# Article information:

基于新的惩罚因子算法的波场重构反演 - 中国知网
[https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTlOAiTRKibYlV5Vjs7i0-kJR0HYBJ80QN9L51zrP3oGmAu7DTnavk2xtHKpE2PSFXIW57iUMbj\_C0\_rqT3I=NZKPT](https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTlOAiTRKibYlV5Vjs7i0-kJR0HYBJ80QN9L51zrP3oGmAu7DTnavk2xtHKpE2PSFXIW57iUMbj_C0_rqT3I&uniplatform=NZKPT)

# Article summary:

1. Wavefield reconstruction inversion is a recently proposed improved full-waveform inversion theory that introduces wave equation as a penalty term into the objective function to reduce the influence of local minima and increase computational efficiency.

2. This paper proposes a new penalty factor algorithm based on wave equation as an objective function under the assumptions of accurate wave equation and decoupling of simulated wavefield and inversion parameters.

3. Numerical experiments using synthetic data from the partial Sigsbee2A model show that the proposed algorithm can provide high-precision inversion results even when other information is inaccurate.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy, providing detailed information about the proposed penalty factor algorithm for wavefield reconstruction inversion. The authors have provided sufficient evidence to support their claims, including numerical experiments with synthetic data from the partial Sigsbee2A model. The article does not appear to be biased or one-sided, presenting both sides equally and exploring counterarguments where appropriate. There are no promotional content or partiality present, and possible risks are noted throughout the article. All claims made are supported by evidence, and there are no unsupported claims or missing points of consideration present. In conclusion, this article is reliable and trustworthy overall.

# Topics for further research:

* Wavefield reconstruction inversion
* Partial Sigsbee2A model
* Penalty factor algorithm
* Numerical experiments
* Wavefield imaging
* Seismic data inversion

# Report location:

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