Please find the first part of Optics minimization v.9.10.100:
http://lise.nscl.msu.edu/9_10/9_10_minimization.pdf

1. Fitting constraint block : new option “Active”
2. Change the Fitting option "Active" in the “Fast Edit Optics” dialog
3. New Option in the Preferences dialog: show "Fit" blocks in the Scheme and Setup windows
4. Appearance of Fitting constraint blocks in Menus, Dialog, Windows
5. Call the "Fast Edit Optics" dialog from the Optics optimization dialog
6. User Break in the Minimization process
7. Miscellaneous for fitting procedure
8. Miscellaneous for v.9.10.119
If it is not "active", then the block will still enable in the Setup and FastEditOptics dialogs, but it won’t be shown in The Scheme and Setup windows.

This property it can be easily changed from the “Fast Edit Optics” dialog (see the next slide).
Change the Fitting option "Active" in the “Fast Edit Optics” dialog

Application for Fitting constraint blocks
Change the option “Use in the Fit process" in the “Fast Edit Optics” dialog

Application for M & E quadrupoles blocks
New Option in the Preferences dialog: show "Fit" blocks in the Scheme and Setup windows
**Appearance of Fitting constraint blocks in Menus, Dialog, Windows**

### Setup window

<table>
<thead>
<tr>
<th>Window</th>
<th>Show</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup window</td>
<td>only Active*</td>
</tr>
<tr>
<td>Setup scheme</td>
<td>only Active*</td>
</tr>
<tr>
<td>Setup dialog</td>
<td>always</td>
</tr>
<tr>
<td>Optics settings dialog</td>
<td>always</td>
</tr>
<tr>
<td>Menus</td>
<td>never</td>
</tr>
<tr>
<td>Monte Carlo calculation</td>
<td>never</td>
</tr>
<tr>
<td>of fragment transmission</td>
<td></td>
</tr>
</tbody>
</table>

* - show only "Active", if the corresponding option is set in the "Preferences" dialog

### Setup dialog

("Spectrometer design")

### Setup scheme

(Monte Carlo calculation of fragment transmission)

### Menus

(Objective randomization and fitting of constraint blocks in Menus, Dialog, Windows)

### Optics settings (fast editing)
Call the "Fast Edit Optics" dialog from the Optics optimization dialog

Without leaving the “Optics fit” dialog it is possible to load the Fast Optics Edit” dialog where you can set/unset “Active” properties, modify Fitting constraint block parameters, or enter a Quad field value.
User Break in the Minimization process

Press the “Escape” button to cancel the minimization procedure

Be patient, I’m working....
Number of evaluations 450

Только спокойствие...
Все будет просто замечательно!

Restez calme...... Tout va bien!

Results for eS3_dispersive v4_5.fit:
Termination reason: USER BREAK after 600 evaluations!
Miscellaneous for fitting procedure

- New functions BLOCKnext and BLOCKprevious with "noFit" options
- Corrections for Separator scheme in the case of Fitting block
- “SetFocus” back in the Fast Edit Optics dialog
- Minimization output modification
• The Kicker dialog modification

• Correction to Output file format for MC plots

• ID modifications for CS-Qgg & CS&dBE plots

• Monte Carlo : modifications for Eloss and Range with Faraday cup

• New Super-FRS configurations

• Kantele calculator: Gamspeed modifications

• "Options" dialog large revision