

Phase Ripple Measurements with the Optical Vector Analyzer

Index

1	Introduction	1
2	Overview of Phase Ripple Measurements	
2.1	Phase Ripple Linear	1
2.2	Phase Ripple Quadratic	2

Introduction

Luna Technologies’ Optical Vector Analyzer has the ability to make phase error measurements with software version 3.8 or later. Both “Phase Ripple Linear” and “Phase Ripple Quadratic” are now available from the drop down graph option in the OVA software.

Overview of Phase Ripple Measurement

2.1 Phase Ripple - Linear

The phase error linear measurement is done by performing a sliding linear fit to the phase response of the DUT over a user defined wavelength/frequency range.

To complete this process on the OVA, select “Phase Ripple Linear” from the dropdown menu. Enter the desired “Channel Width” in the input box, located at the bottom right corner of the graph, and press enter. The system will perform a sliding linear fit based upon the channel width, and it will show on the appropriate graph.

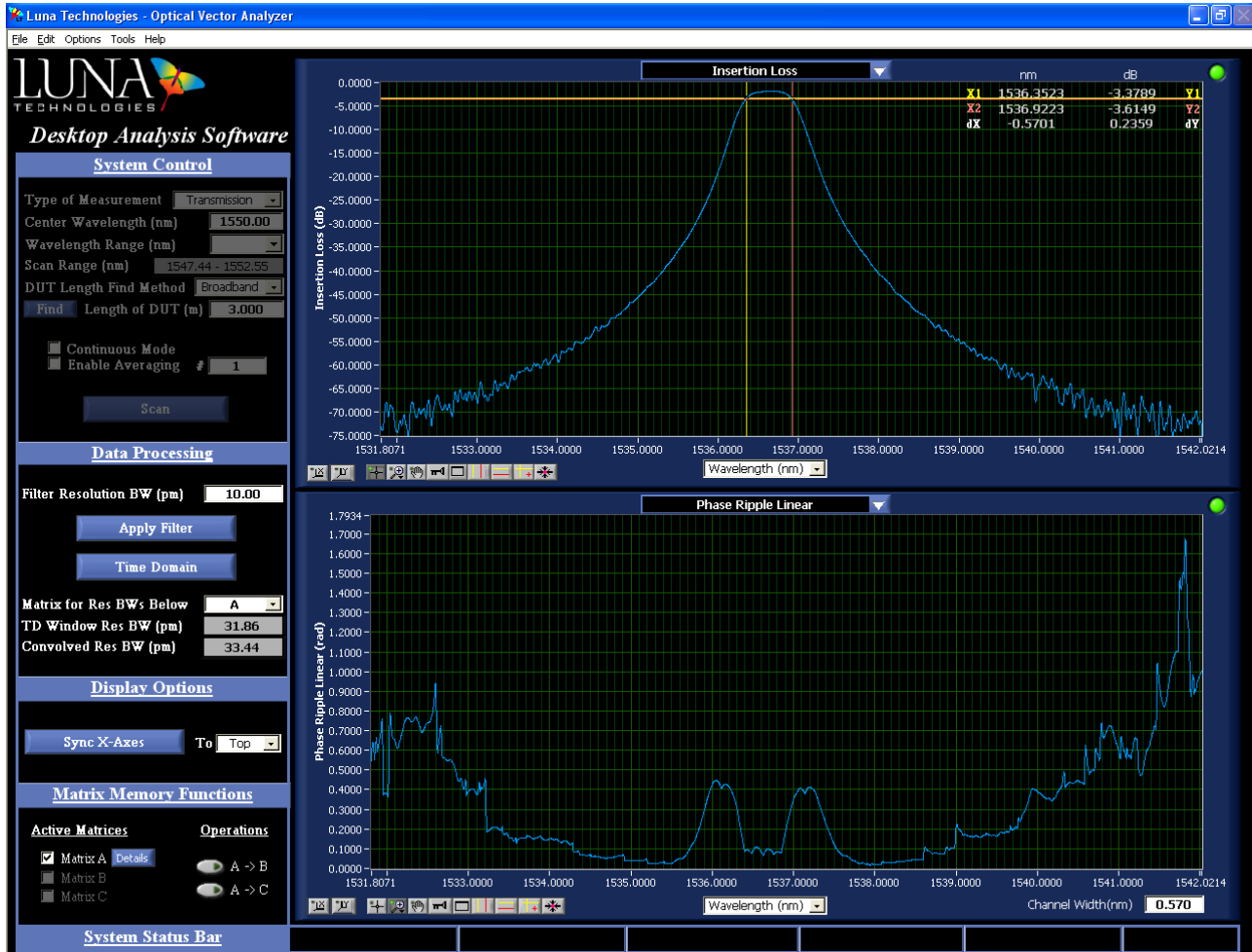


Figure 1: Phase Ripple Linear shown in the bottom graph was calculated based upon a .570nm channel width. The calculation is automatically updated after changing the width.

2.2 Phase Ripple - Quadratic

Similar to the calculation described above, the phase ripple quadratic measurement is done by performing a sliding quadratic fit to the phase response of the DUT over a user defined wavelength/frequency range.

The process is the same as above, where you enter the desired channel width in the bottom right corner of the graph, and it will automatically update the calculation for you.

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Engineering Note EN-FY1307

