



# Quantitative relaxation mapping

Pulse sequence for MRI scanners

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## Overview

This pulse sequences is for the quantitative relaxation Magnetic Resonance (MR) measurements including MR imaging (MRI) and spectroscopy (MRS) to utilize rotating frame adiabatic T1r and T2r modules, Relaxation Along a Fictitious Field (RAFF), RAFF in high rotating frames of rank n (RAFFn), modified Magnetization Transfer (MT) protocols using two subsequent acquisitions from +Z and -Z following inversion of magnetization M, and periodic RF irradiation allowing to selectively irradiate chemical shift of interest.

- This sequence contains MRI pulse sequences and Matlab based reconstruction software for relaxation mapping.
- The pulse sequence supports Bruker scanners.
- The preparation modules consist Adiabatic T1rho, T2rho, RAFF, RAFFn, MT and Periodic RF Irradiation pulses.
- The readout portion of the sequences are gradient echo, spin echo and SWIFT. Any other imaging readout could be further used, e.g., UTE, SSFP, PETRA (on Siemens platform), or efficient 3D GRE.

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