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Invariance principle for tempered fractionally integrated time series.

We establish functional limit theorems for a recently proposed class of time series models. Tempered fractionally integrated time series generalize the well-known fractionally integrated model by applying a tempered fractional difference operator in place of the usual fractional difference operator. The new times series are useful to model turbulence, where they extend the classical Kolmogorov 5/3 model to include low frequencies.

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