Description for the invivo brain test-retest datasets

Six MRE brain data are provided. The data reflects test- retest brain MRE exams in three different healthy volunteers. Between the scans, the volunteers were asked to leave the scanner and move around. Additionally, the volunteer's position were slightly varied in the second scan by uplifting the legs around 10 cm. The waves were induced at multiple frequencies (see description below) by a pressurized air driven cushion-type actuator designed at Charité. Wave images were acquired using a single-shot EPI sequence(Reference, Dittmann MRM wideband MRE) in a 1.5 T MRI system.

Dataset	Sex	Age
CVK_BRAIN_F1 CVK_BRAIN_F1_retest	female	51 years
CVK_BRAIN_M1 CVK_BRAIN_M1_retest	male	47 years
CVK_BRAIN_M2 CVK_BRAIN_M2_retest	male	57 years

The retest data is labled *_retest*.

Sequence Information

component order	SS PE RO	
MEG amplitude	35 mT/m	
MEG type	rectangular, first-moment nulling, single cycle (one period)	
MEG frequency	mechanical frequency	MEG frequency
	20Hz	27,26Hz
	25Hz	27,26Hz
	30Hz	27,26Hz
	35Hz	27,26Hz
	40Hz	29,98Hz
	45Hz	33,78Hz
	50Hz	54,59Hz

Data Description

The data is in complex MATLAB format.
For each data two sets of data are provided:

1) Raw data, wrapped, 6D (3D space,1D time, 1D field components, 1D frequencies), and

2) pre-processed (fourier-transformed in time, selected fundamental frequency, dejittered, denoised), 5D (3D space, 1D field components, 1D frequencies).

Index description:

Index	Physical Meaning	Dimension length	Sorting
1	y-coordinate (row index)	96	ascending
2	x-coordinate (column index)	78	ascending
3	z-coordinate (slice index)	30	ascending
[4]*	time step index	8	Equally distributed over one harmonic cycle
4/[5]*	motion encoding direction index (y,x,z)	3	1: along y-axis 2: along x-axis 3: along z-axis
5/[6]*	frequency index	7	[20.0401 25 30.03 40 50 34.965 45.045] Hz

**for 1) 6D raw data, wrapped*

Image information:

voxel size	[2 2 2] mm
slice order	feet to head