

Feature.0019

## **Animation Generation from Chromatic Fields Sets in Parameter Run**

convert *Chromatic Fields Sets* into an animation in *Parameter Run*

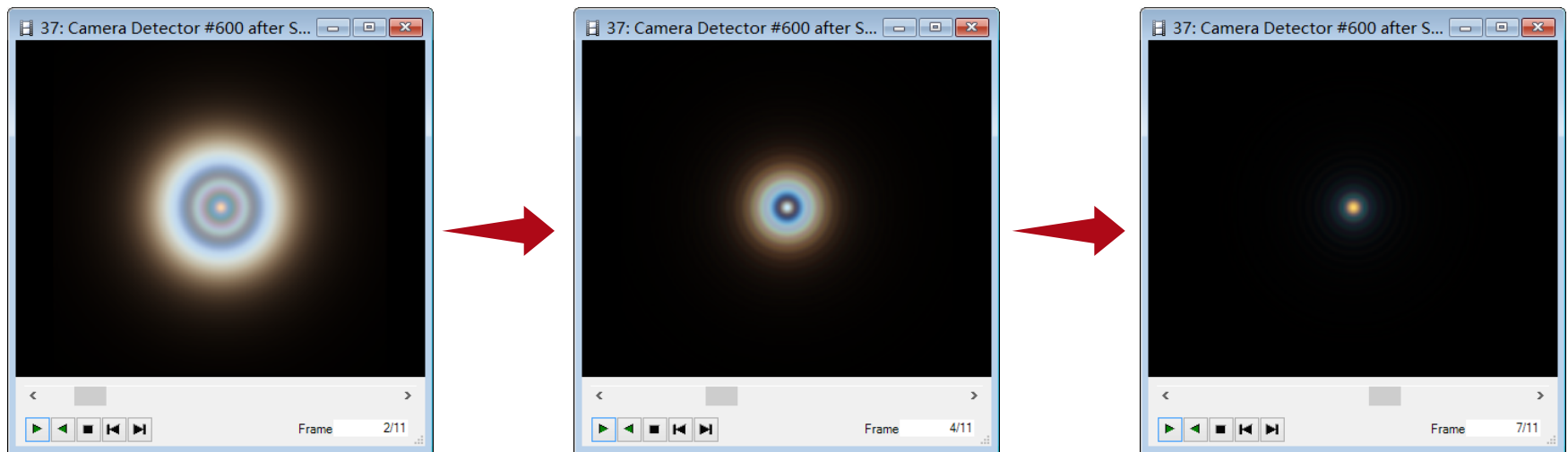
# About This Use Case

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- The following toolbox is required:
  - Starter toolbox
- This use case is created by using VirtualLab Fusion (Build 7.0.0.35).
- Get your free Trial Version [here!](#)

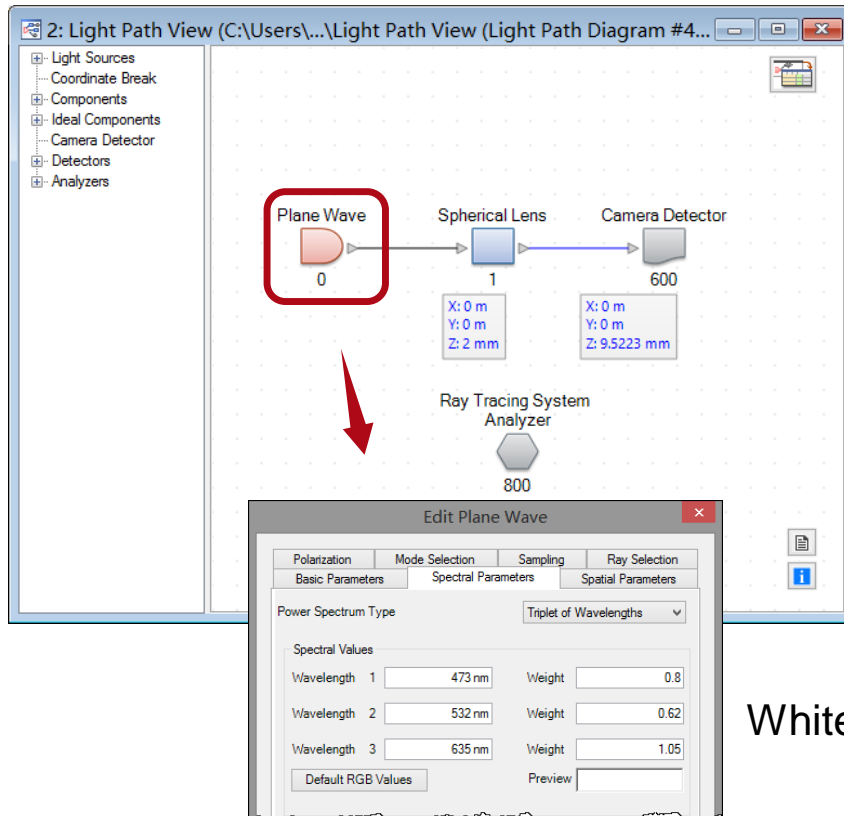
## This Use Case Shows ...

- Use *Parameter Run* to vary the position of the imaging plane behind a dispersive lens.
- Generate animation from *Chromatic Field Sets* results in *Parameter Run*.

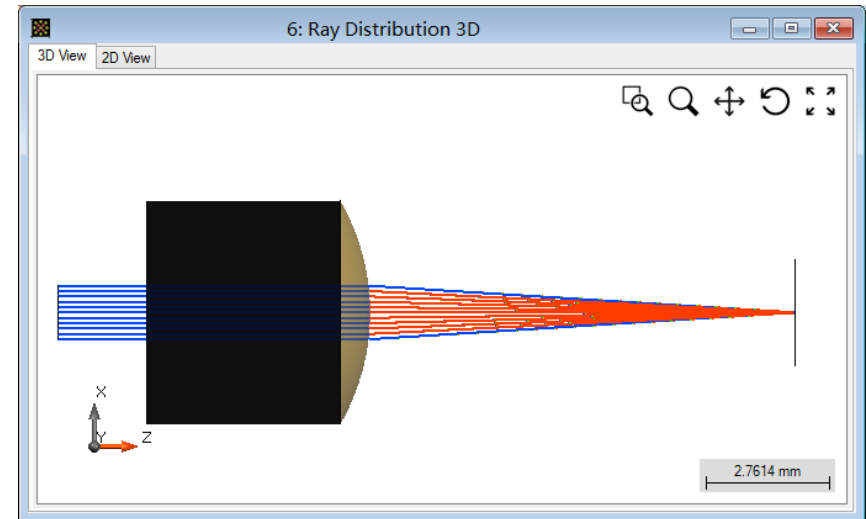


# Spherical Lens System

## Light Path Diagram



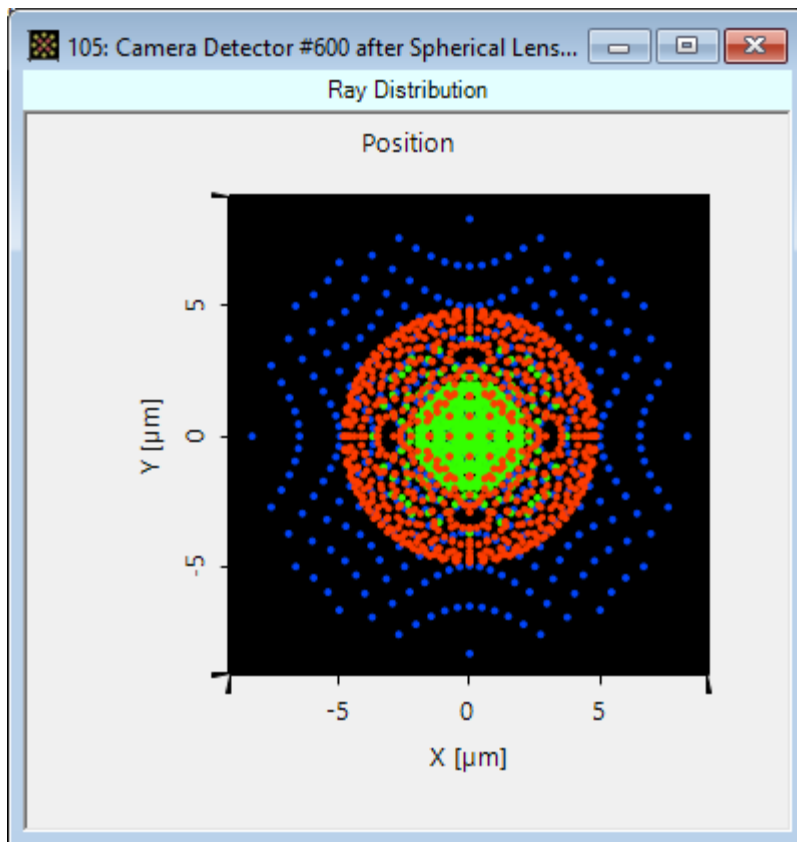
## Ray Tracing Analyzer Result



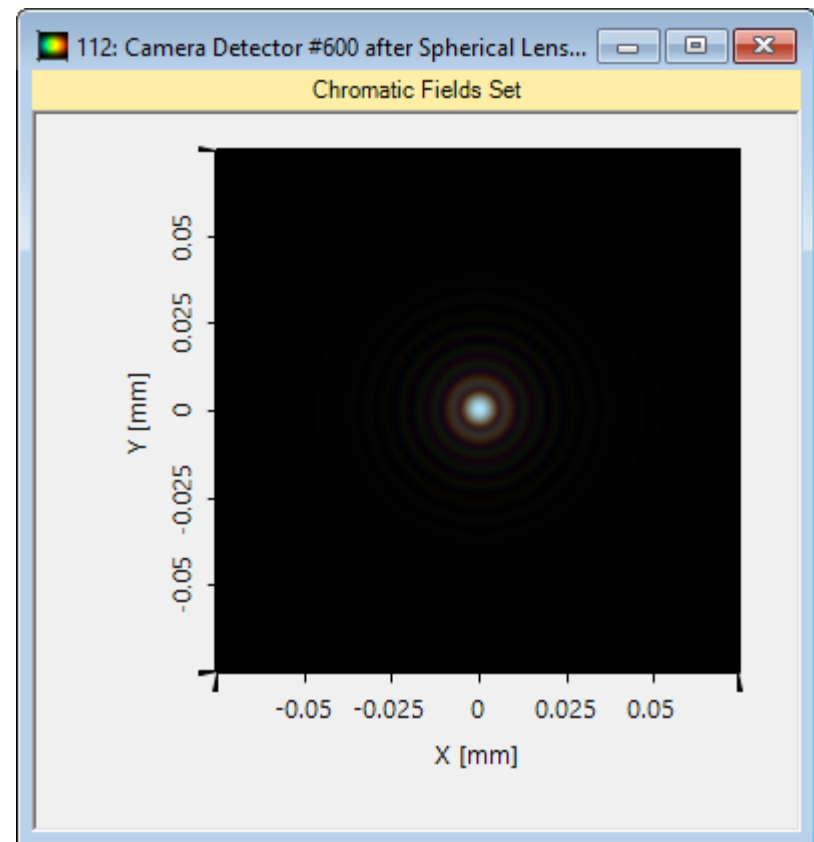
White light source: 3 wavelengths, chromatic field set

# Field at Focal Plane: Dispersion Effect

## Ray Tracing Result

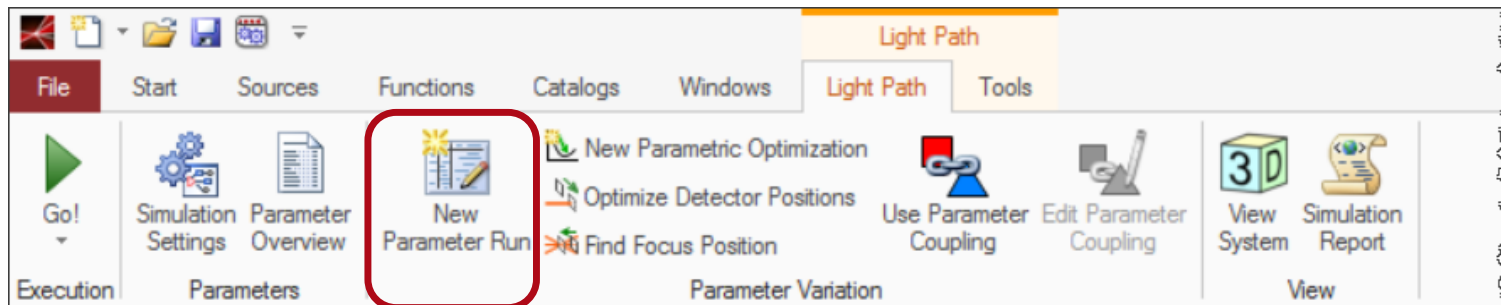


## 2<sup>nd</sup> Gen Field Tracing Result



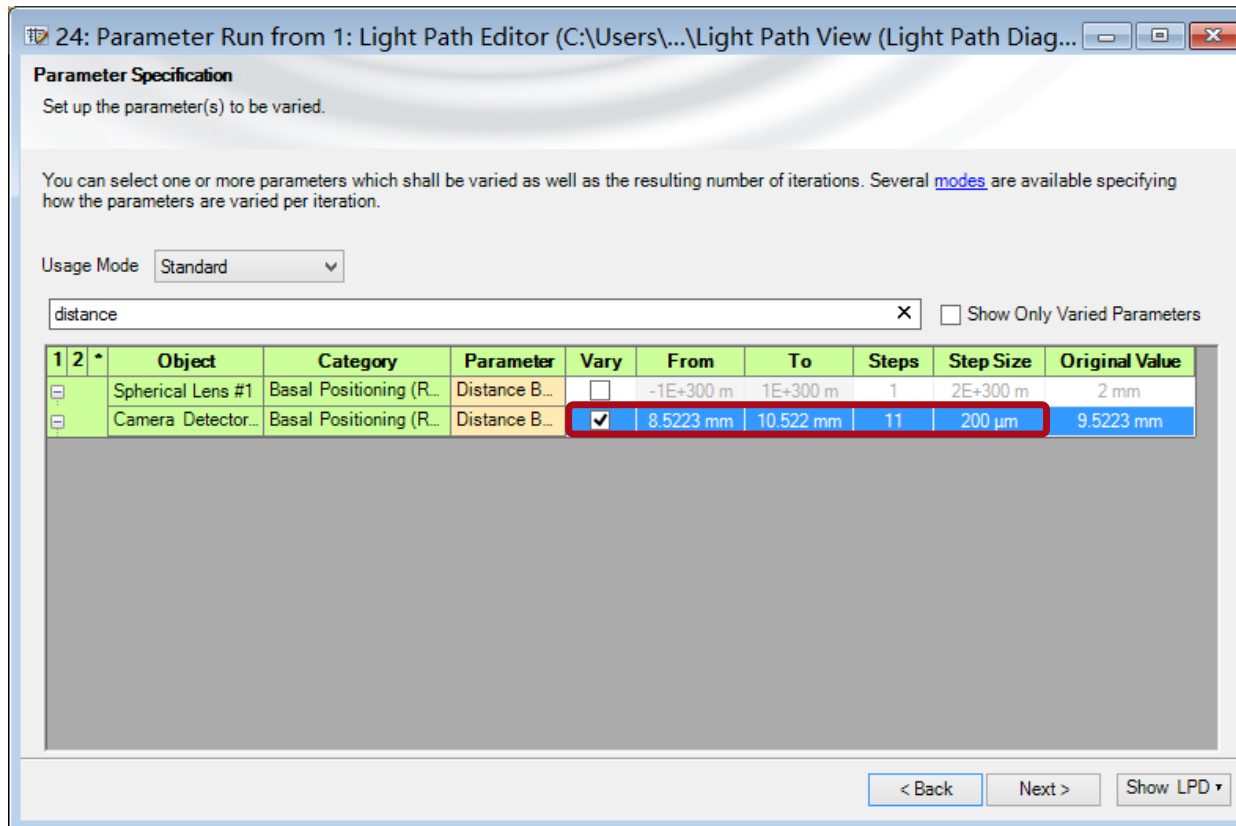
# Parameter Run

- The *Parameter Run* is used to vary parameters of an optical system automatically. With the help of *Parameter Run*, you can analyze the effects of those variations with different detectors.



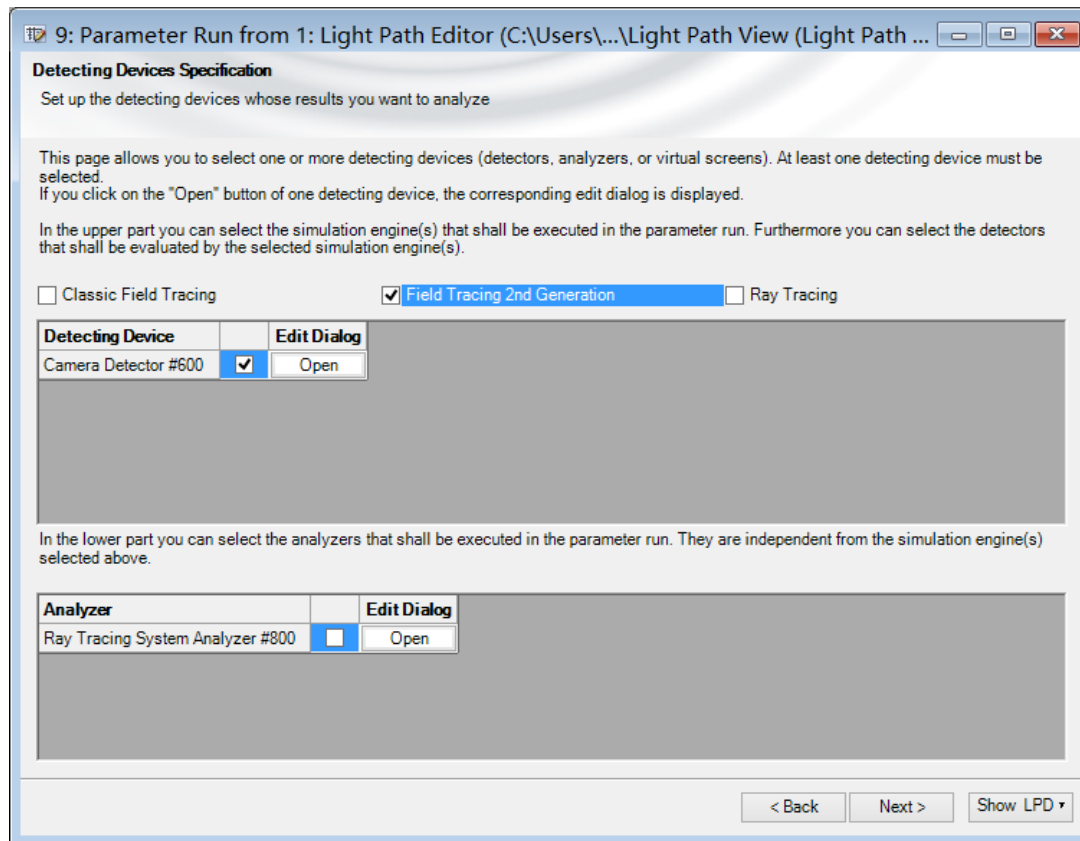
# Setting of Parameter Run

- Scan the distance behind the lens from 8.5223 mm to 10.5223 mm. Here the back focal length is 9.5223 mm.



# Setting of Parameter Run: Engine and Detector

- Select *Field Tracing 2<sup>nd</sup> Generation* and *Camera Detector*





# Parameter Run Result: Chromatic Field Sets

24: Parameter Run from 1: Light Path Editor (C:\Users\...\Light Path View (Light Path Diagram #48).lpd #1)\*

Results  
Start the parameter run and analyze its results

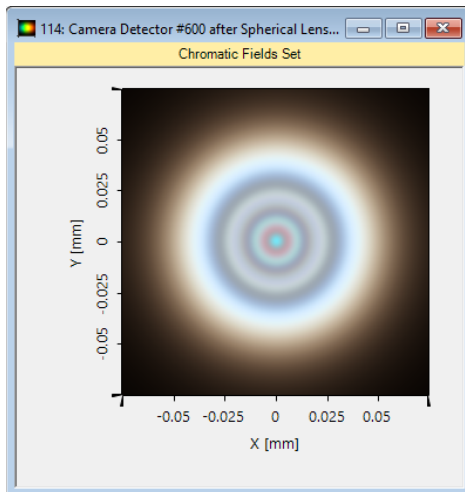
Go!

Use Cached Results for Next Run

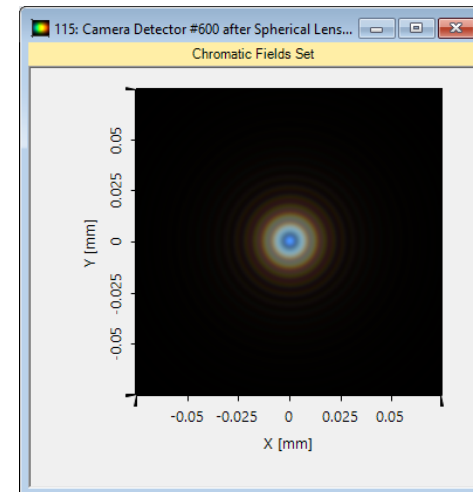
Detector	Subdetector	Combined Output	Iteration Step				
			1	2	3	4	5
Varied Parameters	Distance Before (Camera...	Data Array	8.5223 mm	8.7223 mm	8.9223 mm	9.1223 mm	9.3223 mm
Camera Detector #600 afte...		Animation	Chromatic Fields Set	Chromatic Fields Set	Chromatic Fields Set	Chromatic Fields Set	Chromatic Fields Set

Create Output from Selection

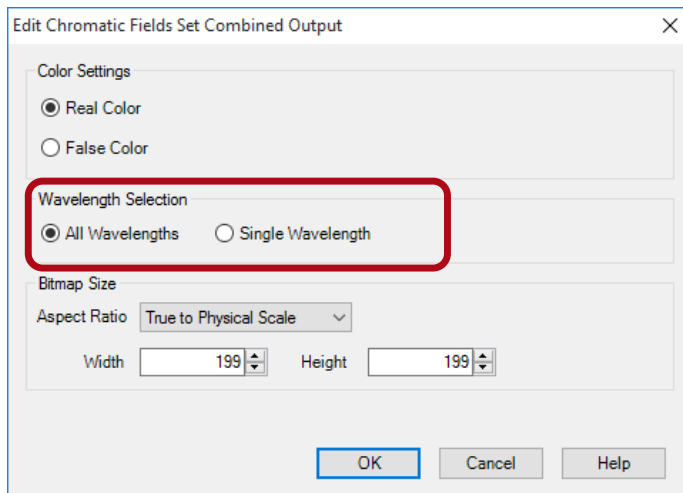
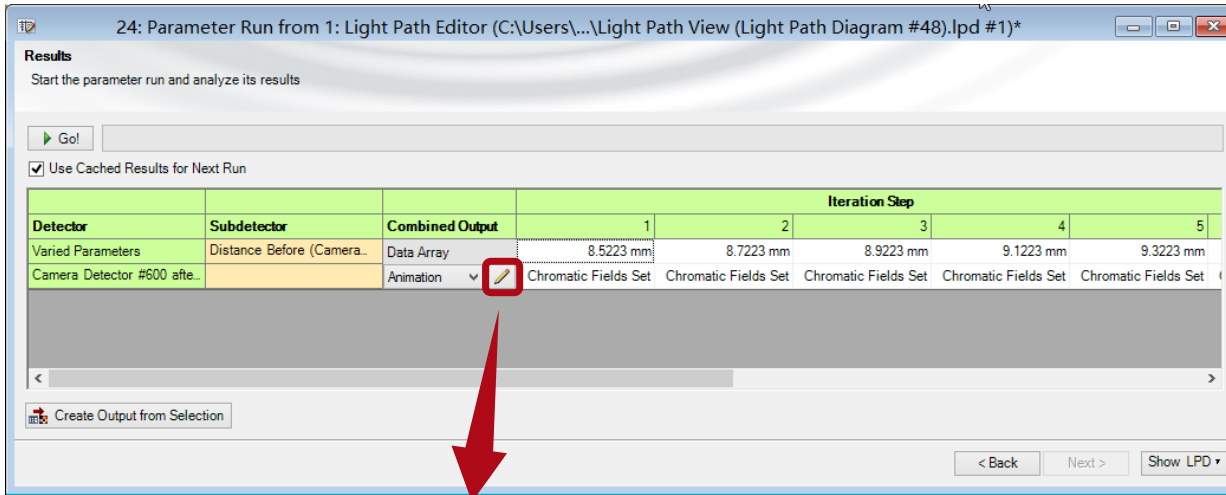
< Back Next > Show LPD ▾



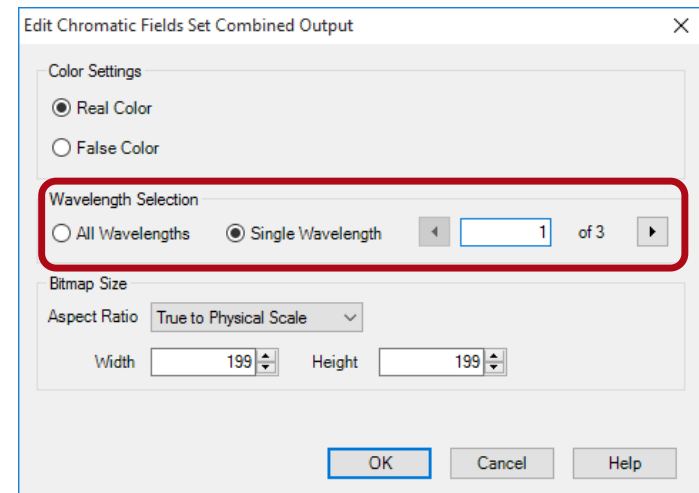
chromatic fields  
at different plane



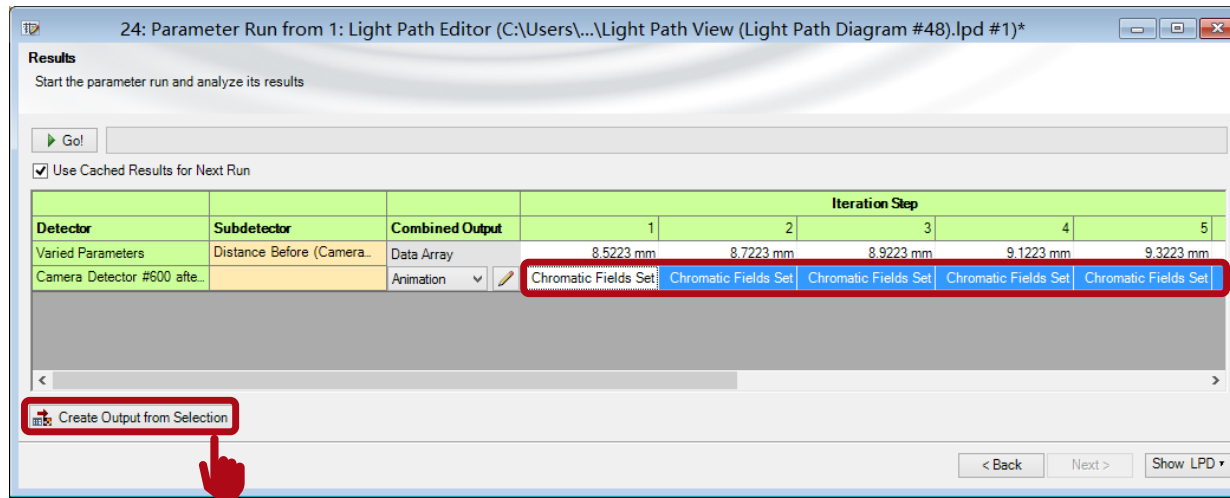
# Combination of Chromatic Field Sets



or



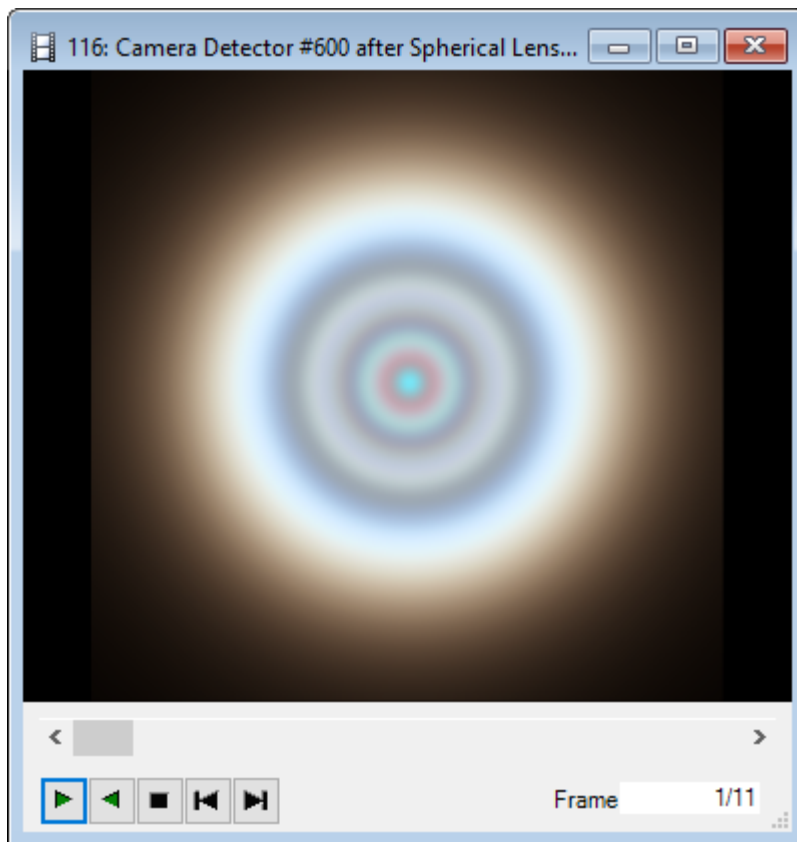
# Combination of Chromatic Field Sets



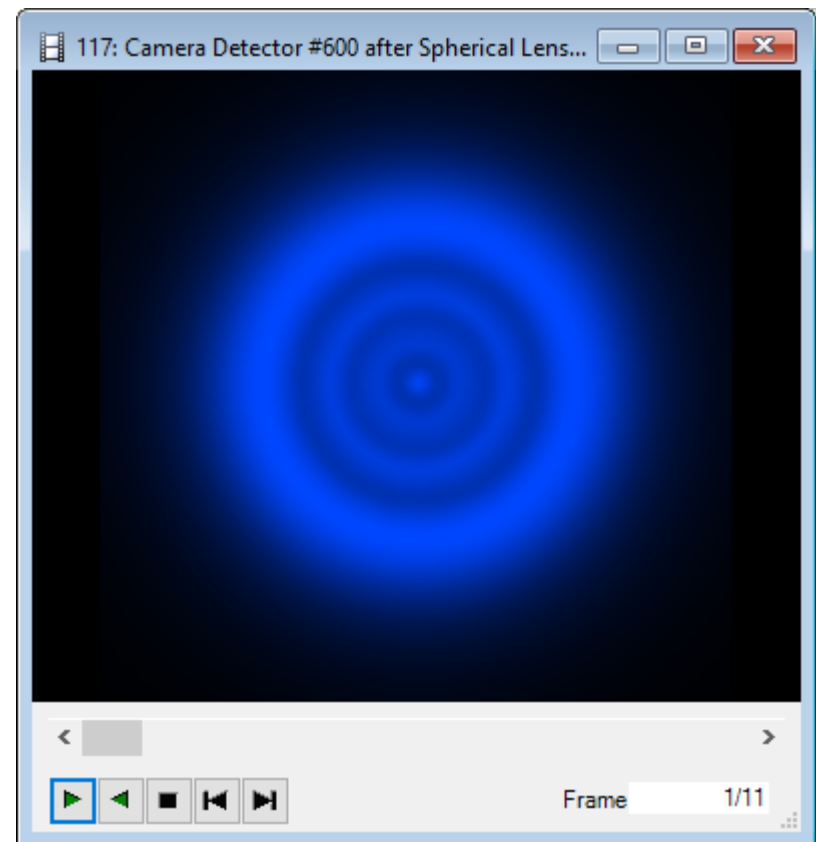
- Select all iteration result or part of them
- Choose *Animation* as combined output
- Click *Create Output from Selection*

# Animation Results

Combination of all wavelengths



Combination of single wavelength



# Document & Technical Info

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