Single-channel 1.28 Tbit/s-525 km DQPSK transmission using ultrafast time-domain optical Fourier transformation and nonlinear optical loop mirror - DTU Orbit (05/12/2018)

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We demonstrate a single-channel 1.28 Tbit/s-525 km transmission using OTDM of subpicosecond DQPSK signals. In order to cope with transmission impairments due to time-varying higher-order PMD, which is one of the major limiting factors in such a longhaul ultrahigh-speed transmission, we newly developed an ultrafast timedomain optical Fourier transformation technique in a round-trip configuration. By applying this technique to subpicosecond pulses, transmission impairments were greatly reduced, and BER performance below FEC limit was obtained with increased system margin.

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