Summary of MPN Calculations Jointly Investigated

David Cunningham & Petar Pepeljugoski

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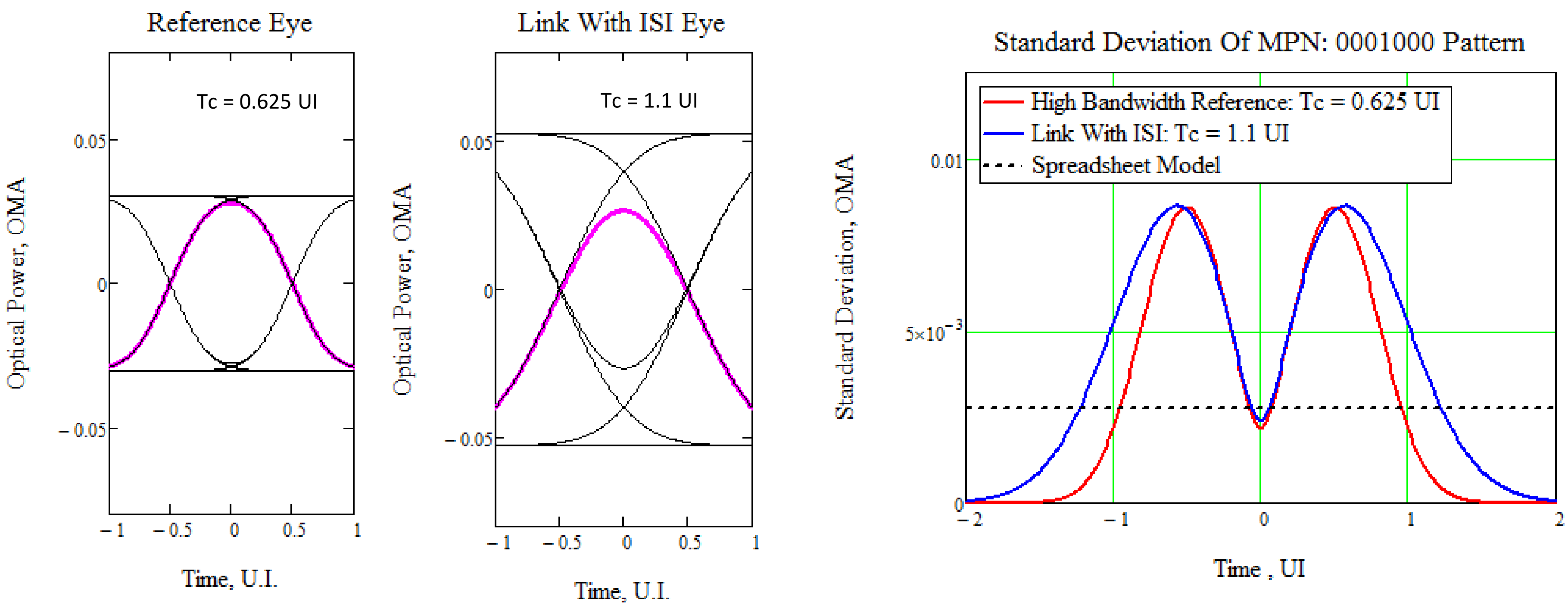
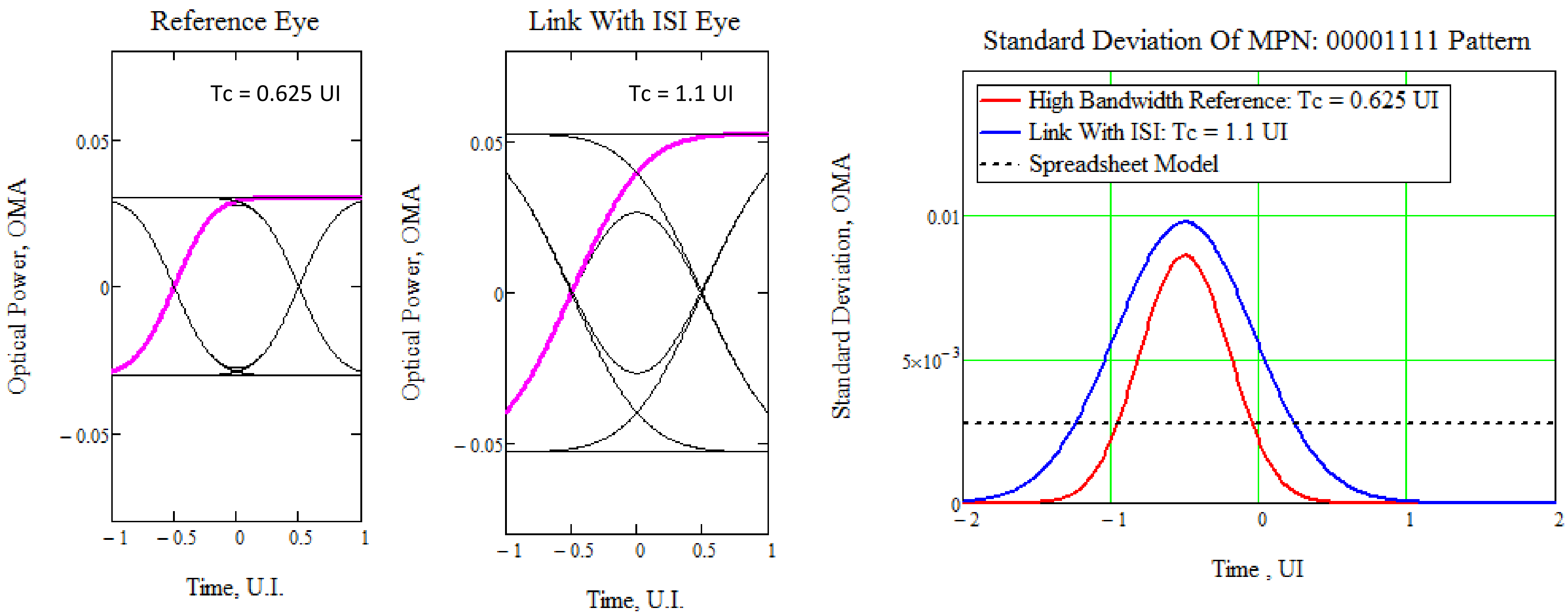
Comparison of the Non Normalised Standard Deviation of MPN For Two Different Tc Values With Link Model Pulse Shapes: 000100 and 0101010 Patterns



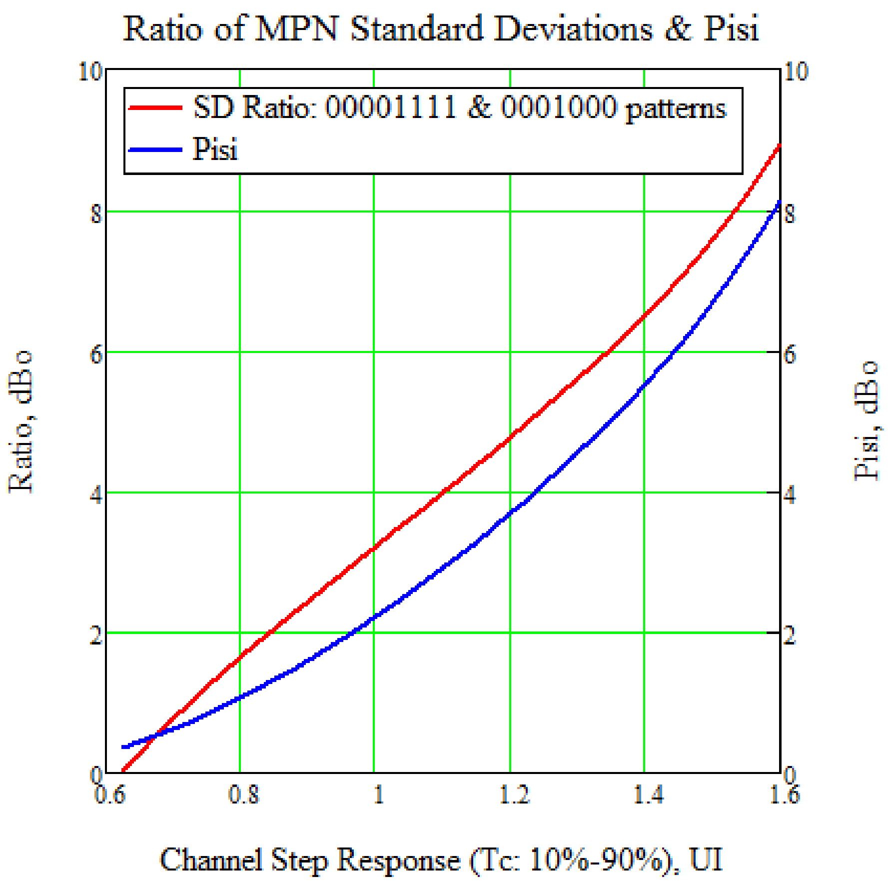
- Agrawal's model, and the spreadsheet model, assume 0101010 patterns are worst case
- The calculation also assumes k is constant for all patterns and edges
- For an isolated one, at eye centre (t= 0), σ_{mpn} has very little dependence on Tc (this is expected)
- But, at previous and next bit sampling times [t = (1,-1)], σ_{mpn} does have a dependence on Tc
- Since the spreadsheet calculates σ_{mpn} based on 0101010 patterns only it does not account for the large σ_{mpn} contribution at t = +1 and -1 due to isolated ones or patterns like 0000111 etc.,

Comparison of the Non Normalised Standard Deviation of MPN For Two Different Tc Values With Link Model Pulse Shapes: 00001111 Pattern



- The σ_{mpn} due to a 00001111 pattern is plotted
- The calculation assumes k is constant for all patterns and edges
- For the current bit, the optimum sampling time is t = 0
- For links with ISI the worst case pattern may be transitions from a string of zero's or transitions from a string of one's, not 0101010 as assumed by the link model

Ratio of the Non Normalised Standard Deviation of MPN of 00001111 and 0001000 patterns as a Function of Tc.



- The ratio has a trend and magnitude that is similar to that of Pisi.
- Assuming k is constant throughout patterns and edges σ_{mpn} , per the spreadsheet model, should be multiplied by the value of the ratio plotted in the graph