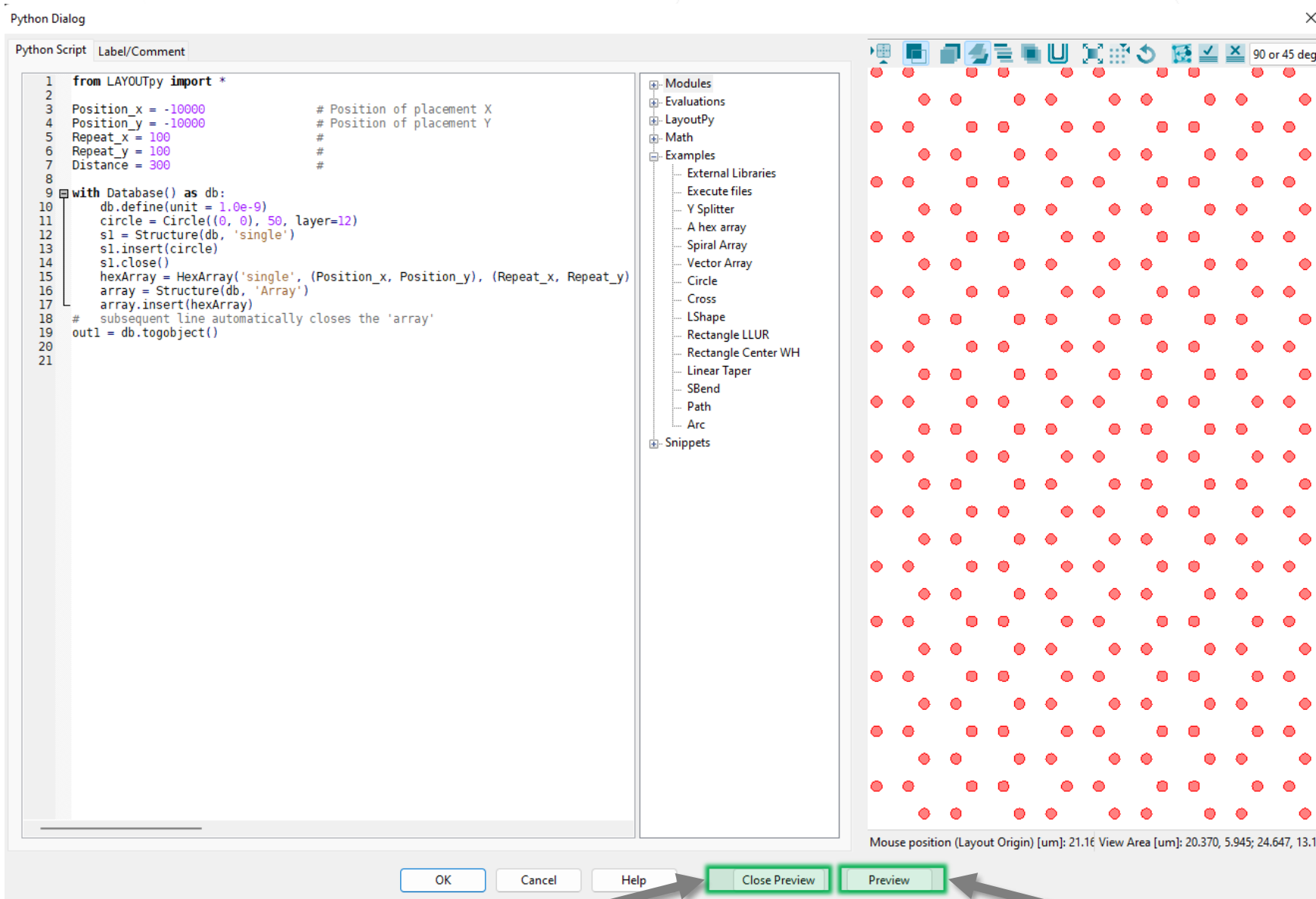


# BEAMER

What's new BEAMER 6.4

# Preview in Python Dialog



The screenshot shows the Python Dialog window with three main sections:

- Python Script:** A text editor containing a Python script that defines a hexagonal array of circles. The script includes parameters for position, repeat, and distance, and uses the LAYOUTpy library to create a database, define a unit, and insert a circle and a hex array into a structure.
- Modules:** A tree view showing the available modules, including External Libraries, Evaluations, LayoutPy, Math, and Examples. The Examples section is expanded to show various geometric shapes and arrays.
- Preview:** A window displaying the result of the script execution, which is a grid of red circles arranged in a hexagonal pattern. The preview window has a toolbar and a status bar showing mouse position and view area.

At the bottom of the dialog, there are buttons for **OK**, **Cancel**, **Help**, **Close Preview**, and **Preview**. Arrows point from the **Close Preview** button to the **Open/Close VIEWER** label and from the **Preview** button to the **Run script and refresh VIEWER** label.

- A preview has been added to the Python module to allow a quick check of the python script within the module
- The font has been changed to fixed width font for better readability of the code

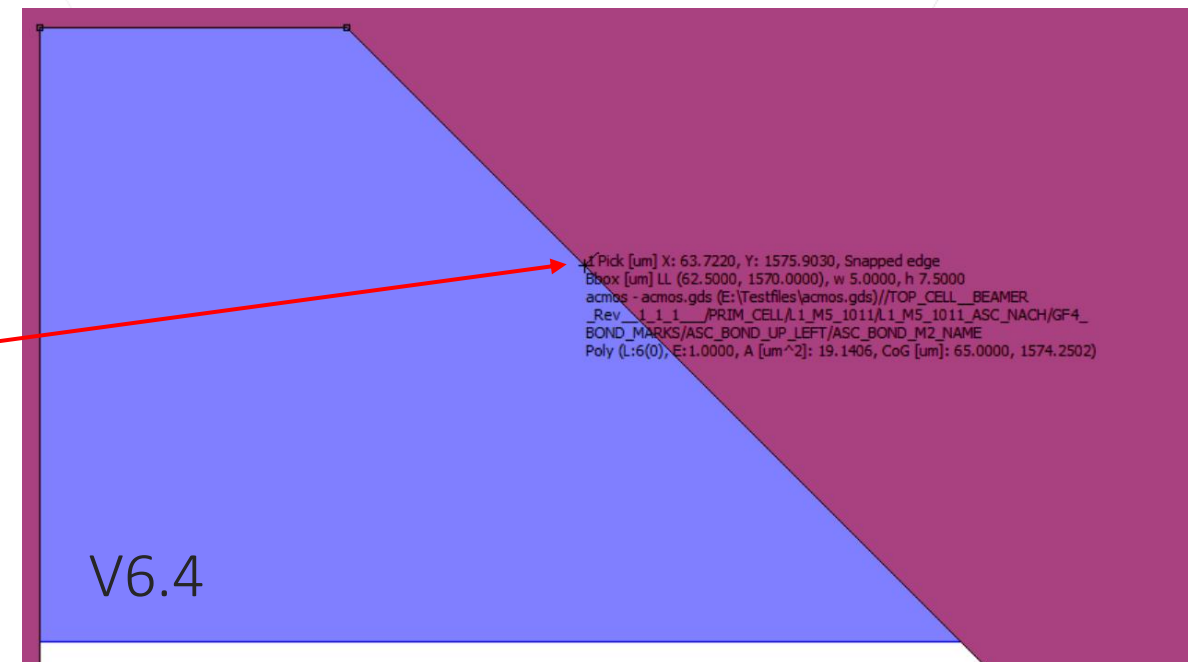
Open/Close VIEWER

Run script and refresh VIEWER

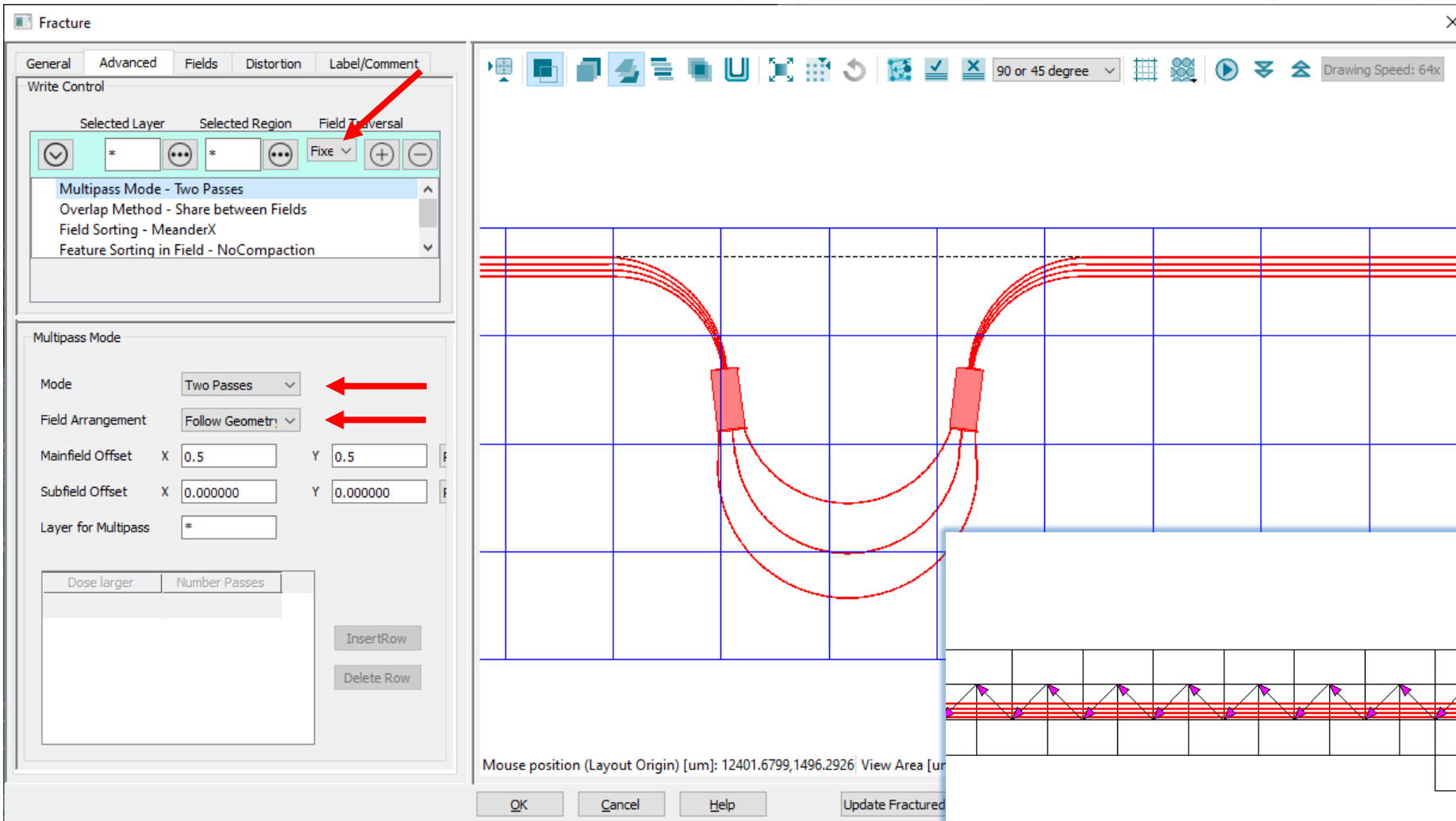
# VIEWER

# Modified the picked data behavior in viewer

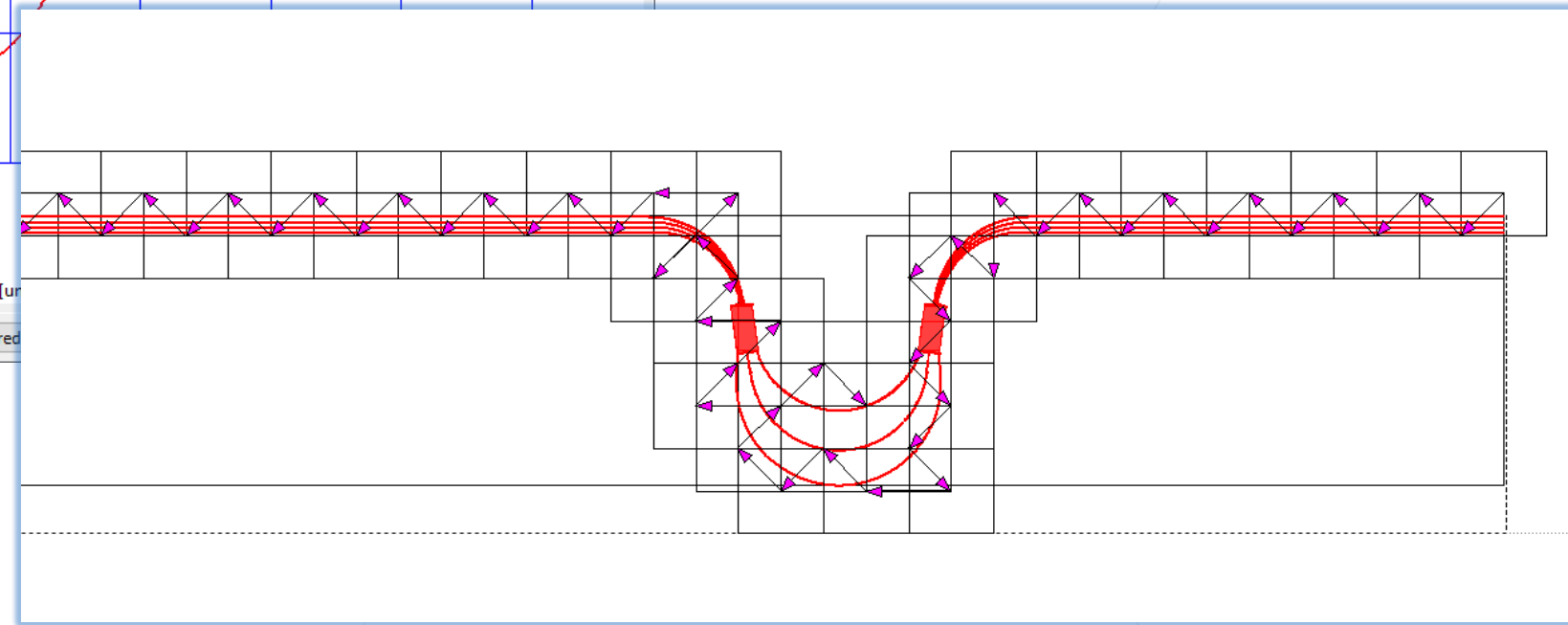
- Designated to identify shapes in overlapping layout scenarios
- The operation selects the shape next to the given pick-point
- Reporting is restricted to only one single shape
- In case of ambiguous shape edges the 1st reported is selected
- The measurement option is available via
  - CTRL + SHIFT + Right-double-click



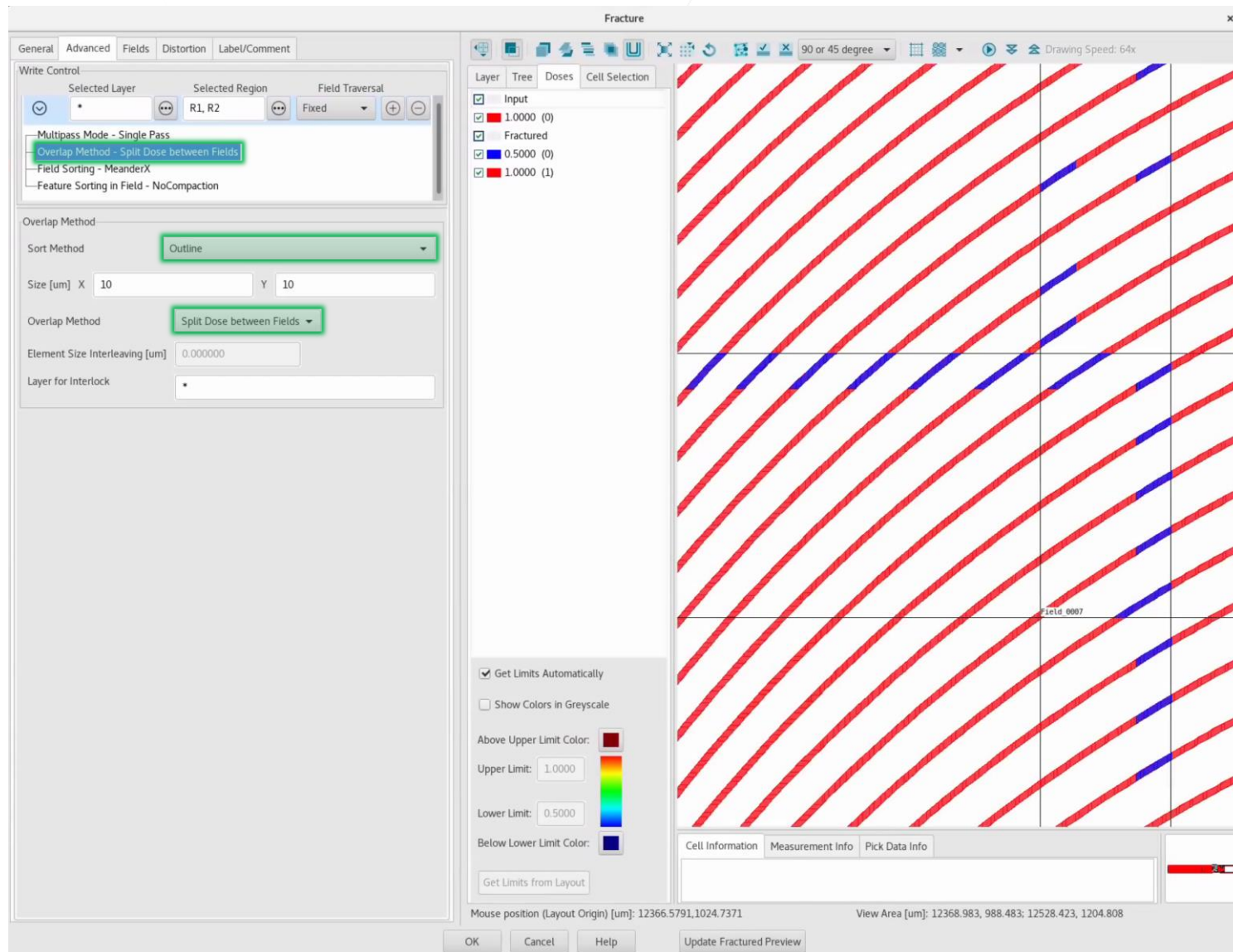
# Field sorting



Field shifting and sorting has been improved, minimizing the transitions between fields



# Overlap Dose in Shared Shapes



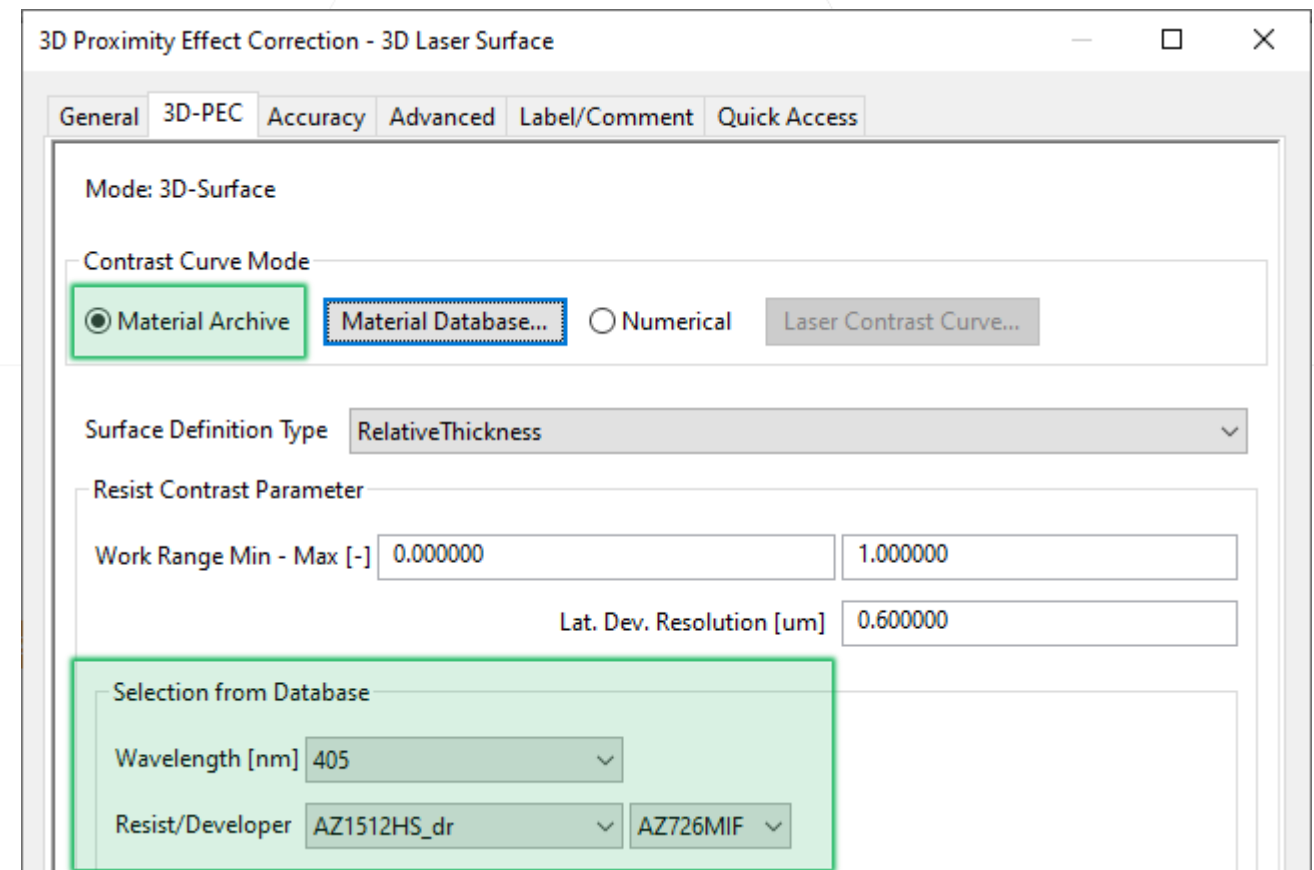
- The shared shapes between fields can be exposed with overlap dose in selected region to improve the stitching performance.
- Write Control: Overlap Method – Split Dose between Fields
- Sort Method: Outline
- Overlap Method: Split Dose between Fields

# Material Database



BEAMER and LAB do share the same material database now. This allows the user to use setups up for LAB simulation also for correction in BEAMER and vice versa.

- The user can select between using a numerical contrast curve or the new material database.
  - The resist needs be a Contrast Curve modelled resist
- The resist selection is prefiltered to show only resist for the selected exposure type.
- New material can be added via the “material database” button.



# 3D PEC & 3D Simulation

# 3D Laser PEC Segmented Dev. Rate Model

3D Proximity Effect Correction - 3D Laser Surface

General | **3D-PEC** | Accuracy | Advanced | Label/Comment | Quick Access

Mode: 3D-Surface

Contrast Curve Mode

Material Archive | Material Database... |  Numerical | **Laser Contrast Curve...**

---

Contrast Curve

Original Thickness [um] 8.90513

Grey Value	Resist thickness [um]
0.000000	8.905130
1.000000	8.814754
2.000000	8.728659
3.000000	8.646438
4.000000	8.567715
5.000000	8.492141
6.000000	8.419395
7.000000	8.349183
8.000000	8.281231
9.000000	8.215291
10.000000	8.151136
11.000000	8.088556
12.000000	8.027362
13.000000	7.967382
14.000000	7.908461

Optical Parameter

Wavelength [nm]	n unbleached	n bleached	Dill A [1/um]	Dill B [1/um]
405	1.69	1.69	1.086000	0.031000

Development Rate Model

Dill C Absorption 0.148632

Use Fitted Data

Model

Mack 4 |  Dev. Rate |  **Segmented Dev. Rate**

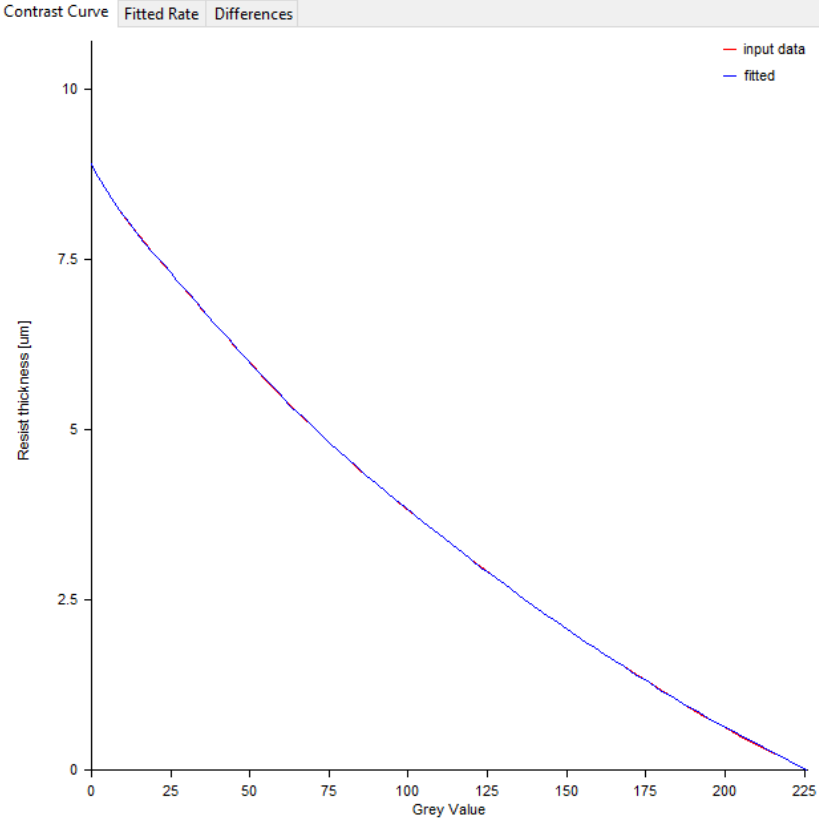
RMS: 0.006 um CPU time: 389.16 seconds, Elapsed time: 99.78 seconds

**Run Fit...**

OK Cancel Help

---

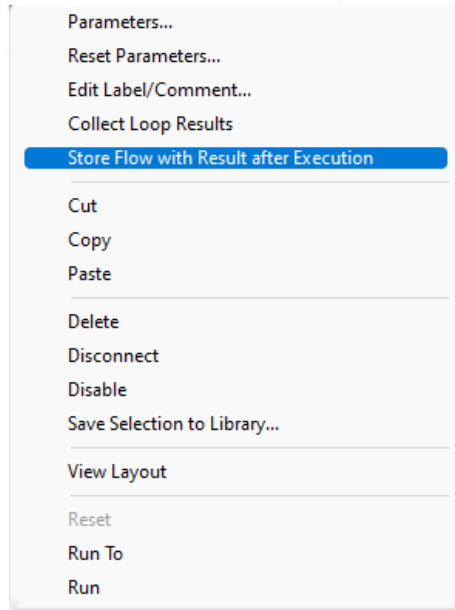
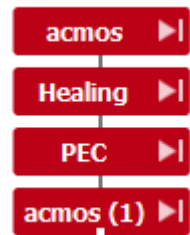
Contrast Curve Fitted Rate Differences



- Segmented Development Rate model is now introduced for the imported contrast curve fitting.

- The contrast curve fitting quality and stability has been improved, by fitting segments of the contrast curve individually.

# Usability

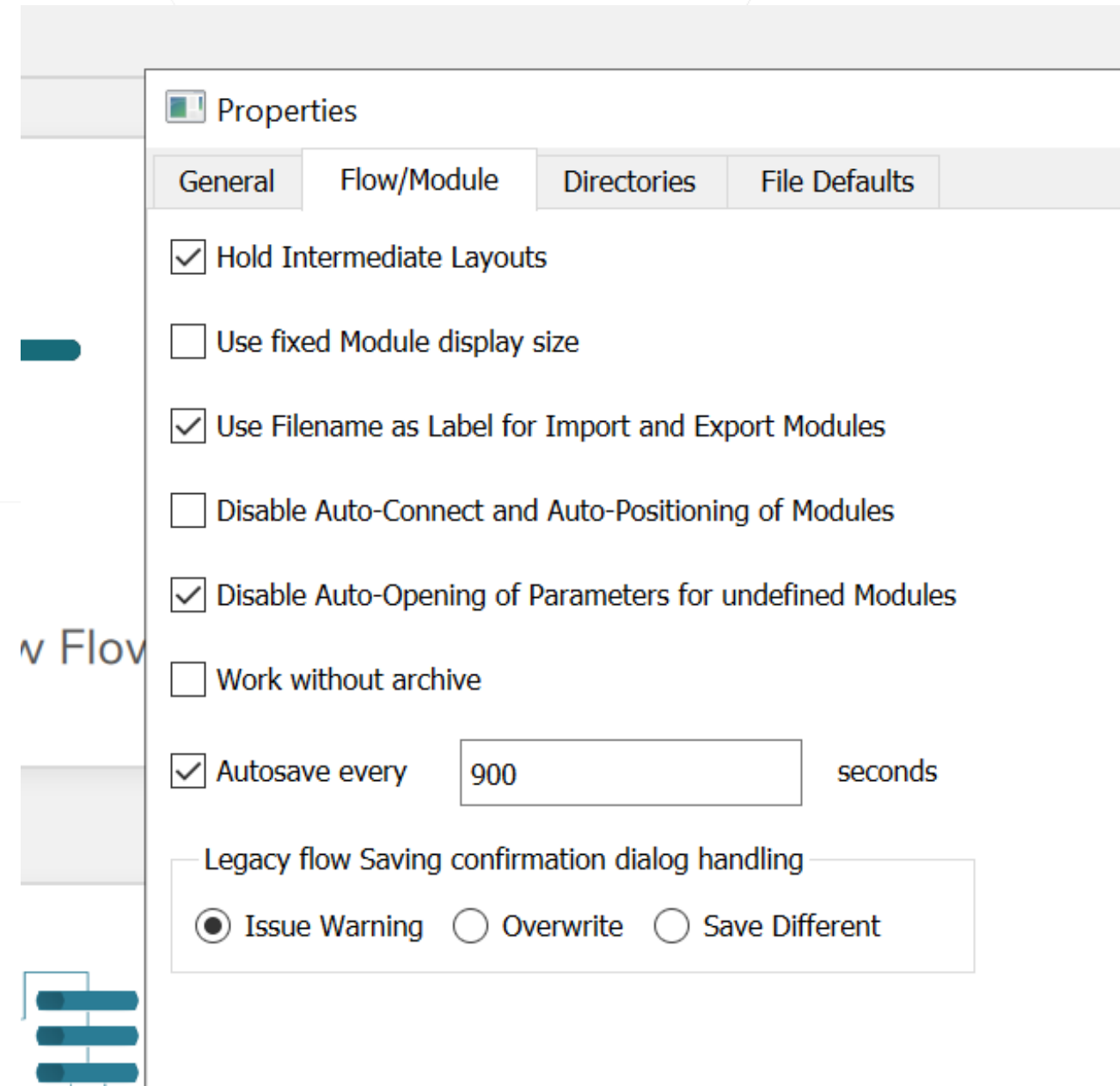


# Store Flow with Executed Time

The user has now the possibility to save intermediate results

- Right click on the module – Store Flow with results after execution
- The intermediate results will be saved after the module has been executed
- The fwr files are saved in the same location as the original flow.

- Pre BEAMER 6.4 versions create a recover flow whenever the flow changes (e.g. changing options, run, undo, ...)
- This happens quite frequently and blocks the GUI noticeably if the flow is large
- In 6.4, this mechanism was replaced by an (optional) timer
- Enabled by default, set to every 900 seconds (i.e. 15 minutes)



The screenshot shows the 'Properties' dialog box in GenISys, specifically the 'Flow/Module' tab. The dialog has four tabs: 'General', 'Flow/Module', 'Directories', and 'File Defaults'. The 'Flow/Module' tab is active. It contains several settings, each with a checkbox:

- Hold Intermediate Layouts
- Use fixed Module display size
- Use Filename as Label for Import and Export Modules
- Disable Auto-Connect and Auto-Positioning of Modules
- Disable Auto-Opening of Parameters for undefined Modules
- Work without archive
- Autosave every  seconds

Below these settings is a section titled 'Legacy flow Saving confirmation dialog handling' with three radio button options:

- Issue Warning
- Overwrite
- Save Different

# Thank You!

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