

As seen in Fig. 1, active compensation of optical frequency shifts induced by the fibre link optical path fluctuations works on the principle of the phase-locked loop that keeps the beat note frequency of transmitted and back reflected light at a constant value. The frequency of the signal driving acousto-optic modulator (AOM1) at the transmitting side (control action) is continuously recorded to compute fluctuations of the transport delay of the link. Relative stability of the optical frequency transfer has been evaluated by means of Allan deviations. First results show that the relative stability of the optical frequency transfer over the fibre link before compensation of frequency shifts is 10^{-14} for 10^3 s integration time.

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