

Extracting Periodic Signals in Magnetic Field Data by a Matching Pursuit with Adapted Trial Functions

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We present some preliminary results on the application of a (functional) matching pursuit to the extraction of temporal signals from data that contains time-dependent and time-independent contributions. In particular, we present test examples for the extraction of periodic tidal signals in magnetic field data. The used matching pursuit has the advantage that it chooses suitable trial functions from a dictionary which may contain various types of functions. This way, we can include functions particularly tailored for the signal under consideration.