Demodulation of DPSK signals up to 40 Gb/s using a highly birefringent photonic bandgap fiber - DTU Orbit (31/12/2018)

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Phase-to-intensity modulation conversion of differential phase-shift keying signals is successfully demonstrated at 10 and 40 Gb/s using a polarization Mach-Zehnder delay interferometer implemented with only 2.4 m of a highly birefringent air-guiding photonic bandgap (PBG) fiber. Such a PBG fiber exhibits a birefringence one order of magnitude larger than that of conventional polarization-maintaining fibers, thus enabling the realization of compact interferometers. Furthermore, its single material nature is expected to result in reduced temperature sensitivity.

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