

Last Change	Review	Approval

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

	GAMMASTAR RECONSTRUCTIONS		Document-ID GSTAR_RECON Last Change by jhu
	Release Letter	V2	Last Change on 2025-09-25 Page 2 / 3

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.

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2 Release Summary

Software Component	gammaSTAR Reconstructions
Version	https://gitlab.fme.lan/rc_nextgenimaging/mri/gammastar_recon-/tags/v1.0.2_release
Embedding Product(s)	Not applicable
Purpose of this Release	Provision of the gammaSTAR Reconstructions v1.0.2 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	<p>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.</p> <ul style="list-style-type: none"> • 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	<p>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 v1.0.2 improves v1.0.1 by the following measures:</p> <ul style="list-style-type: none"> • Fixed non-functioning epi phase correction for multiple partitions • Fixed non isotropic matrix sizes • Added warning if phase correction data contains zeros only

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