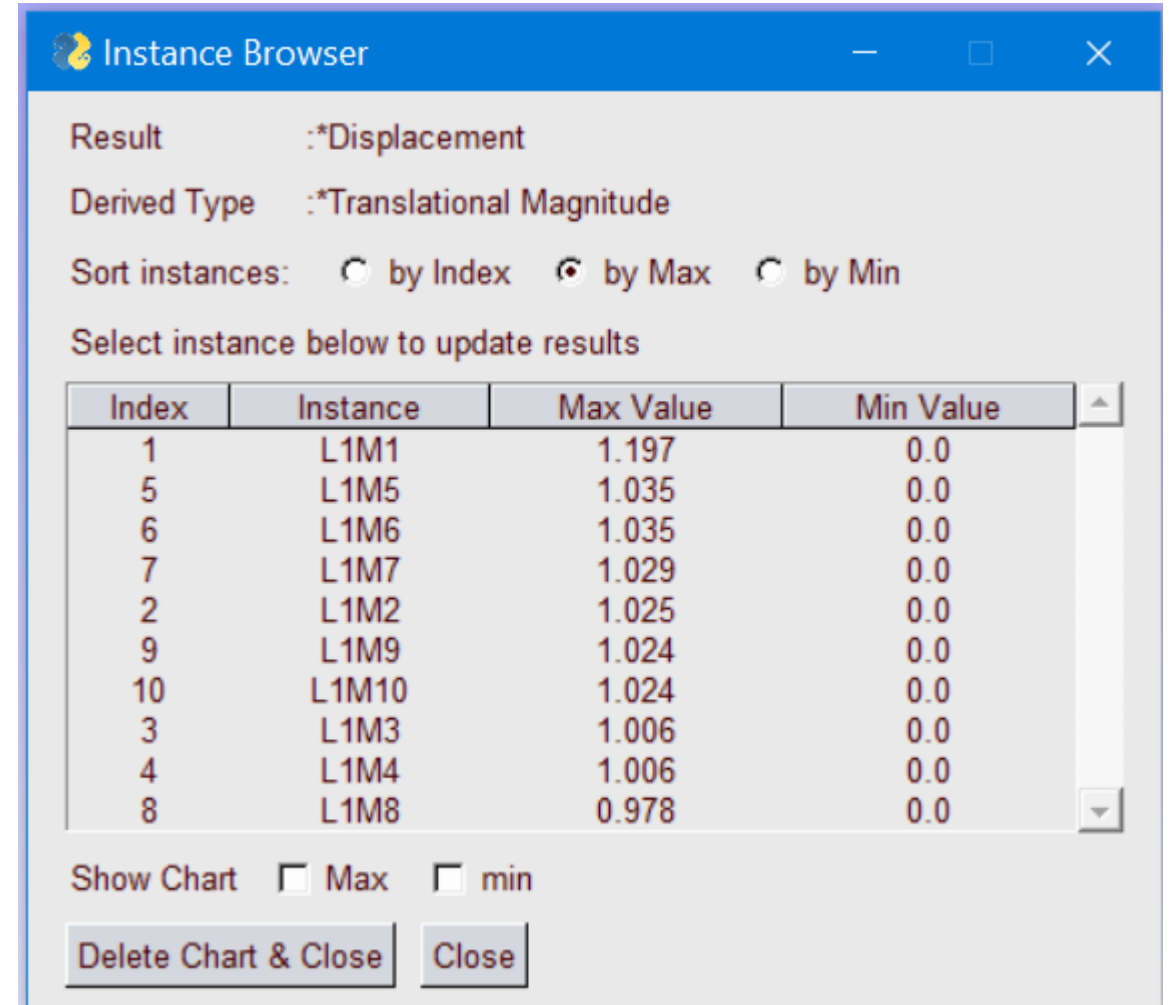
Exporting the results of Nodesets into CSV using Python API

```
bool xExportCAENodeSetResults(String sModel, String sFilePath, List<String>
NodeSetNames, List<String> resultList, List<String> instanceList, int
iPrecision, bool bScientific, bool bPrintCoords)
```



# PyTools => Instance Browser

- Display List of instances and Max/Min Value
- User can select specific instance from list
  - CAE display will be updated to this instance
- User can create Max or Min XY plot



Instance Browser

Result : \*Displacement

Derived Type : \*Translational Magnitude

Sort instances:  by Index  by Max  by Min

Select instance below to update results

Index	Instance	Max Value	Min Value
1	L1M1	1.197	0.0
5	L1M5	1.035	0.0
6	L1M6	1.035	0.0
7	L1M7	1.029	0.0
2	L1M2	1.025	0.0
9	L1M9	1.024	0.0
10	L1M10	1.024	0.0
3	L1M3	1.006	0.0
4	L1M4	1.006	0.0
8	L1M8	0.978	0.0

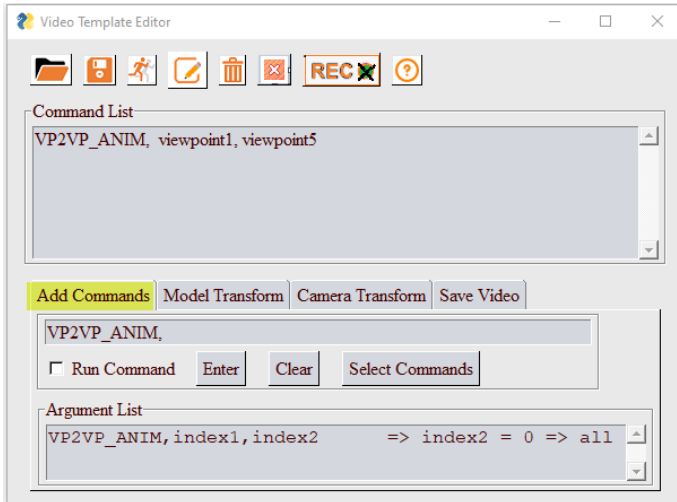
Show Chart  Max  min

Delete Chart & Close Close

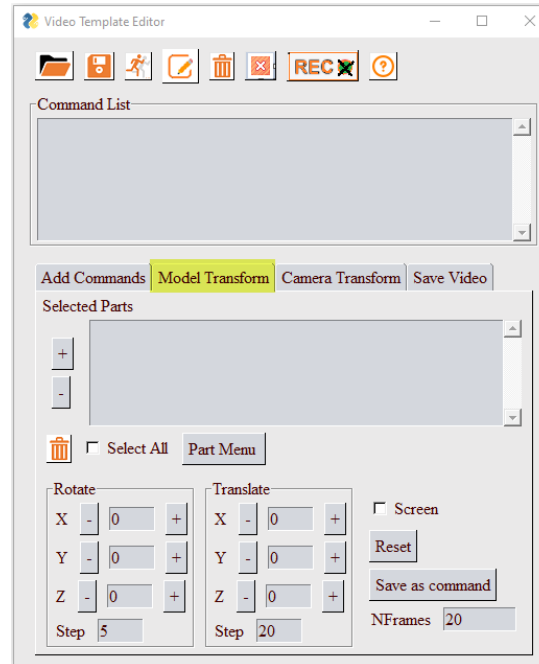
# PYTools: Video Maker

Animations can help to communicate complex geometric feature (Shape/Assembly/Joint/Connections), specific deformations or relative motion between parts and critical hotspot locations in a model. In general, a video should capture part movements, rotation of models or camera, sectional views and CAE animations. High quality animations are created by capturing many frames (images) and then stitching them together. Select "PyTools=> Video Maker " menu option to lunch the following GUI. The GUI can be used to load , Edit and run a set of commands. Help option in this dialog will give details for all the commands. Python Source code for the commands as also available in Pytools/VideoMaker folder.

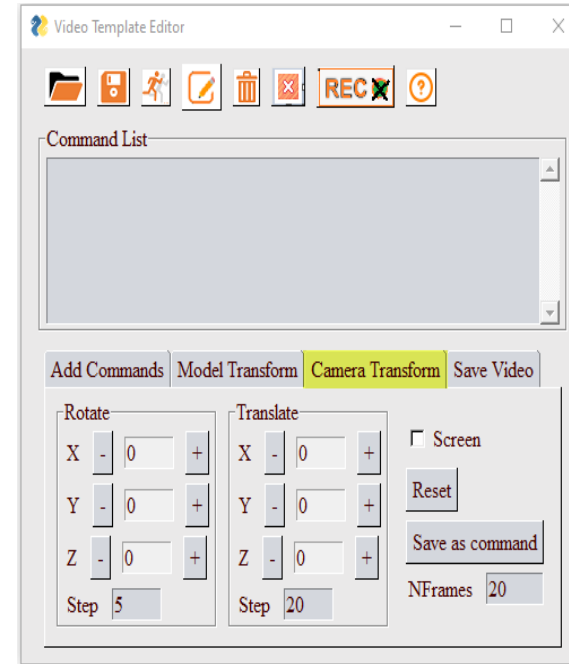
## Video Template Editor GUI



To add a command to define video action



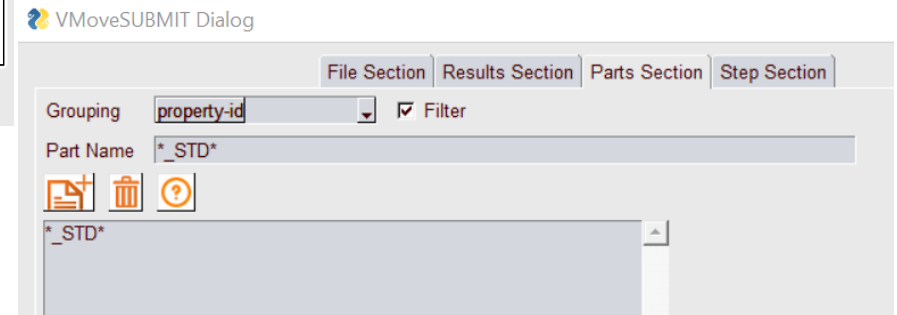
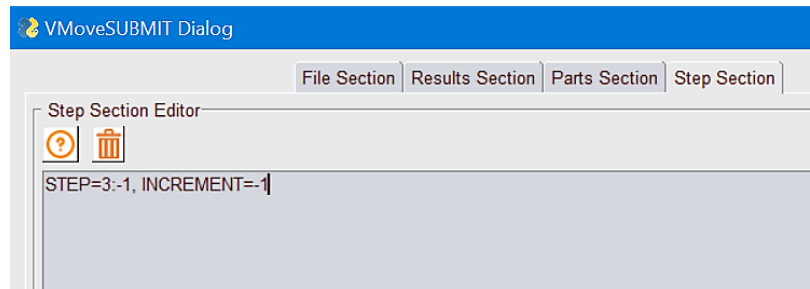
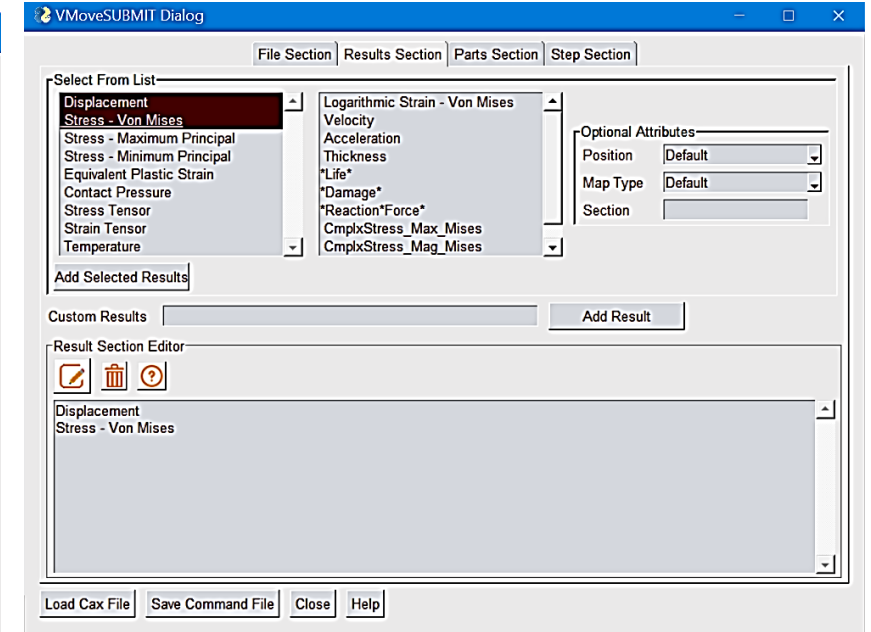
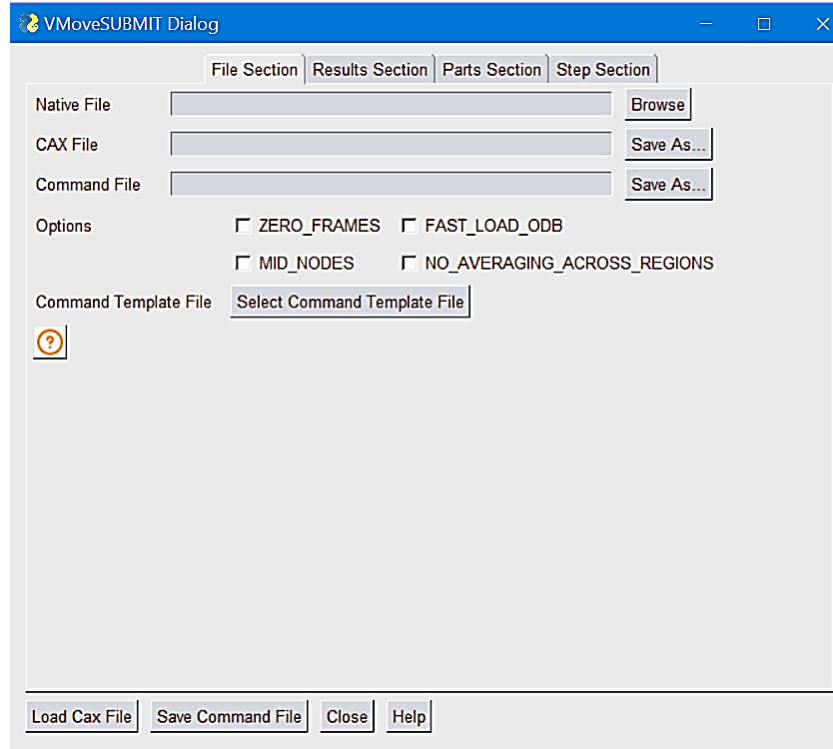
To define model transformation



To define Camera Transformation

# PyTools => CreateCAX (VMoveSubmit)

- GUI to select Native files, Results, Parts and Steps/Instances
- Create CAX using VMoveSubmit and load into VCollabPro
- Or Save VMoveSubmit command text file and run in batch mode



# VCollabWeb Viewer Enhancement

## Premium Viewer Features

Support provided for

- Product Tree
- Explode
- Section
- Probe

