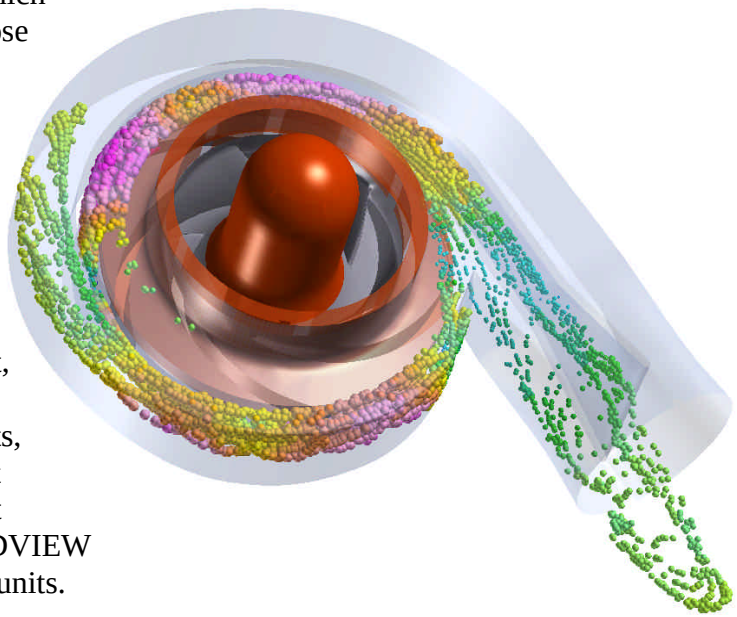
Intelligent Light

What's New in PROSTAR 521 for STAR 3.15

The latest release of PROSTAR which is now available from CD-adapco has several new features which are of benefit to FIELDVIEW users. For those who are already familiar with PROSTAR, there have been some bug fixes to the FIELDVIEW Unstructured File Export.

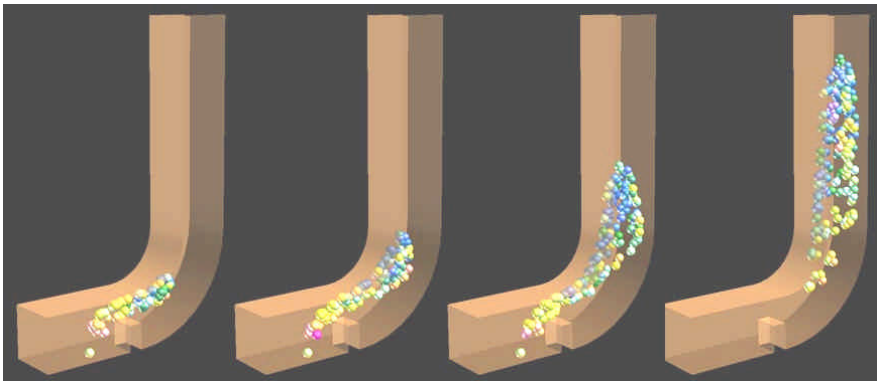


Fix for Spray Droplet Visualization

STAR lets you specify any set of dimensions when you set up your model. Previously, when the results were exported to our FIELDVIEW Unstructured file format, grid units were retained while results were converted to SI. But, the spray droplet results, stored in the *.trk file, are always written out using SI units. To make sure that the droplet (or any trk results) scale correctly, the FIELDVIEW export now has the grid data stored using SI units.

Easier Export of Transient Datasets

Now, entire transient datasets can be exported using the single command, **fv,write**. While the **fv,write** command is not new, it is now able to recognize whether a dataset is transient or not. The same functionality is also available from the PROSTAR Nav Center. Simply go to ***Export Data*** and then proceed to ***Export Results***. Choose FIELDVIEW as the export option, pick a FIELDVIEW rootname, and then click on ***Export Data.***



Choice to save Wall Scalar Data

You can now select whether you want to write this data as part of your export. Before you generate your solution, go to Analysis Controls, and configure the desirable Analysis Output. Depending on the choice of physical model, you may have the option to write Wall Force Data, Heat and Mass Transfer fluxes, Yplus values and any of your own user defined scalars.

Of additional interest:

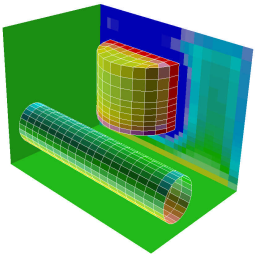
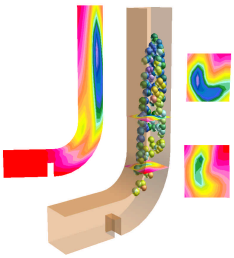
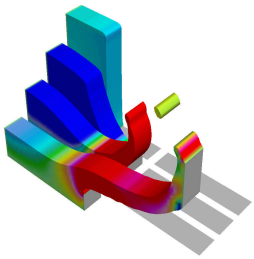
Longer Filenames

- The four character limit for **fv,root** has been removed. So, now you can specify filenames of any length for your export. The correct naming convention for transient files is also automatically applied.

Double Precision Data

- You do not need to do anything special to export double precision data. It is automatically truncated to single precision when being exported.

And, did you know?

	Support is available (since PROSTAR 520!) to export ***surface based data*** such as Force, Heat and Mass transfer fluxes, and turbulence surface parameters such as Yplus. The data within the FIELDVIEW file is exported for only cells (shell boundaries) at those surfaces, rather than for the entire volume, which leads to smaller exported files.
	Cells in PROSTAR belong to cell tables which have unique properties. These *table definitions are preserved* in FIELDVIEW using the ***Regions***. These Regions in FIELDVIEW (defined by the exported file with the .fvreg extension) can be manipulated independently, and can be used to threshold surfaces. Since Cell Table definitions are supported, thermal conjugate heat transfer problems are fully supported as well – temperatures are displayed continuously across fluid and solid regions.
	Spray Droplet or Particle Path Track data (***trk files***) can be *directly imported* to FIELDVIEW as ***particle paths***. Within FIELDVIEW, there are further options to display sets of these particle paths on the basis of • Physical properties at the start of path, • Physical properties along the path, or • On the basis of release location
	Transient data exported to FIELDVIEW, and the native STAR trk files can be read into FIELDVIEW together. At this point FIELDVIEW *automatically maintains* these results in ***the correct time sequence***. There is no way to create a picture in which the flow results do not match the particle track results. So, making animations of transient sequences is simple, since you can sweep through all of your time steps with a single button click