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Prism Pulse Compressor

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Abstract content
 (Max 300 words)

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Various techniques can be used to stretch and compress laser pulses. One such technique involves the use of a pair of prisms as a pulse compressor. Based on the principle of refraction of light, we show that angular dispersion of light by a prism pair can generate negative group delay dispersion (GDD). We describe the prism pulse compressor and show that it can provide adjustable negative group delay dispersion by choosing an appropriate geometry of the prism pair setup. An expression for the optical path length was calculated for a specific wavelength distribution. From this expression, negative group delay dispersion was calculated for specific prism pair geometry and a specific prism material. We show how the prism pair can be used to compress broadened pulses. Potential applications and future work will be discussed.

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MSc

Main supervisor (name and email)
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