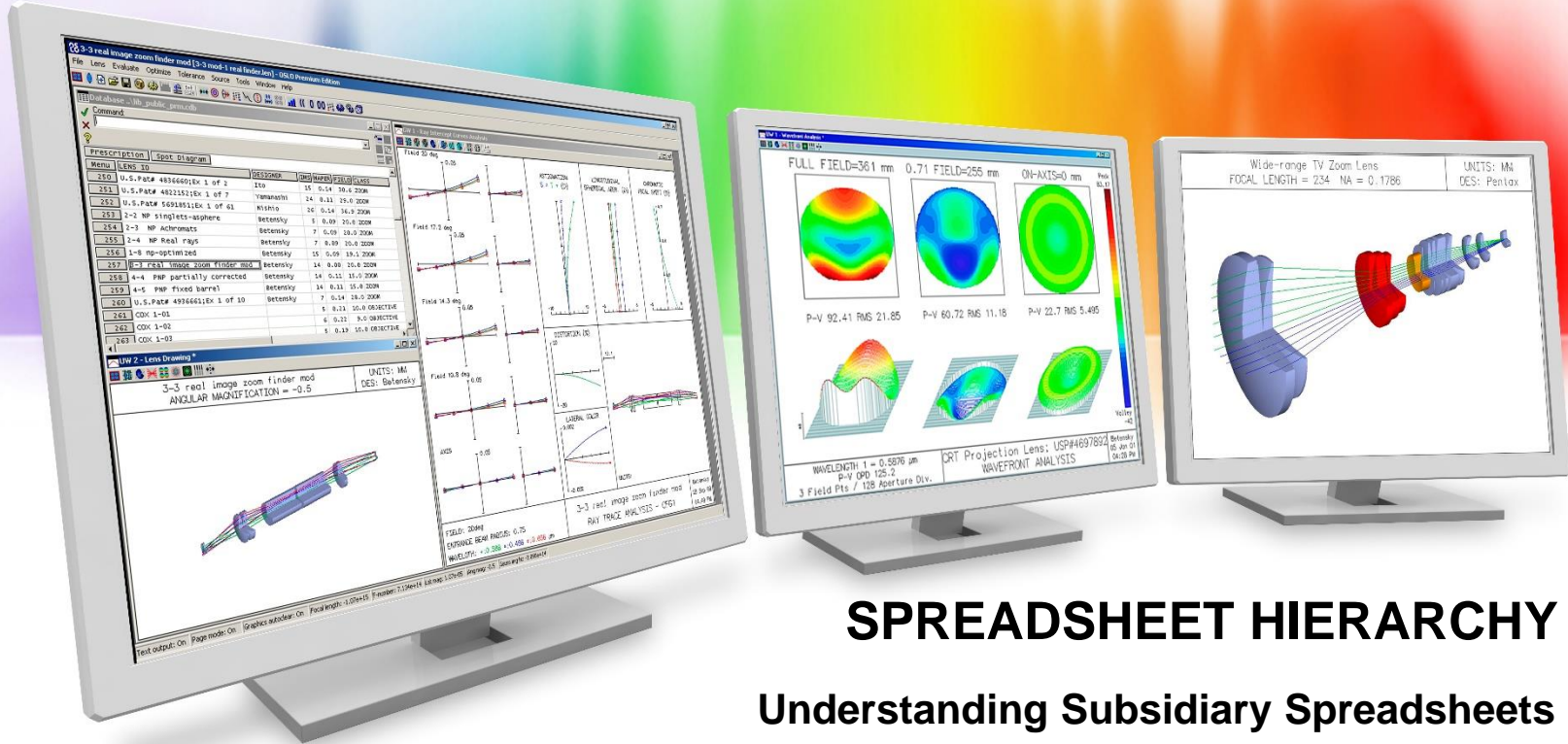


OSLO

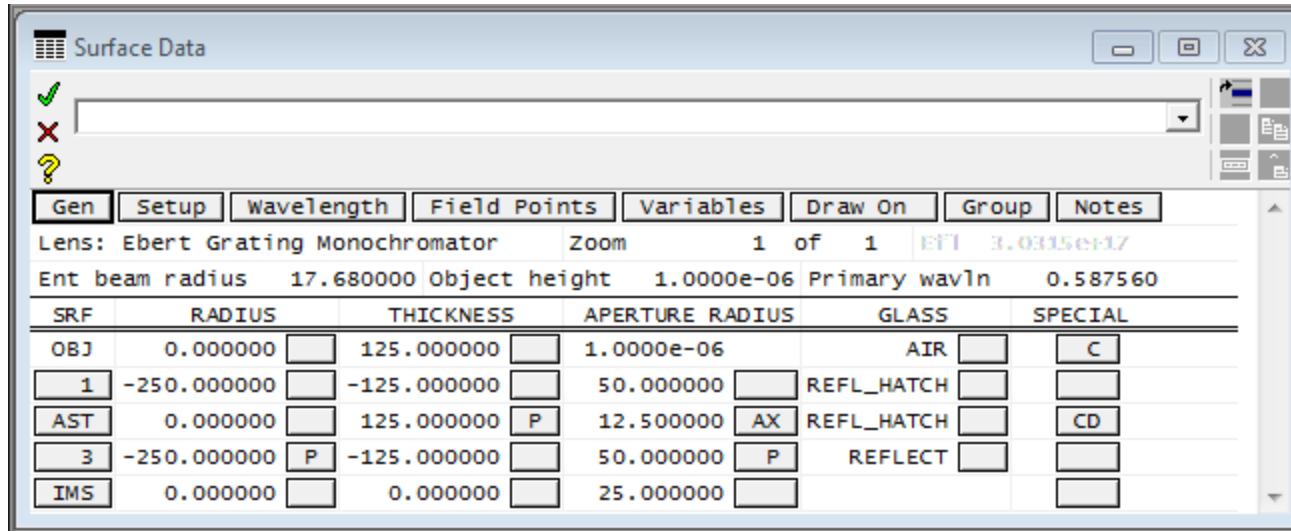


SPREADSHEET HIERARCHY

Understanding Subsidiary Spreadsheets

Richard N. Youngworth - Presenter

A main feature in OSLO are spreadsheets

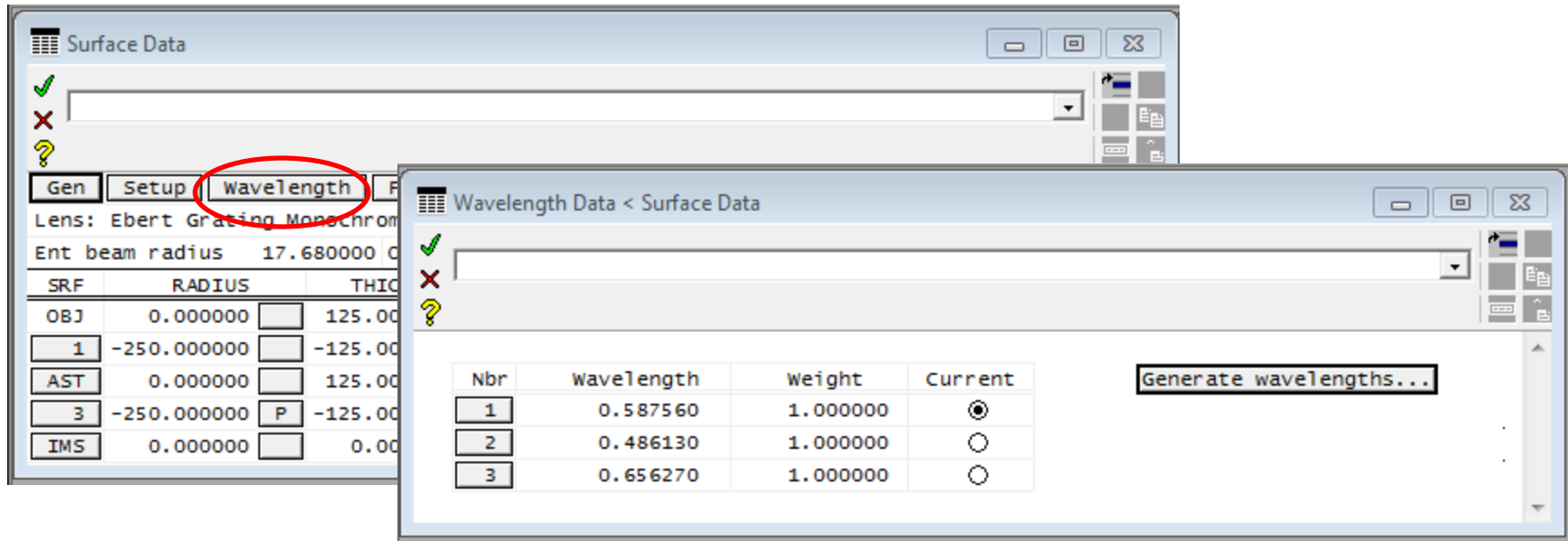


The screenshot shows the 'Surface Data' window in OSLO. It features a toolbar with a green checkmark, a red X, and a yellow question mark. Below the toolbar are several tabs: Gen, Setup, Wavelength, Field Points, Variables, Draw On, Group, and Notes. The main area displays lens data for an 'Ebert Grating Monochromator' with a zoom of '1 of 1' and an effective focal length (EFL) of $3.0315e+17$. Other parameters include 'Ent beam radius' of 17.680000, 'Object height' of $1.0000e-06$, and 'Primary wavln' of 0.587560. A table below lists surface data with columns for SRF, RADIUS, THICKNESS, APERTURE RADIUS, GLASS, and SPECIAL. Each cell in the table contains a numerical value and a small button.

SRF	RADIUS	THICKNESS	APERTURE RADIUS	GLASS	SPECIAL
OBJ	0.000000	125.000000	1.0000e-06	AIR	C
1	-250.000000	-125.000000	50.000000	REFL_HATCH	
AST	0.000000	125.000000	12.500000	REFL_HATCH	CD
3	-250.000000	-125.000000	50.000000	REFLECT	
IMS	0.000000	0.000000	25.000000		

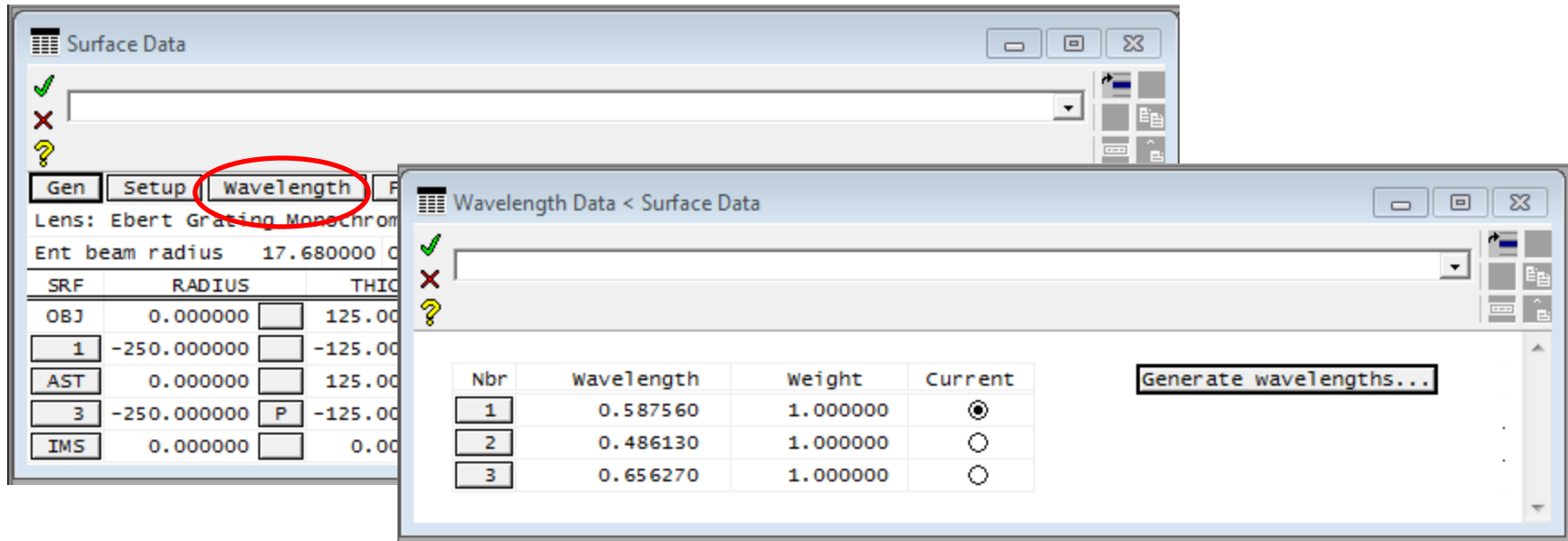
- The primary spreadsheet is the surface data spreadsheet (or lens spreadsheet editor)
- Some of the mid buttons and buttons to the right of data columns can call up other spreadsheets
- Considering the green check mark and red x accept/cancel changes feature, how does the priority of the spreadsheets work?

Why knowing the hierarchy can be important



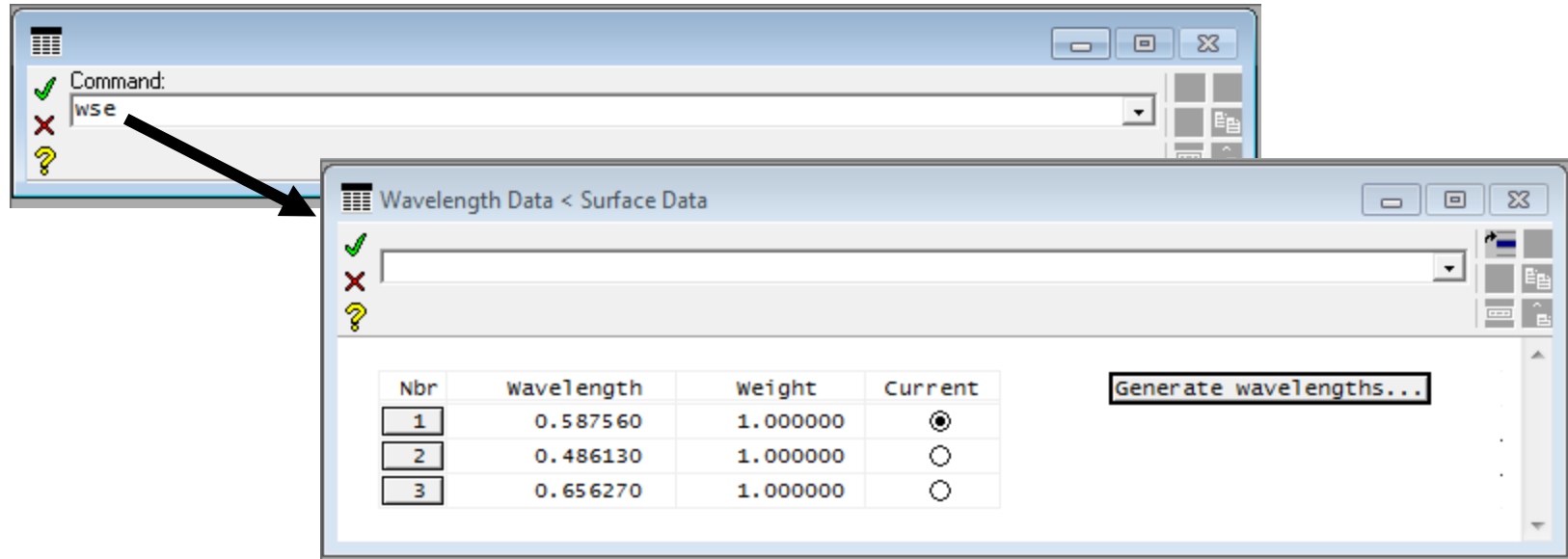
- The case to avoid is starting work in the surface data spreadsheet, then opening a subsidiary spreadsheet and making changes
- If you accept changes in the subsidiary spreadsheet (wavelengths) and then cancel changes in the master spreadsheet (surface data) you will lose your changes
- Understanding the nuances of priority is important!

If you open a spreadsheet as a subsidiary be aware of your accept state in OSLO



- If you open a subsidiary spreadsheet, be sure you are willing to accept any changes in the master spreadsheet
- You can cancel changes in the subsidiary spreadsheet with no problem
- If you want to accept and store your changes to the subsidiary spreadsheet you need to accept changes from both spreadsheets

The easy case is just opening a solo spreadsheet directly



- In this clear case if you accept or cancel changes it applies because there is no other spreadsheet involved
- It is wise if you open a spreadsheet this way to avoid opening a master spreadsheet that can call this as a subsidiary, or things can get quite confusing!
 - For example on wavelengths, do not open the surface data spreadsheet

A few tips because these features are very handy when used properly

- If you are happy with changes be in the habit of accepting the changes and reopening spreadsheets
- Saving files is wise when you want to archive results, and you control revision file naming
- It is also good to either open spreadsheets solo or open them as subsidiaries when you know you can accept changes cleanly
 - Avoid opening subsidiary spreadsheets then master spreadsheets or it can get confusing!
- More cases exist than the example shown here
- There are cases where spreadsheets can be opened from another spreadsheet, a command, and the menu at the top
 - The variables spreadsheet is a good example
- Please see the video on the accept/cancel changes (the green check mark and red x) for clarification on using those features