

# 低频电流场颅内异物检测技术重建算法的研究

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电磁场数值计算方法可用于检测颅内异物。使用的重建算法有拟牛顿法、Bulirsch-Stoer外推法、局部加速收敛法。这些算法对改善重建计算的精度起着至关重要的作用。最后，仿真计算说明算法是有效的。

## A STUDY OF RECONSTRUCTION ALGORITHM ON INSPECTION OF FOREIGN SUBSTANCE IN BRAIN BY LOW FREQUENCY CURRENT FIELD

New approaches of reconstruction algorithm in low frequency current field are proposed, which includes Quasi-Newton, Bulirsch-Stoer extrapolation and local area accelerating convergence methods. These new methods make it possible to improve the precision as well as computation speed dramatically in the reconstruction calculation. Intensive simulation results demonstrate that these new approaches are effective.

### 关键词

低频电流场(Low frequency current field); 重建算法(Reconstruction algorithm); 拟牛顿法(Quasi-Newton); Bulirsch-Stoer外推法(Bulirsch-Stoer extrapolation); 局部加速收敛法(Local area accelerating convergence method)