Last Change	Review	Approval
Joern Huber Digital unterschrieben von Joern Huber Datum: 2025.11.04 11:04:37 +01'00'	Vincent Kuhlen Digitally signed by Vincent Kuhlen Date: 2025.11.04 13:23:05 +01'00'	Stephan Zidowitz Digitally signed by Stephan Zidowitz Date: 2025.11.04 13:32:08 +01'00'

Document History

Version	Date	Changes	JIRA-Ticket	Name
V1	2025-09-11	Release of v1.0.1 of gammaSTAR Reconstructions	n/a	jhu
V2	2025-09-25	Release of v1.0.2 to fix bugs for non-isotropic matrix sizes and phase correction for GRASE sequences.	n/a	jhu
V3	2025-11-04	Release of v1.0.3 which improves the code documentation, removes unnecessary functions and fixes crashes for non-imaging sequences.	n/a	jhu

1 Introduction and Overview

This document summarizes the delivery of the **gammaSTAR Reconstructions** for generic image reconstruction from MR raw data acquired using gammaSTAR sequences on arbitrary systems. The software handles various k-space acquisition strategies such as 2D or 3D Cartesian sequences with/without ramp sampling, 2D or 3D radial or spiral sequences as well as PROPELLER trajectories.

Contact person at Fraunhofer MEVIS: Jörn Huber (joern.huber@mevis.fraunhofer.de)

2 Release Summary

Software Component	gammaSTAR Reconstructions
Version	https://gitlab.fme.lan/gammastar/gammastar_recon/-/tags/v1.0.3_release SHA: 74c3d5562ab0f4b5cee64d9d37b138a25d7653d4
Embedding Product(s)	Not applicable
Purpose of this Release	Provision of the gammaSTAR Reconstructions v1.0.3 software under AGPLv3-clause license for research and educational purposes. Not for clinical use.
OS and Compiler Details	OS: Windows 11 Python Version: 3.12
Embedded Libraries	The following libraries are used by the software. Detailed license information is contained in the delivered "third_party_licenses" folder and in the NOTICE file. • MRI Nufft (BSD-3-Clause License) • Python ISMRMRD Server (MIT License) • pymapvbvd (MIT License) • pydicom (MIT-based License) • ismrmrd (ISMRMRD SOFTWARE LICENSE JULY 2013) • sigpy (BSD-2-Clause License) • xmltodict (MIT License) • numpy (NumPy License) • scikit-learn (MIT License)
Functionality	The software provides a unified reconstruction solution for arbitrary MR sequences implemented using the gammaSTAR framework. Cartesian data as well as non-Cartesian data in 2D or 3D can be reconstructed as well as more PROPELLER sequences. No input by the user is required if data was acquired using the gammaSTAR framework. The software comes with clients which allow to send data to the reconstruction server which are acquired on various MR systems or simulators and which are stored in .h5 or .dat format (for Siemens Healthineers MR systems). GammaSTAR Reconstructions v1.0.3 improves v1.0.2 by the following measures: • Added type hinting and improved documentation of functions • Removed redundant imports • Fixed non-imaging gammaSTAR sequences

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