

**Docket #:** S06-475

# **MRI - Water and Fat Separation with Bipolar Multi-Echo Sequences**

A method for magnetic resonance imaging (MRI) is provided. A magnetic resonance excitation is provided. A plurality of k-space echoes is acquired bi-directionally wherein at least one echo is an even echo acquired in a first direction and at least one echo is an odd echo acquired in a second direction opposite from the first direction. K-space echo realignment is corrected between the even and odd echoes. Field inhomogeneity induced artifacts are corrected. Chemical shift induced artifacts between at least two species are corrected.

## **Patents**

- Published Application: [20090072826](#)
- Issued: [7,777,486 \(USA\)](#)

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