

# Tecplot 360 MB Beta Notes

We're working on improvements to make Tecplot 360 "MB" (Mo' Better). This version of Tecplot 360 represents a new way of working with your data by introducing a number of key new concepts:

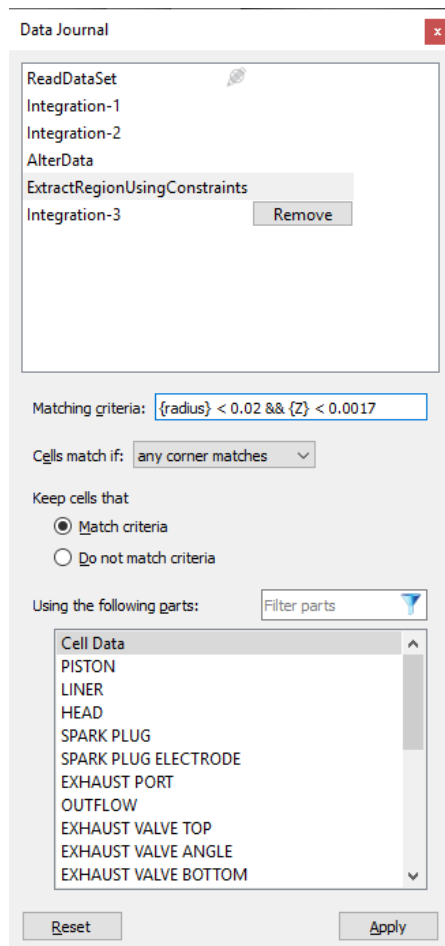
- Data Journal
- Deferred computation
- Part names
- Transient XY Line Plots
- Layouts/Macros/Stylesheets will refer to Parts/Variables by name

These concepts will make Tecplot 360 faster to use, reduce reliance on scripting, decrease the need to write out data when saving layouts, and allow layouts, macros, and stylesheets to be more easily reused with other datasets.

[Learn more in this YouTube video](#)

## Data Journal

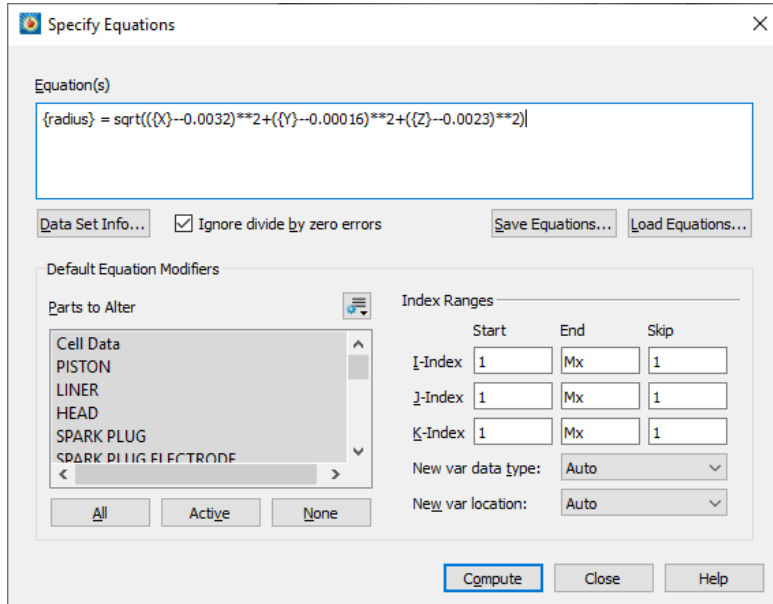
The data journal is the key component to this Beta build of Tecplot 360. The Data Journal is available via the View > Data Journal sidebar menu and displays a visual, executable, and editable record of the data operations performed to the dataset. This Data Journal is only executed at timesteps you visit, saving you time by not performing data operations across all timesteps immediately (as Tecplot 360 does today).



Tecplot 360 has roughly 40 data operations that will need to be ported to this new infrastructure. This Tecplot 360 Beta has a handful of the most commonly used data operations implemented to demonstrate the aforementioned concepts. These data operations are:

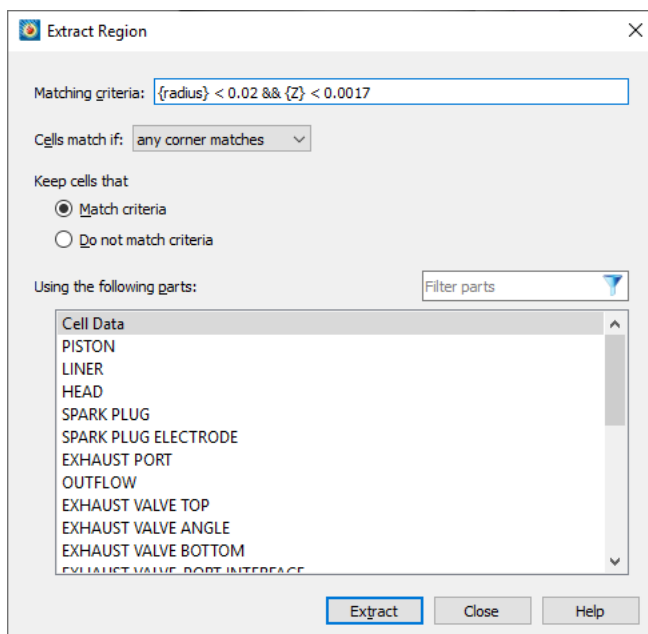
## Data > Alter > Specify Equations

Specify Equations will now use “Deferred computation” so you don’t have to wait for the equation to be processed at all timesteps before moving on with your work.



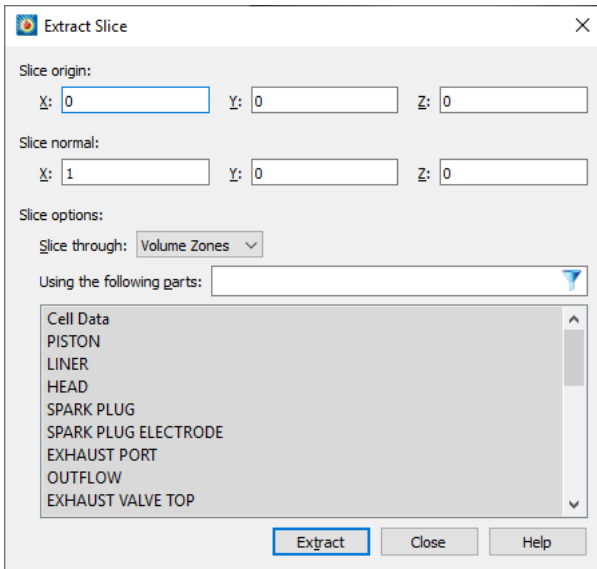
## Data > Extract > Extract Region \*NEW\*

Extract Region allows you to use equivalence operators to extract a subset of the cells in your data.



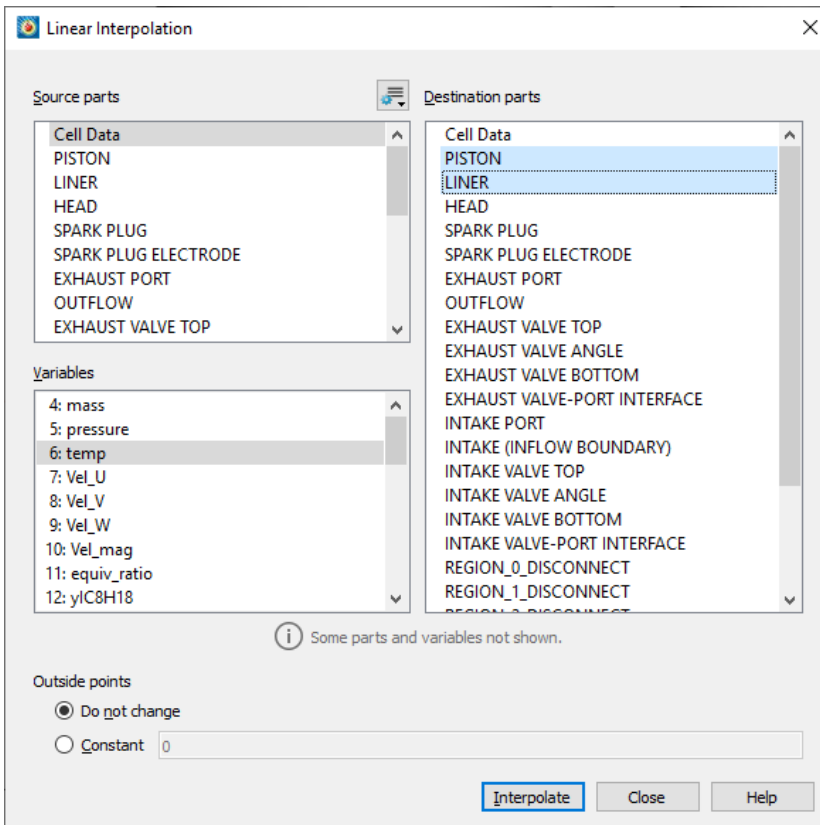
## Data > Extract > Slice (prototype) \*NEW\*

A new extract slice dialog is independent of the “Slice Details” dialog. This new method of slice extraction will eventually be streamlined, but check out this feature, especially if you need to extract slices over time in a transient dataset. It utilizes “deferred computation” to only extract at the timesteps you visit.



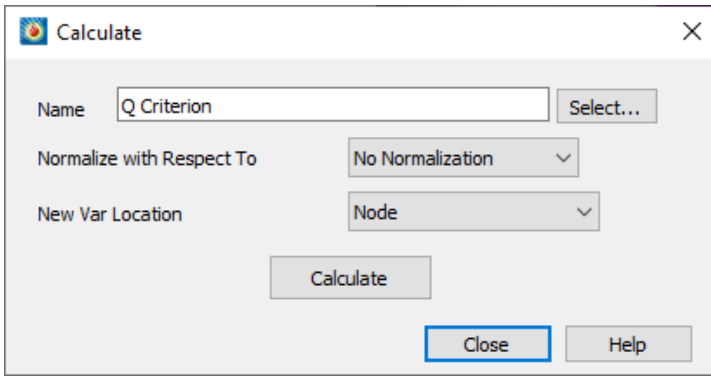
## Data > Interpolate > Linear

Linear Interpolation has a redesigned dialog that makes interpolation across time for transient datasets easier.



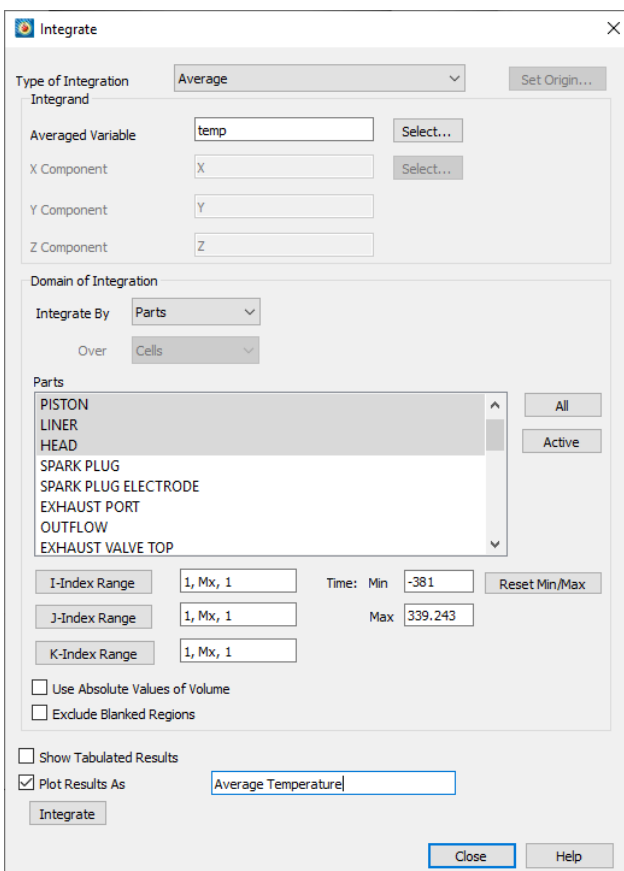
## Analyze > Calculate Variables

Calculate Variables no longer has the “Calculate On Demand” option, as it now utilizes the “Deferred computation” framework to only compute variables at the timesteps you visit.



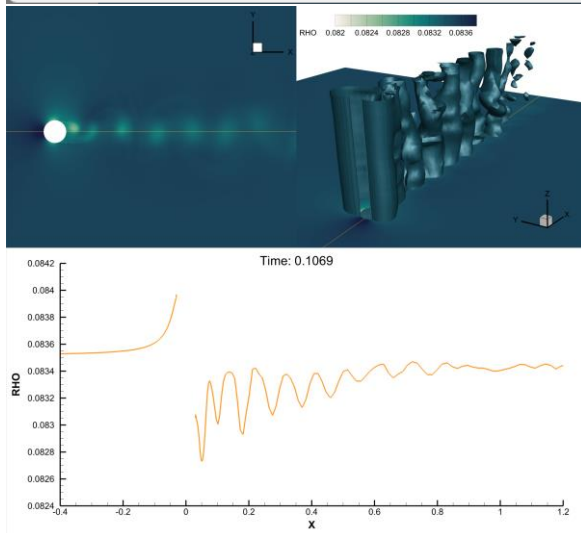
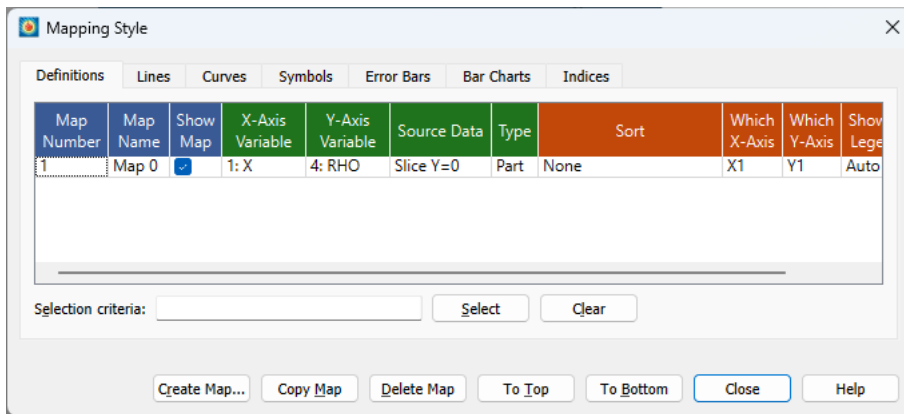
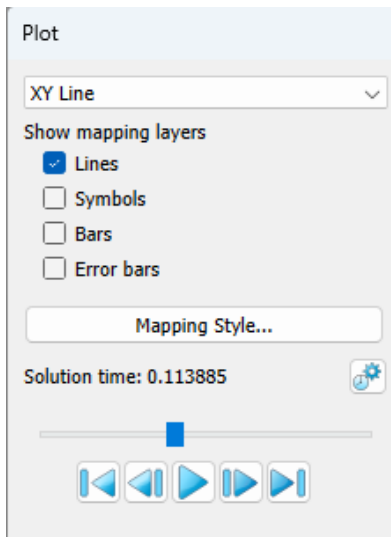
## Analyze > Perform Integration

Integration results (when choosing Plot Results As) will now allow you to save a layout without saving the data, since the command is now stored in the Data Journal and can be reproduced when opening the layout.



## Transient Line Plots \*NEW\*

Tecplot 360 has the ability to animate Line Mappings, but it's never been easy to animate line data concurrently with 2D and 3D data. The Tecplot 360 MB Beta makes this easy, by allowing Line Maps to reference Parts. The Plot Sidebar also now includes the Solution Time controls, just like 2D and 3D plots. If you have transient data, simply assign a Line Map to a transient Part and animate!



## Known Issues

- Layouts which use Integration may flip 2D/3D plots to XY when interrupting during an animation.
- Performing data extraction actions that have not yet been ported to this new infrastructure may result in undefined behavior. For example:
  - Use Data > Extract > Slice (prototype) **instead of** Data > Extract > Slice
  - Use Data > Extract > Region **instead of** Data > Extract > Blanked Zone
- Transient controls on the sidebar may go gray while animating when the layout includes XY line plots. To stop the animation, use the “Stop” button at the bottom right of the application.
- Layouts which use Edit Time Strands may not load correctly in this version.

- Use of **letter codes** will result in undefined behavior when using `Data > Alter > Specify Equations` and `Data > Extract > Region`. Variables names, enclosed in curly braces are recommended:
  - Example:  $\{\text{Radius}\} = \text{sqrt}(\{\text{X}\}^2 + \{\text{Y}\}^2)$
- Check out [this YouTube video](#) for a demonstration of these concepts.