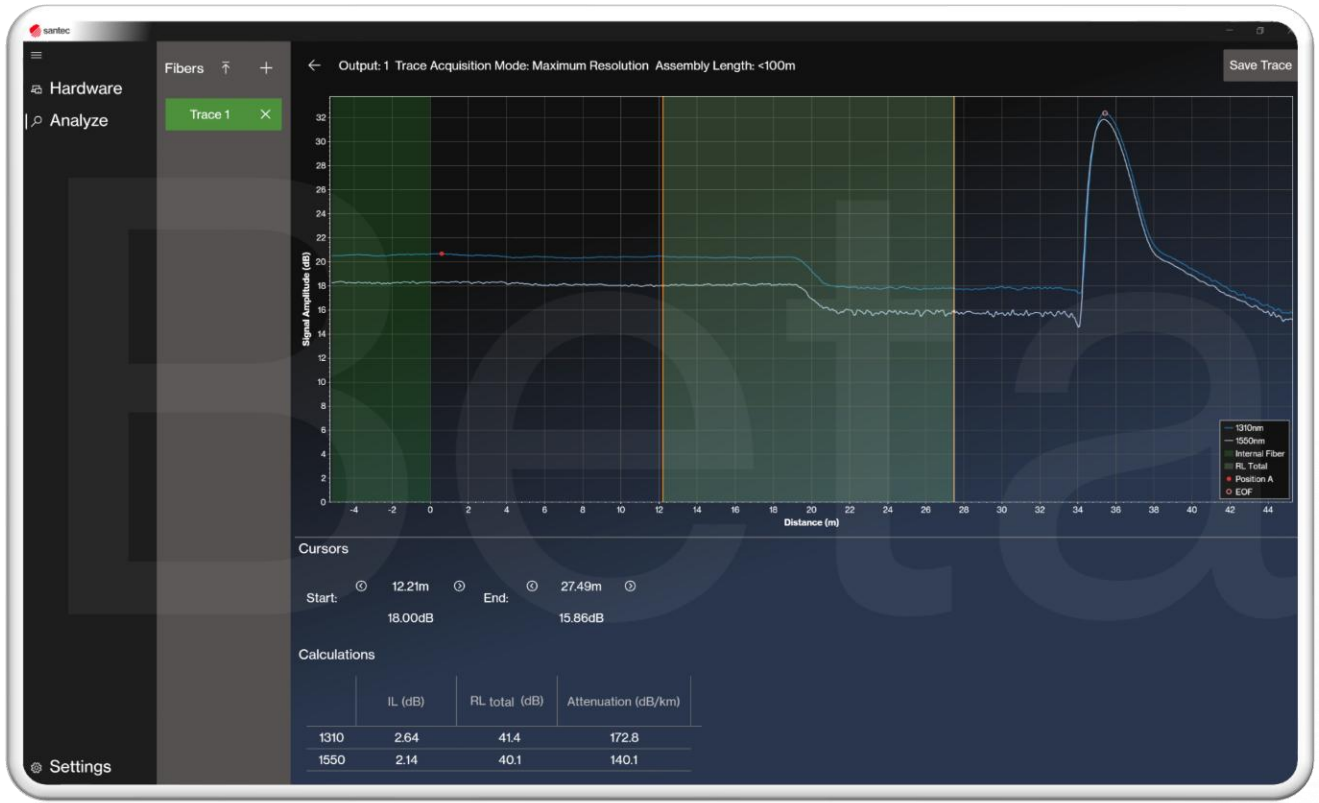
# Santec OTS Beta


*inst.santec.com*

# Introduction

The Santec OTS Beta (Optical Trace Software) is designed to leverage the OTDR trace capabilities of the RLM-100, allowing the user to:

- Gain a clear picture of the optical path within a system for easier analysis and troubleshooting.
- Identify fiber breaks, sharp bends, and high-reflection points.
- Measure the insertion loss and return loss across defined fiber lengths.




# Disclaimer

The Santec OTS Beta is still in its testing phase, and some bugs are expected. Users may experience occasional crashes or the RLM rebooting. However, rest assured that OTS will not damage your equipment in any way.

We greatly appreciate your feedback as we work toward a full release of OTS. Please send any feedback to the Santec representative who provided you with the software.

# Santec OTS Beta

To begin using OTS, make sure the RLM-100 and the computer running the software are connected to the same local network

The RLM-100 can only communicate with OTS via the Ethernet port on the rear of the meter.

# Santec OTS Beta

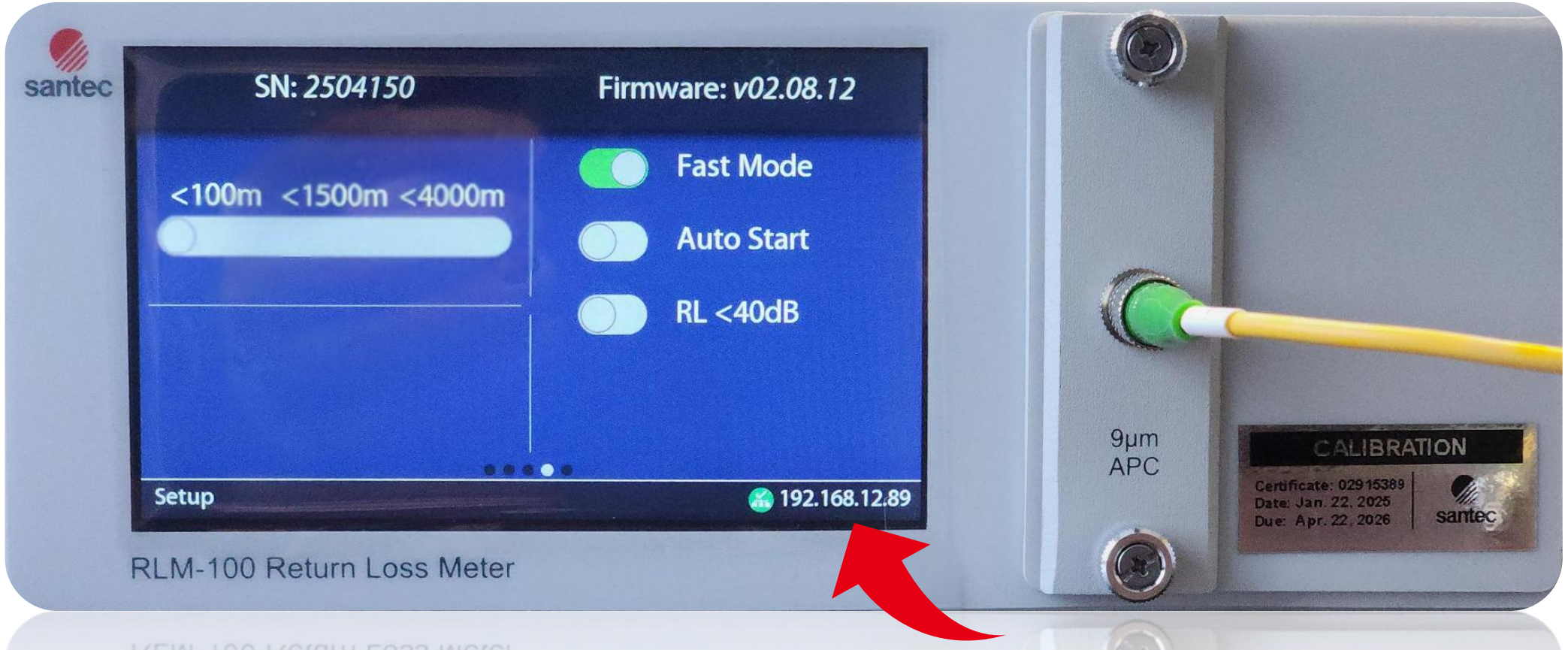
After opening the software, select an RLM. To do this, click the "Change RLM" button. If the RLM is also connected to the computer via USB, the software will identify the RLM as “Local.”

Click on the desired RLM, then click "Select."

# Santec OTS Beta

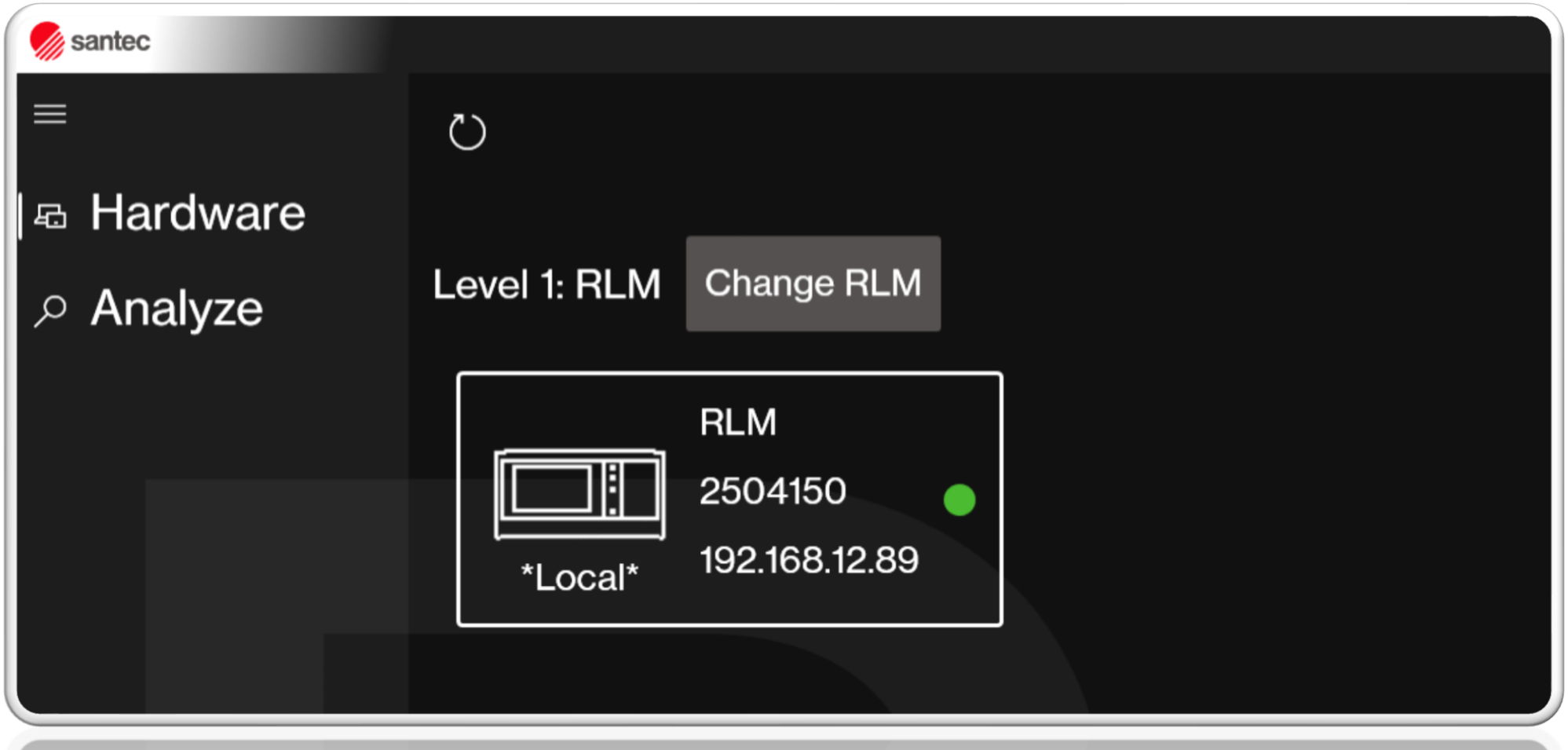
If the IP address is not known and the RLM is not connected to the computer via USB, swipe to the setup page on the RLM. The IP address is displayed in the bottom right corner of the display.

If the RLM does not have an IP address, check that the Ethernet cable is securely connected to the rear of the RLM and paired to a valid network.



# Santec OTS Beta

A green circle will appear when the RLM is selected and ready to be used.

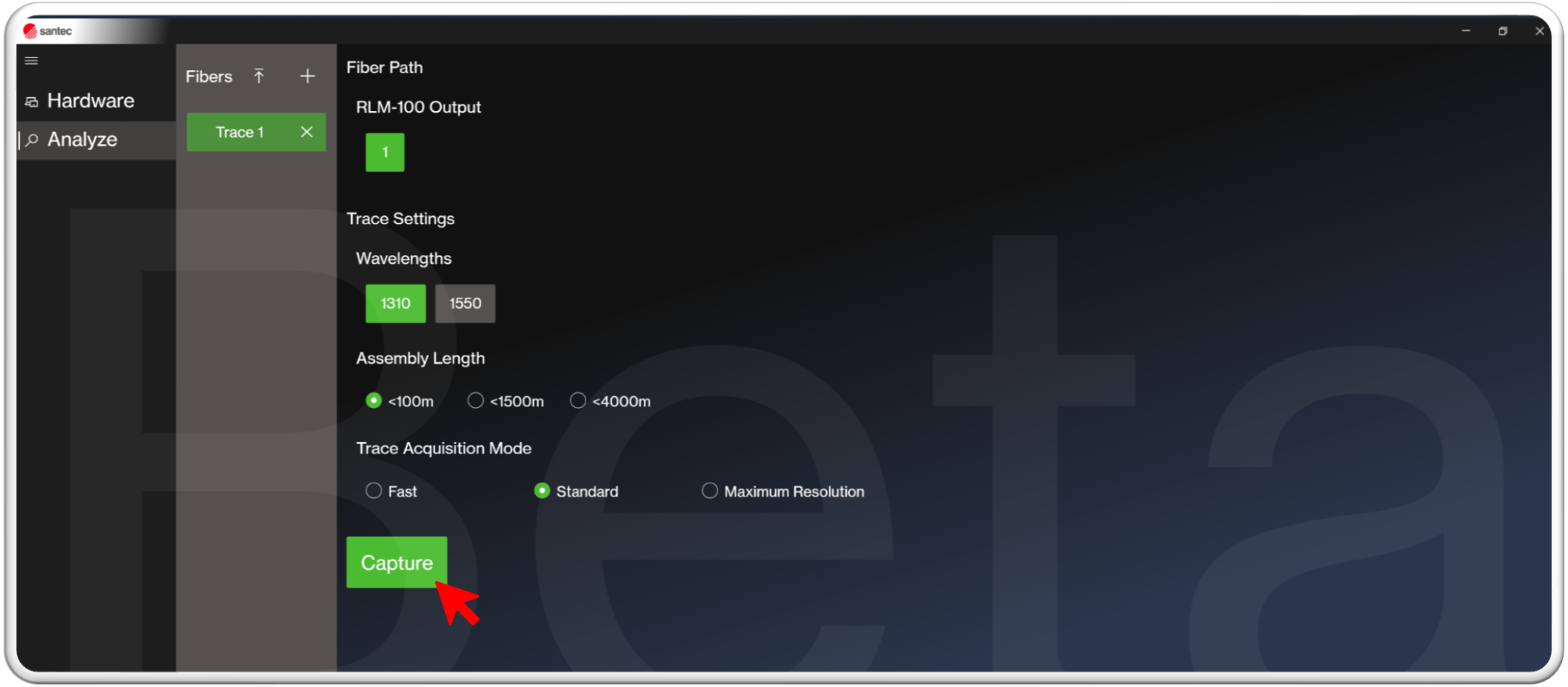


# Santec OTS Beta

After selecting the RLM, click Analyze.

On this page, you can configure test parameters such as wavelength, channel, cable length, and resolution.

Click *Capture* to begin measuring the OTDR trace.



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After a few seconds, an OTDR trace like the one in the image to the right will be displayed.

The dark green shaded area of the graph represents 5 meters of the RLM internal fiber.

The end of fiber is represented by this icon  .

The position A or $RL_A$ is represented by this icon  . The $RL_A$ position set by the reference length on the RLM.

The X-axis shows the signal strength in dB, while the Y-axis represents distance in meters.

Click Save to access the data later or on a different computer.

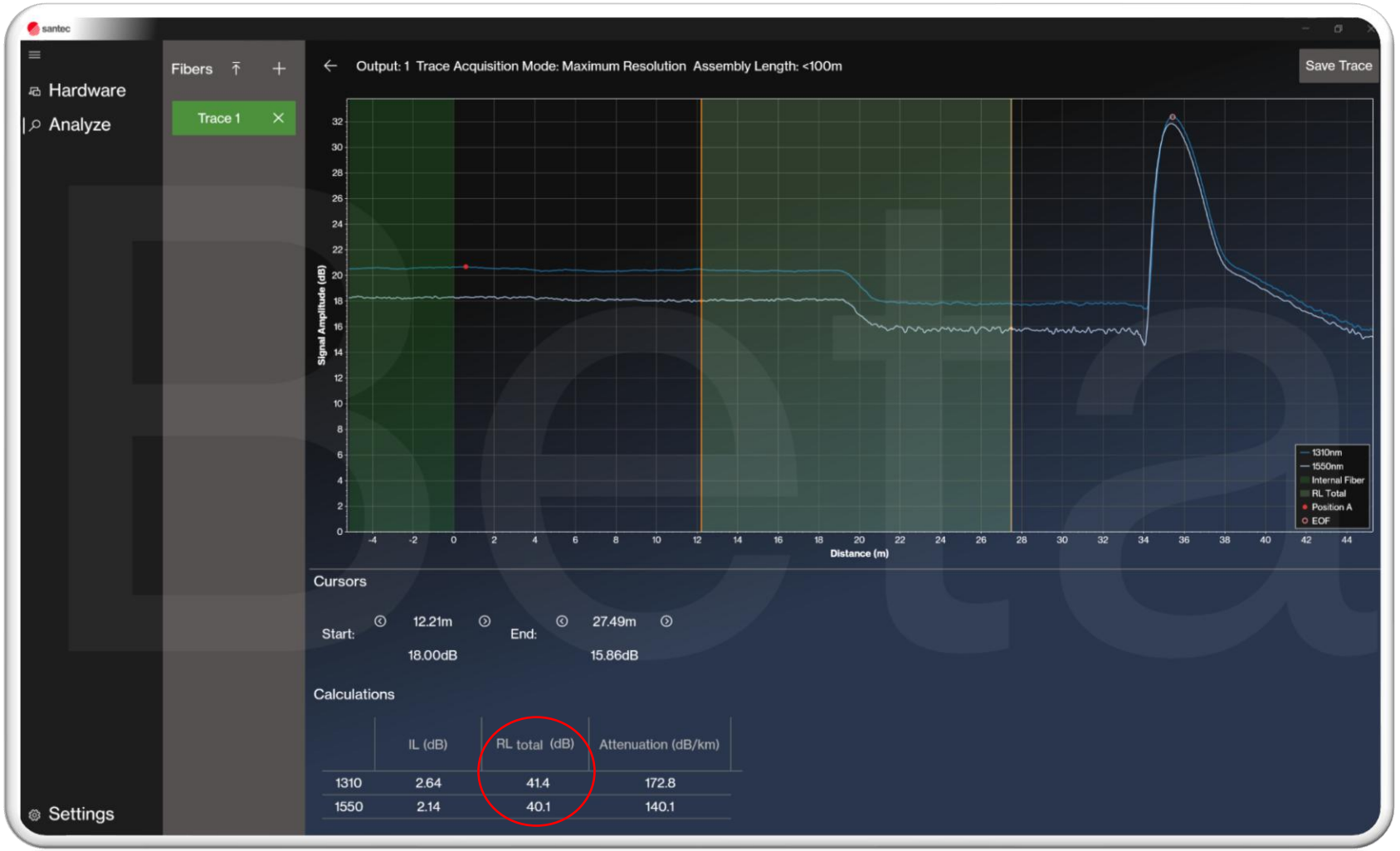
# Santec OTS Beta – $RL_{Total}$

$RL_{Total}$ is the total return loss measured over a given length of fiber.

The light-green shaded area represents the length of fiber in which $RL_{Total}$ is calculated.

The length can be controlled by changing the start and end positions or by clicking and dragging the edges of the shaded area.

The $RL_{Total}$ for each wavelength is displayed in the circled area.



# Santec OTS Beta - IL

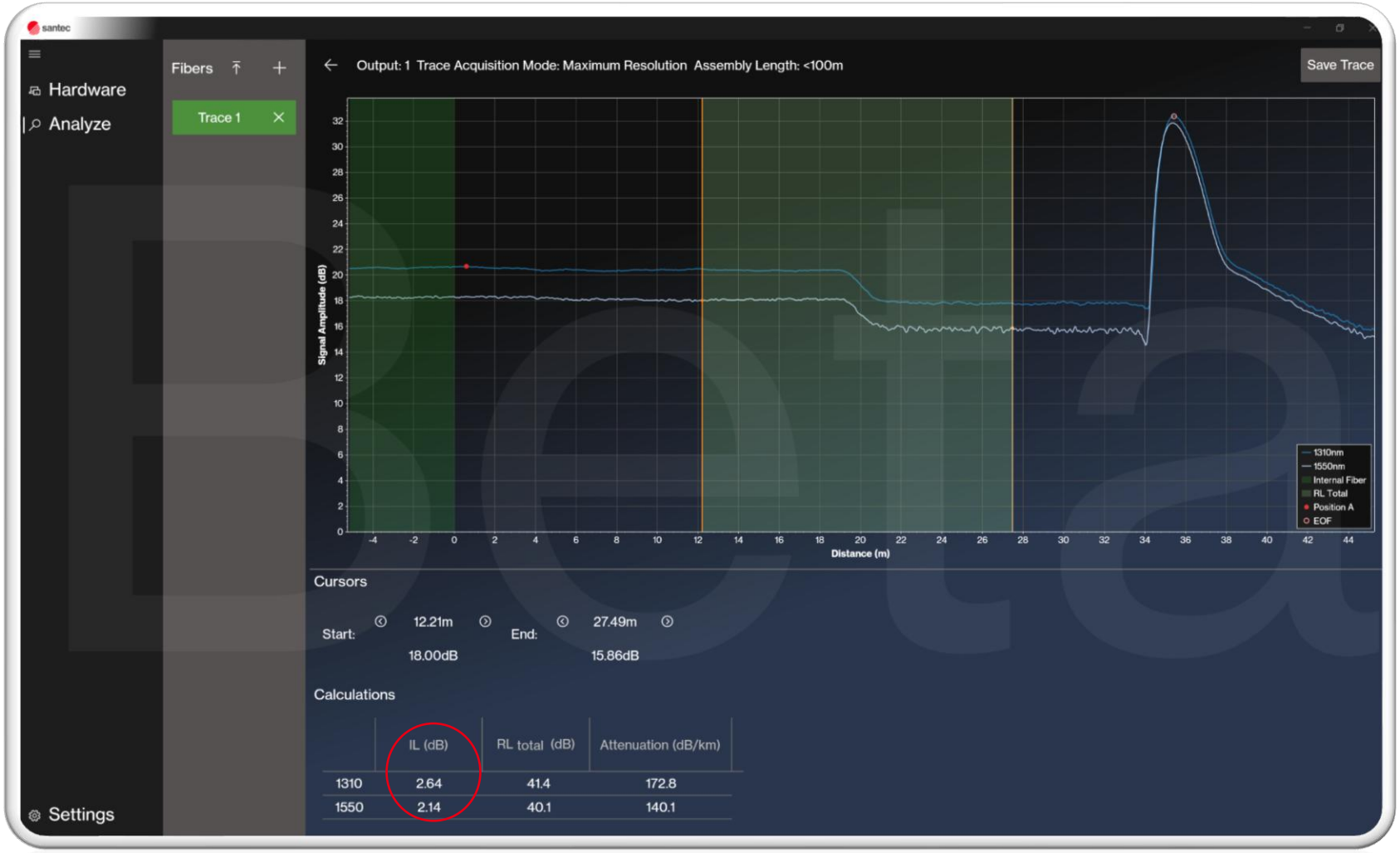
Without the need for a detector, the Insertion Loss (IL) over a specified length of fiber can be measured.

The light green shaded area indicates the segment of fiber in which IL is being calculated.

Users can adjust this length by modifying the start and end positions or by clicking and dragging the edges of the shaded region.

In the example image, OTS is being used to identify a harsh bend 20m into the DUT.

OTS accurately identifies 2.64 dB and 2.14 dB of insertion loss in this location.



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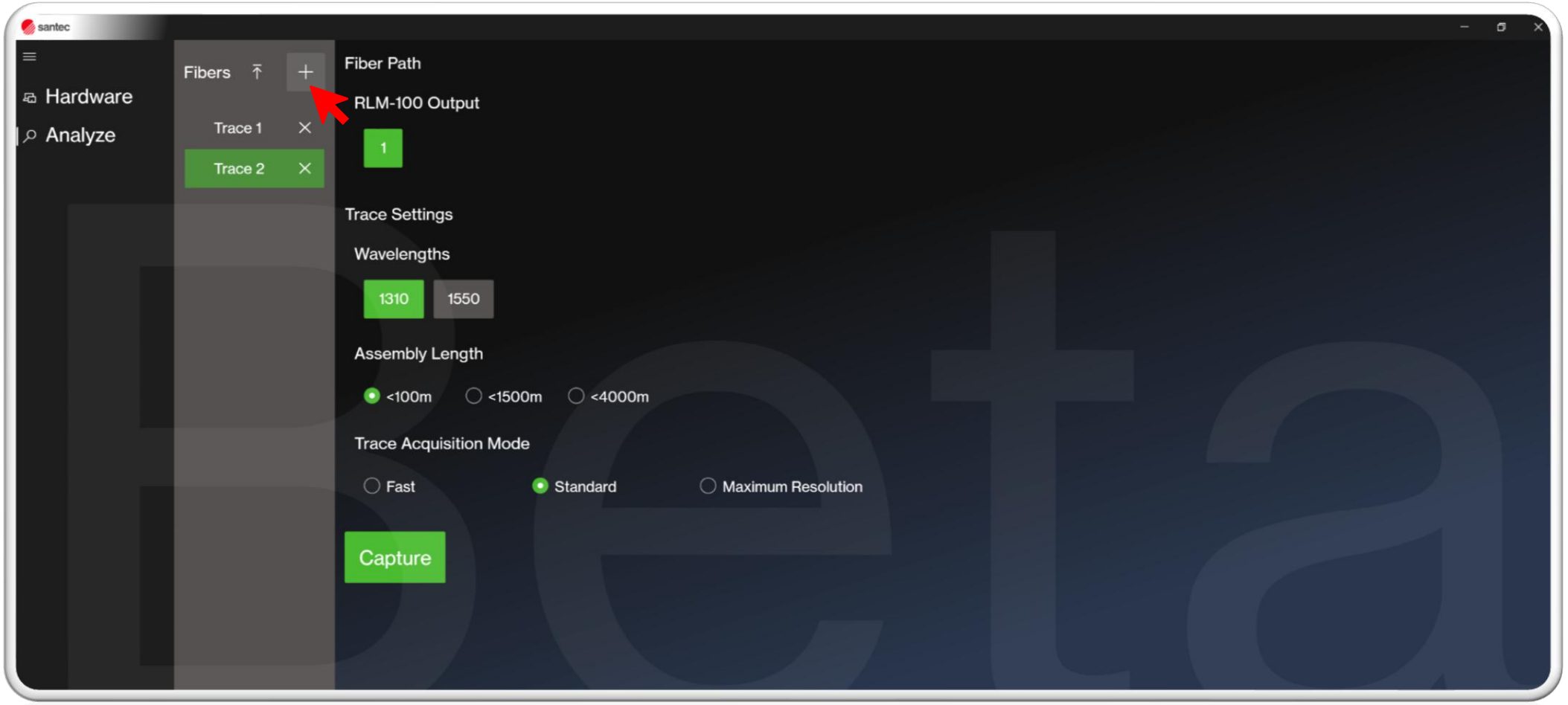
Additional traces can be captured at any time by clicking the + icon.

Previously saved traces can be reopened by clicking the ↑ icon.



# Santec OTS Beta

When the RLM is paired with an OSX (optical switch) or an OSX is connected to the computer directly, the software will automatically recognize the connection and allow for the ability to select and compare multiple channels.

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For questions, please email Support.inst@santec.com