

MRI formats and corresponding coordinates

FT_READ_MRI reads anatomical and functional MRI data from different file formats.

The following MRI file formats are supported and read by fieldtrip:

example: `ft_read_mri('subject1.mri')`

- CTF - VSM MedTech (*.svl, *.mri version 4 and 5)
- NIFTi (*.nii) and zipped NIFTi (*.nii.gz)
- Analyze (*.img, *.hdr)
- DICOM (*.dcm, *.ima)
- AFNI (*.head, *.brik)
- FreeSurfer (*.mgz, *.mgh)
- MINC (*.mnc)
- Neuromag - Elekta (*.fif)
- ANT - Advanced Neuro Technology (*.mri)
- Yokogawa (*.mrk, incomplete)

If you have a series of DICOM files associated to one subject, please provide the name of any of the files in the series (e.g. the first one). The other files will be found automatically.

Table1: MRI formats and corresponding coordinate system

A/P means anterior/posterior

L/R means left/right

S/I means superior/inferior

As an example: **RAS** means that the first dimension (x) orients towards **R**ight, the second dimension (y) orients towards **A**nterior, the third dimension (z) orients towards **S**uperior.

MRI formats	units	orientation	origin
CTF - VSM MedTech (*.svl, *.mri version 4 and 5)	mm	ALS	Between the ears
NIFTi (*.nii) and zipped NIFTi (*.nii.gz)	mm	RAS	Scanner origin (center of gradiometer coil)
Analyze (*.img, *.hdr)	mm	LAS	-
DICOM (*.dcm, *.ima)	mm	LPS	-
FreeSurfer (*.mgz, *.mgh)	mm	RAS	Center of isotropic 1mm 256*256*256 volume
Neuromag - Elekta (*.fif)	m	RAS	Between the ears
Yokogawa (*.mrk, incomplete)	-	ALS	Center of device
MNI	mm	RAS	Anterior commissure
Talairach_Tournoux	mm	RAS	Anterior commissure