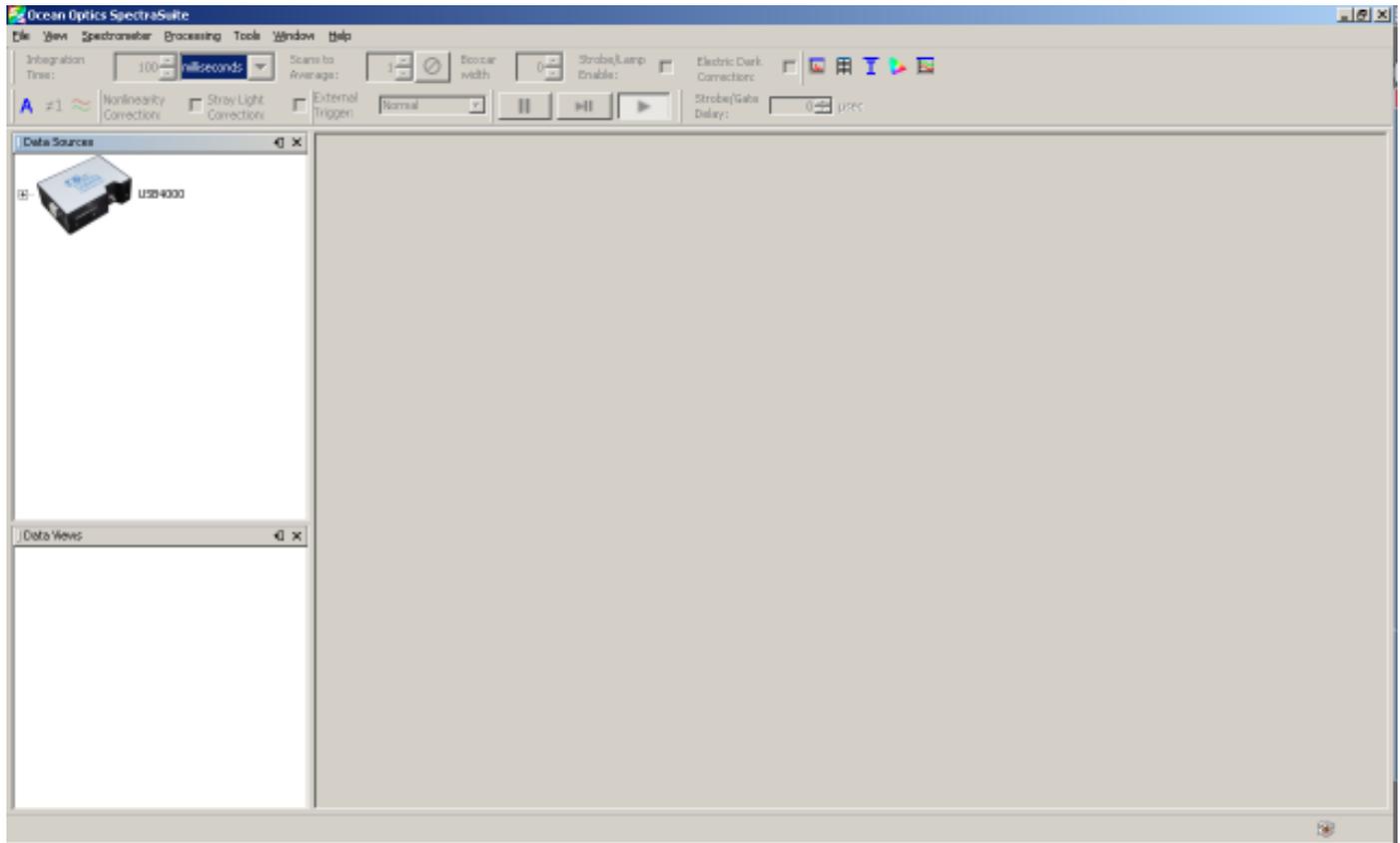
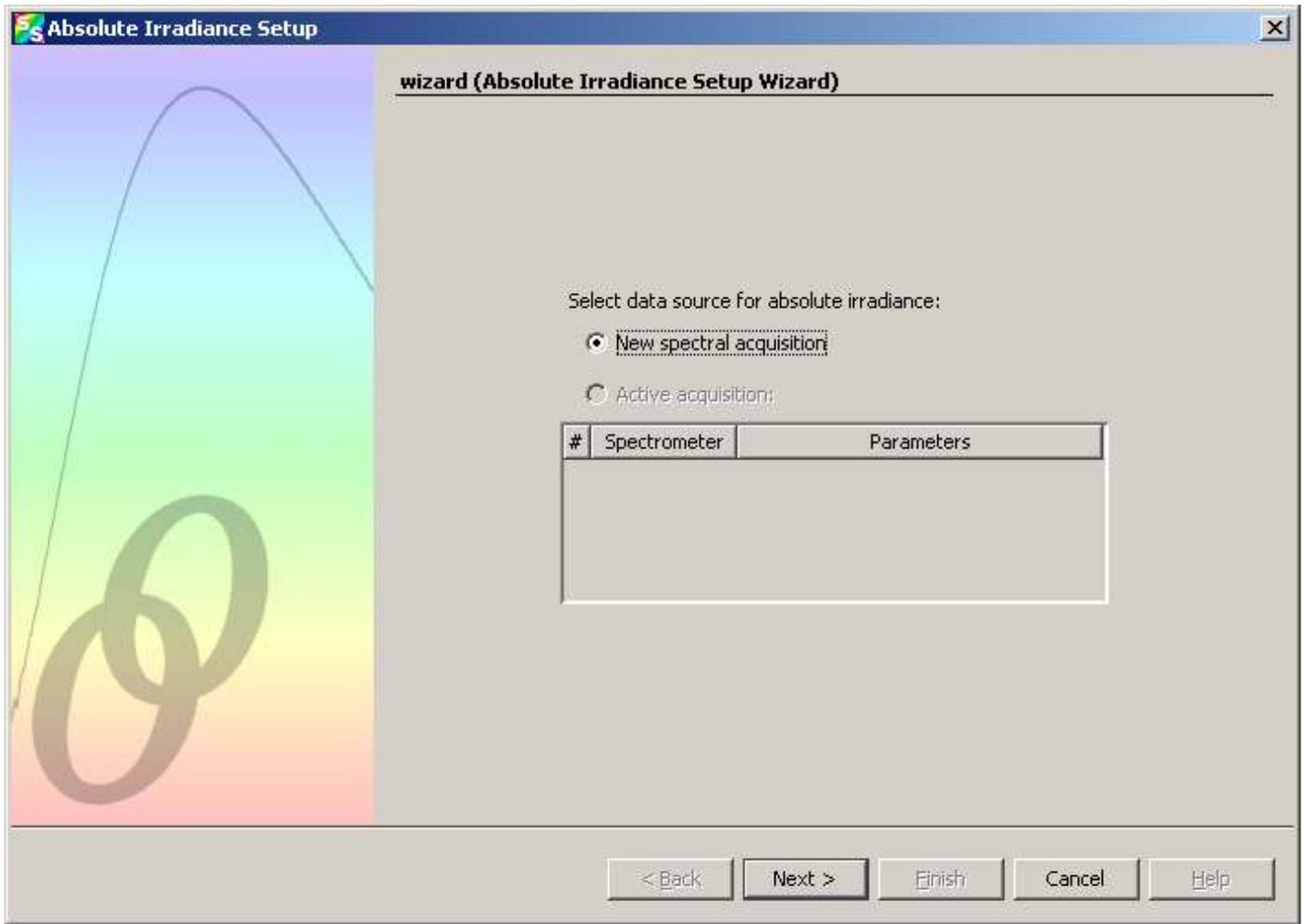


# Absolute Irradiance Calibration & Measurement – Part 2: Measurement

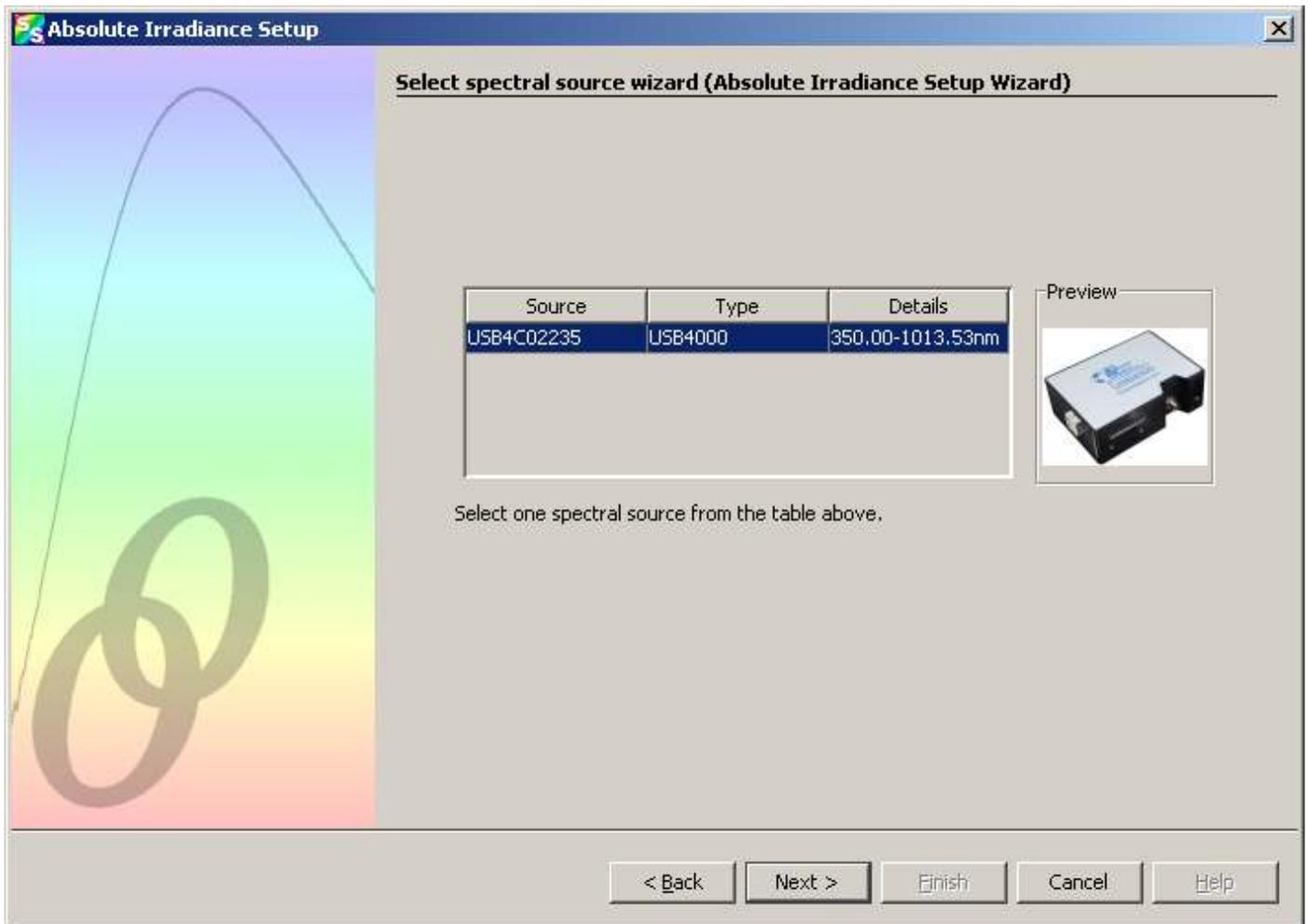
1. When you open SpectraSuite, close any open graphs so you start with a blank graph area. Go to the Main Menu under File / New / New Absolute Irradiance Measurement.



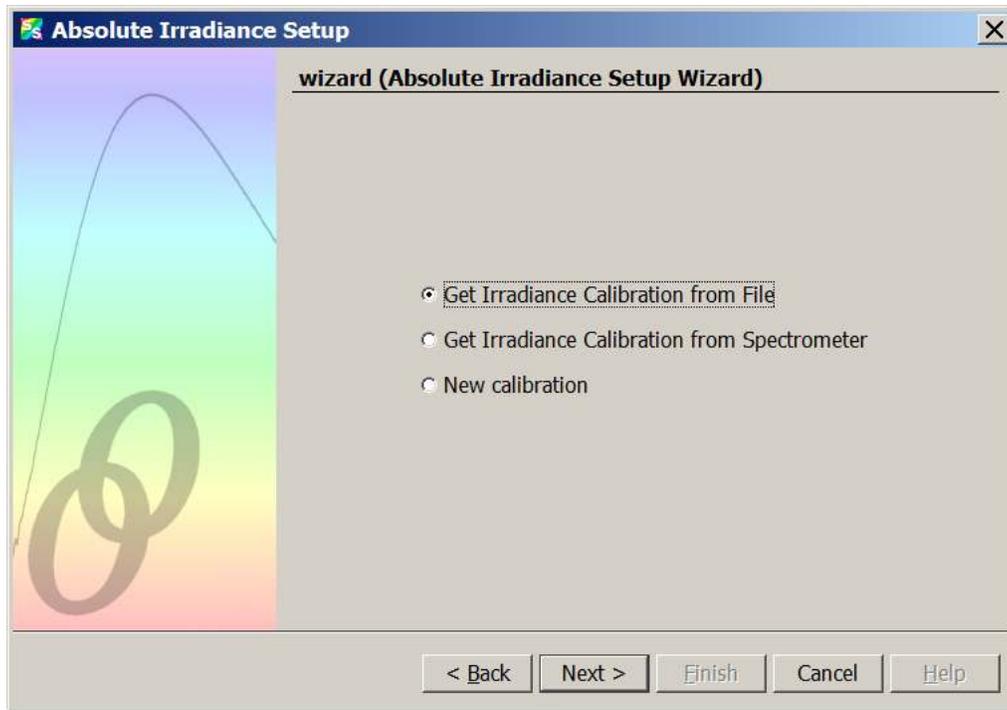
2. New spectral acquisition is selected. Click the “Next” button.



3. If you only have one spectrometer attached to your PC, it will be selected. If you have more than one spectrometer attached, select the spectrometer you wish to use. Click the “Next” button.



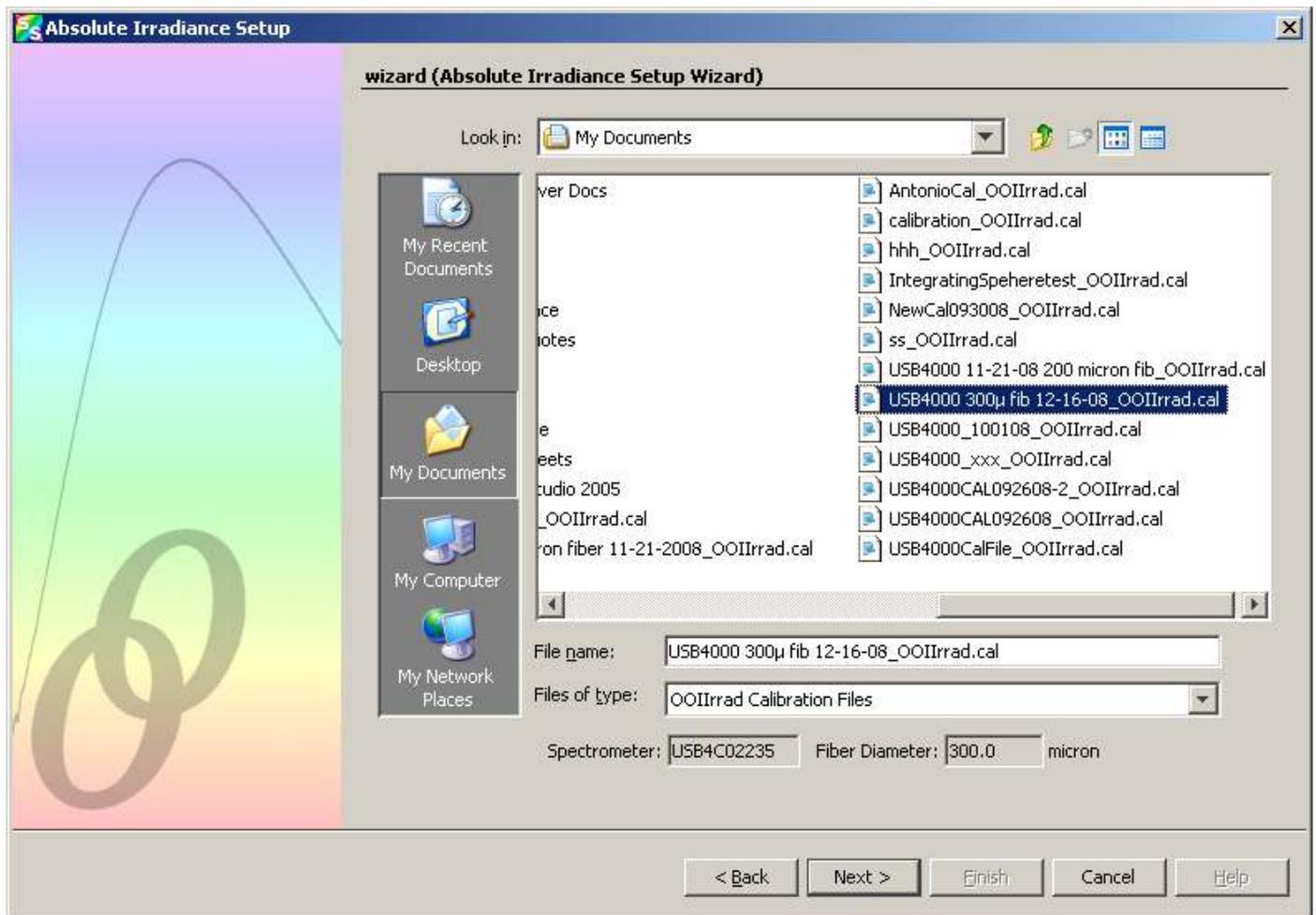
4. Select the “Get Irradiance Calibration from File” radio button. Click the “Next” button.



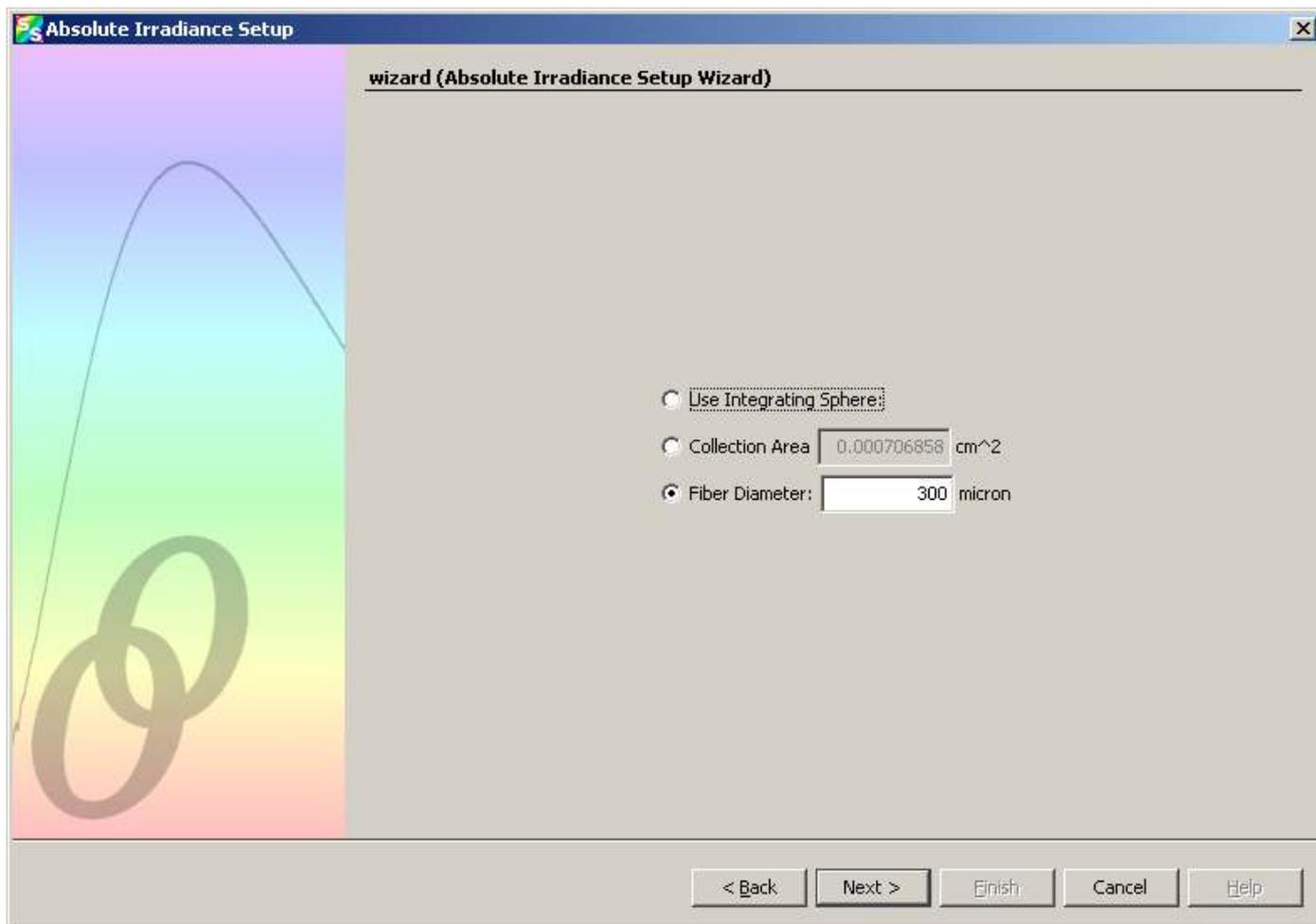
5. Browse for the calibration file that you saved previously



6. Select the appropriate calibration file. Click the “Next” button.



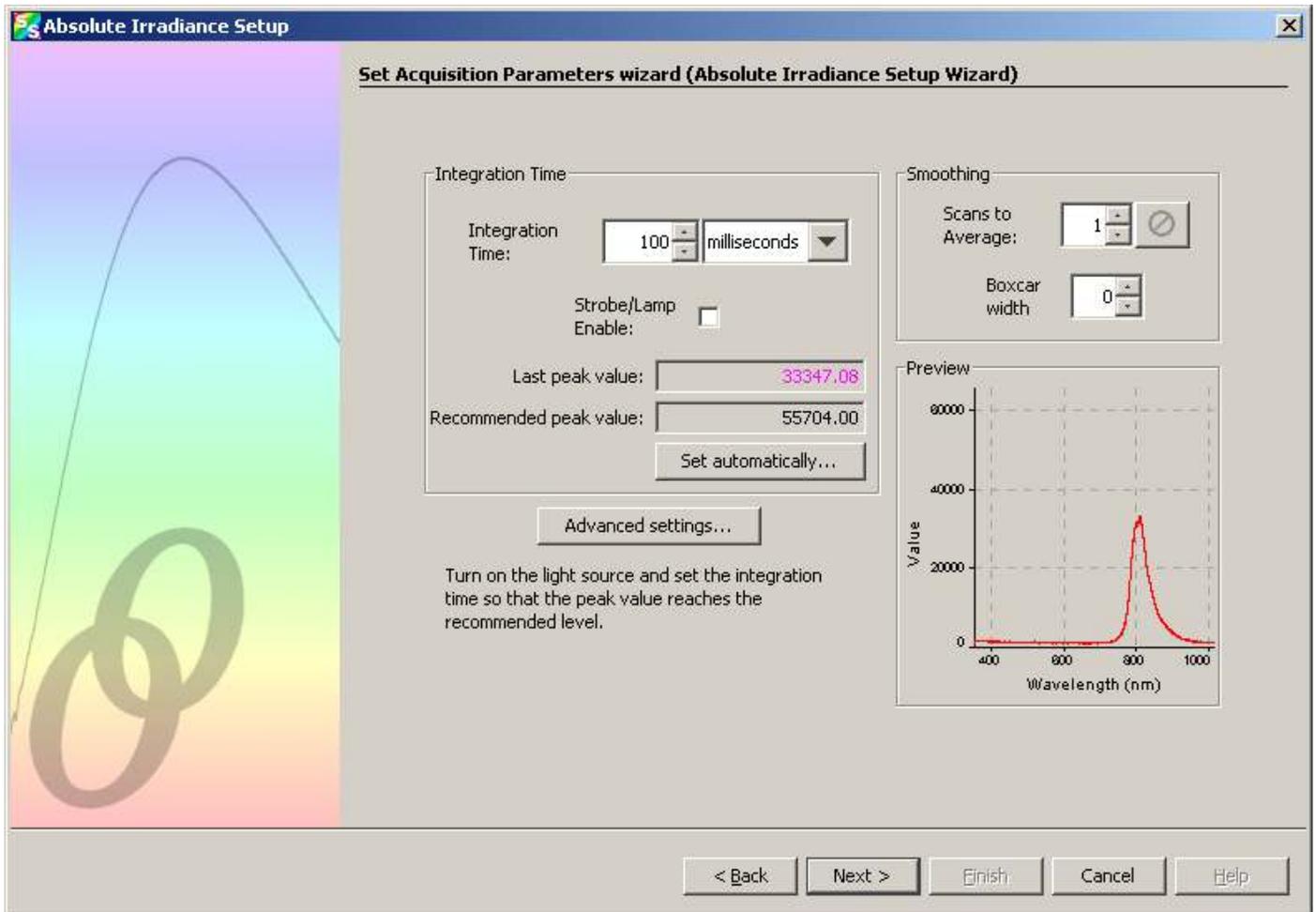
7. The Collection Area should already be populated with data from the calibration file. Click the “Next” button.



8. Click the “Advanced Settings” button and an “Advanced Settings” window will be displayed. Check the checkbox corresponding to “Nonlinearity Correction” and then click the “OK” button.



9. Acquisition Parameters.



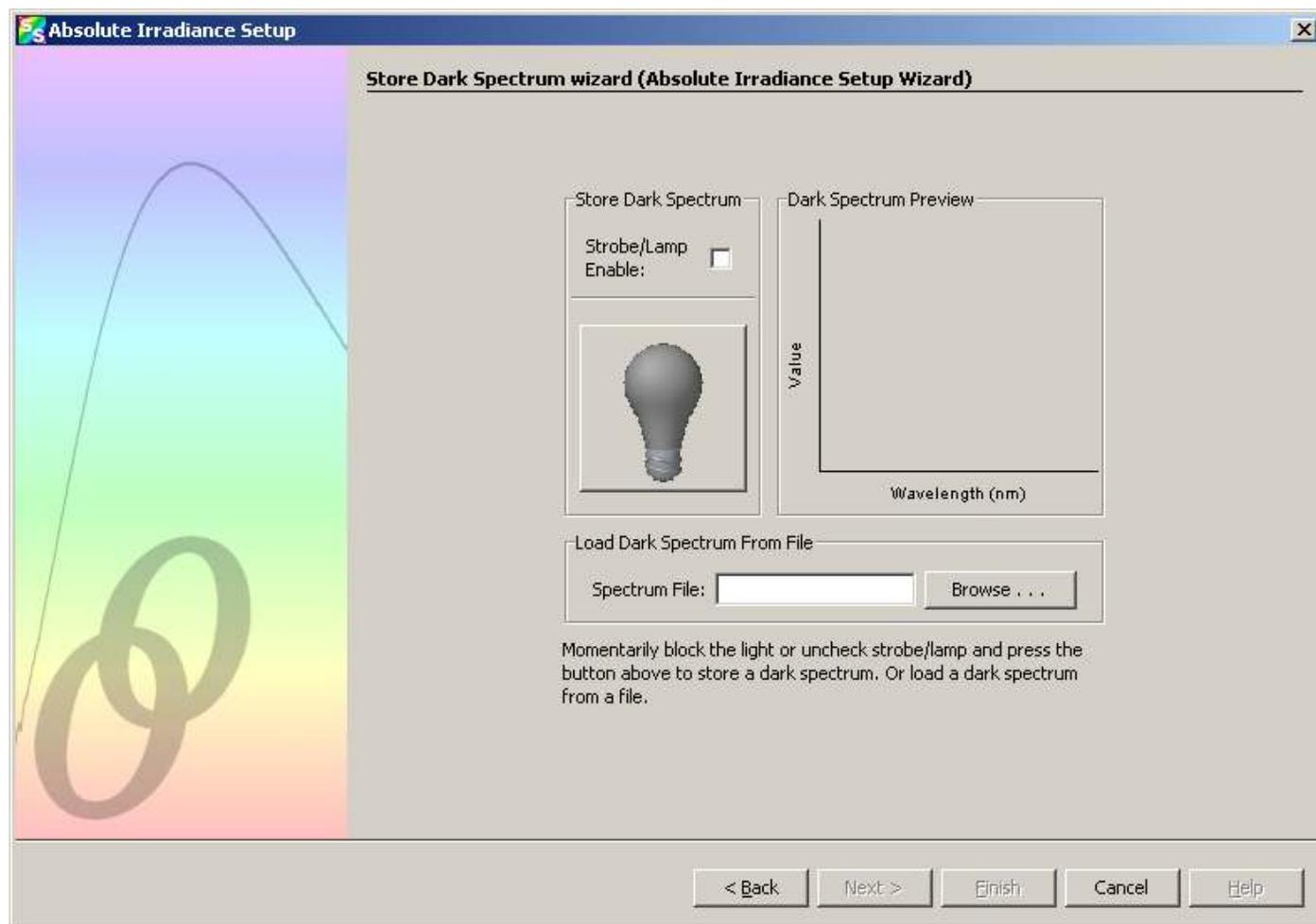
9. Adjust the integration time so that the “Last Peak Value” is close to the “Recommended Peak Value.”

The screenshot shows the "Set Acquisition Parameters wizard (Absolute Irradiance Setup Wizard)" window. On the left is a vertical color gradient bar with a blue curve and two interlocking rings. The main area contains the following controls:

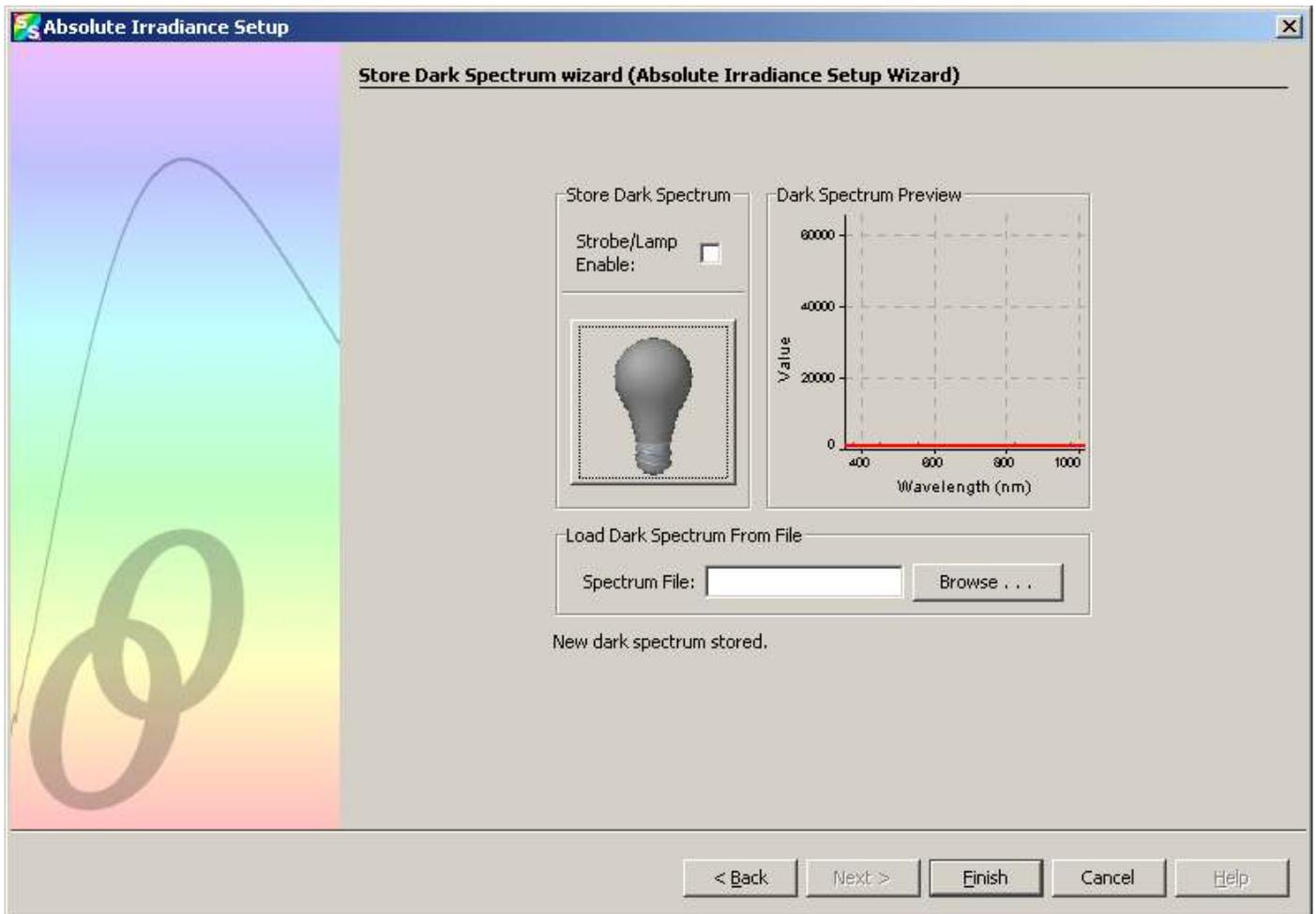
- Integration Time:** A numeric field set to "181,593" and a dropdown menu set to "microsec...".
- Strobe/Lamp Enable:** An unchecked checkbox.
- Last peak value:** A numeric field showing "57613.46".
- Recommended peak value:** A numeric field showing "55704.00".
- Buttons:** "Set automatically...", "Advanced settings...", and "Recommended integration time acquired."
- Smoothing:** "Scans to Average" set to "1" and "Boxcar width" set to "0".
- Preview:** A graph of "Value" vs "Wavelength (nm)" showing a red peak at approximately 900 nm. The y-axis ranges from 0 to 8000, and the x-axis ranges from 400 to 1000 nm.

At the bottom of the window are navigation buttons: "< Back", "Next >", "Finish", "Cancel", and "Help".

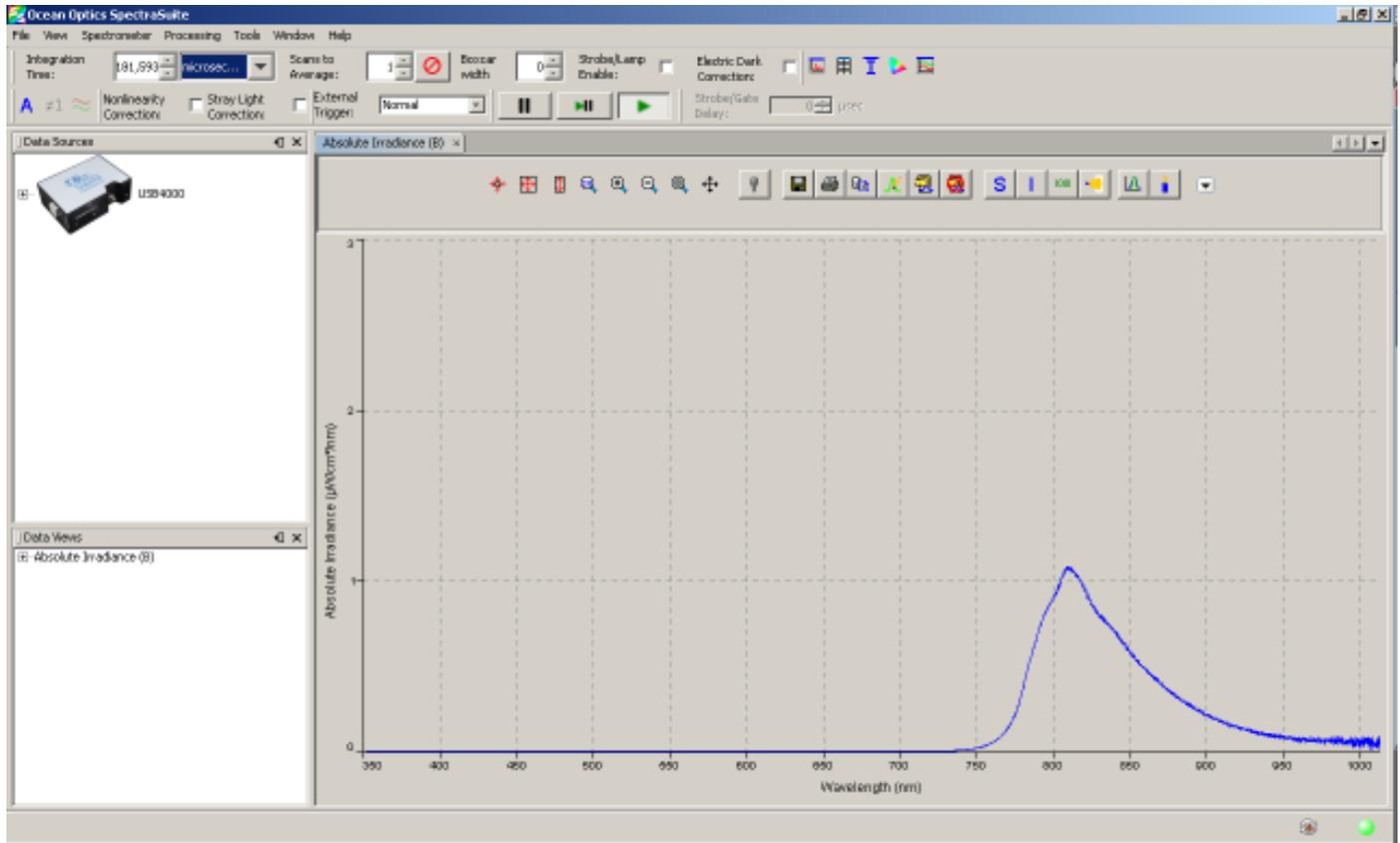
## 10. Dark Spectrum



11. Make sure no light is getting into the system and click the “dark light bulb” button. You should get a relatively flat line spectrum. Click the “Finish” button.



12. You are now measuring absolute irradiance.



13. You can use two features once you have calibrated for absolute irradiance, “New Energy, Power, Photons,”  and “New Photometry Measurement.” 

14. New Energy Power Photons

The screenshot shows the "Energy, Power, Photons" dialog box. It has a title bar with the Ocean Optics logo and the text "Energy, Power, Photons". The "Source:" section contains a table with the following data:

#	Spectrometers	Spectrum Type
0	USB4C02235	Processed

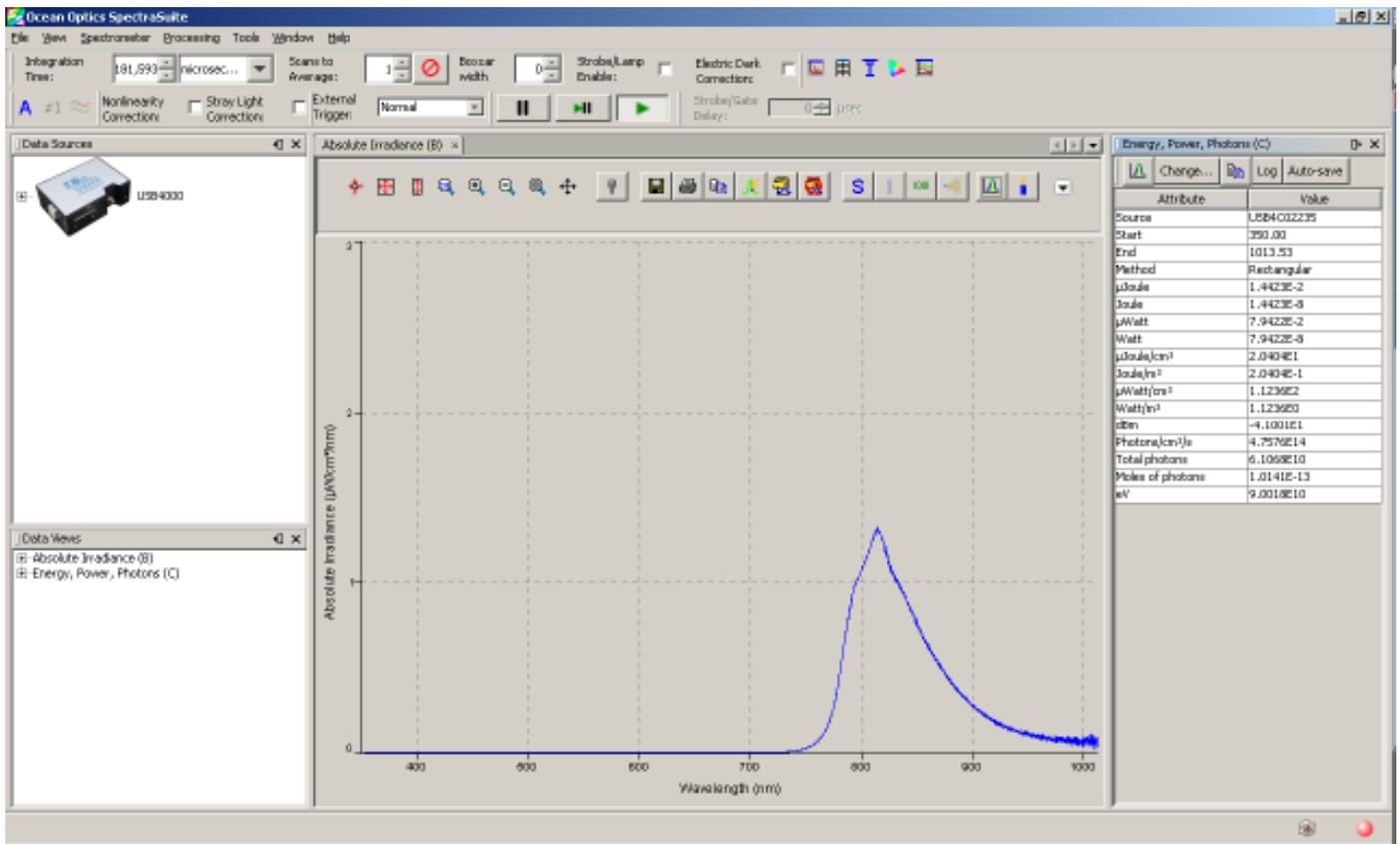
The "Integration Options" section contains the following fields:

Integrate from:

to:  nm

Integration Method:

Buttons: Accept, Cancel



#### 14. New Photometry Measurement

The screenshot shows the "Configure Photometry" dialog box. It is divided into two main sections: "Source" and "Observer Information".

**Source:**

#	Spectrometers	Spectrum Type
0	USB4C02235	Processed

Observer: 2-degree  
Steradians: 1.0

**Observer Information:**

Details | Graph

Description:  
2 degree (photopic, daylight) observer

Reference: CIE 15.2 - 1986  
Creator: Ocean Optics, Inc.  
Date: 17:43:38 EDT 2005  
Provided by Ocean Optics, Inc.

Accept | Cancel

Please note that the information in the pane at right is based on 1 Steradian.

