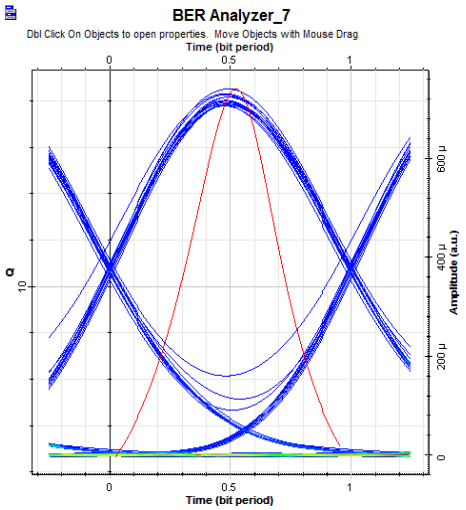

Figure 9: Eye diagrams of 120Gbps DWDM system with equal channel spacing of 100 GHz with optical span of 100 km in the presence of FWM.

5. Conclusion

An implementation of 120Gbps DWDM system in the presence of Four Wave Mixing (FWM) with equal channel spacing has been evaluated to estimate Q-factor, BER and FWM power. System performance is increased and the BER is decreased because of reducing the FWM by using the Hybrid Modulator technique. The single and combined effect of various parameter such as effective area, input power, channel spacing and fiber length have been analyzed to determine the effectiveness of FWM power. The combined of four parameter i.e., increasing the effective area, decreasing the input power, increasing the fiber length, and increasing the channel spacing gives the best reduction on the FWM power. The FWM power is reduced as -100dBm. By reducing the FWM, the system performance is increased and also communicates long distances with high data rate.

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