

# Quantum Teleportation For Long Range Communications

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We propose an EPR correlated pairs protocol based on fractal correlated signals: *e.g.* a specific  $\alpha$ -Fractional Brownian Motion (FBM) is induced by a device on a group of EPR photons. It is well known that a non-orthogonal wavelets filter is able to characterize the FBM from a noisy environment (as a white noise is) by formalizing a nonlinear optimization problem for FBM  $\alpha$  characteristic parameter estimation. The estimated signal is a  $1/f$  process. A simple quantum teleportation network based on  $\alpha$  time correlated/uncorrelated EPR pairs as a Morse signal is proposed. In this way it could be possible to use pre-existing EPR states generated by a beam splitting via suitable interstellar medium cloud of a MASER signal. What we propose is a non orthogonal wavelet analysis of MASER sources time series, (reflections included) that could give, above all, relevant astrophysical informations on correlation properties of those sources.