## COMPLEX CONTINUOUS POISSON WAVELET TRANSFORM FOR IDENTIFYING THE SOURCES OF THE POTENTIAL FIELD ANOMALIES

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**Abstract:** Some possibilities of continuous wavelet transform as applied for interpreting the potential field data are considered. The use of complex Poisson wavelets of arbitrary order is suggested. The highly efficient scheme of computing continuous wavelet transform using the fast Fourier transform is described. The possibility of localizing the singularities using the continuous complex wavelet transform with Poisson kernel is explored on several simple models. The way for determining the continuous distributions of anomalous properties of the environment based on the continuous wavelet transform and Kobrunov theorem is demonstrated.

Keywords: continuous wavelet transform, potential fields.