

Appendix A

System Check 13 MHz Head
System Check 750 MHz Head
System Check 835 MHz Head
System Check 1750 MHz Head
System Check 1950 MHz Head
System Check 2450 MHz Head
System Check 2600 MHz Head
System Check 5200 MHz Head
System Check 5300 MHz Head
System Check 5600 MHz Head
System Check 5800 MHz Head

Test Laboratory: TOWE Lab

System Performance Check Report

Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
CLA-13 – SN1043	13.0	HSL	20.0	27.7	28.1	n/a	2.0

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid 0			CW, 0--	13.000, 0	18.19	0.765	56.1

Hardware Setup

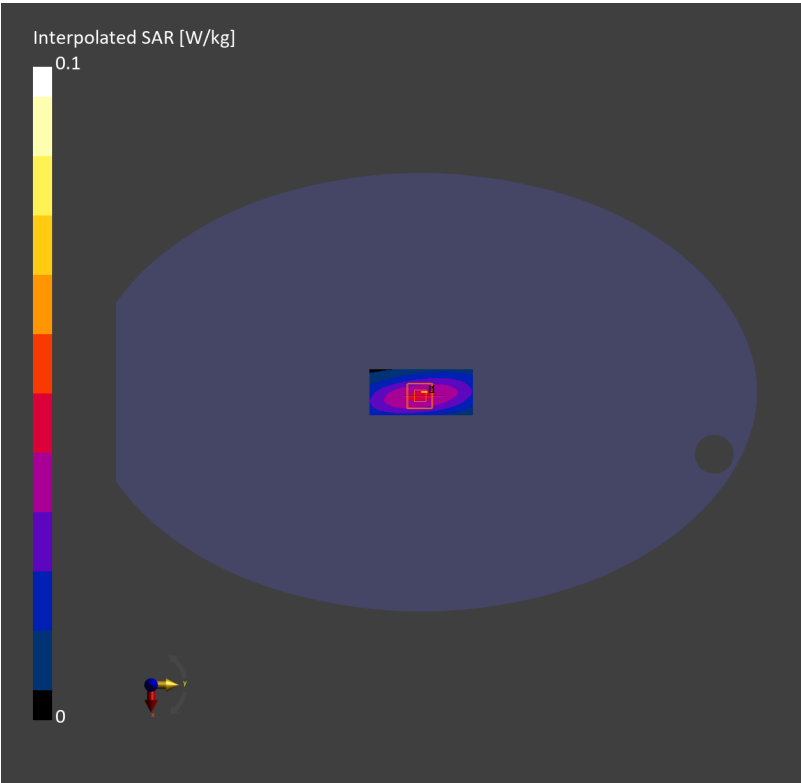
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) – 2222	HSL3-6GHz	EX3DV4 – SN7858, 2025-02-20	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-05-06, 07:57	2025-05-06, 08:04
psSAR1g [W/Kg]	0.051	0.050
psSAR10g [W/Kg]	0.034	0.032
Power Drift [dB]	0.03	0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D750V3 – SN1231	750.0	HSL	20.0	0.5	0.7	13.6	–6.4

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	15	CW, 0--		750.000, 0	9.65	0.893	43.2

Hardware Setup

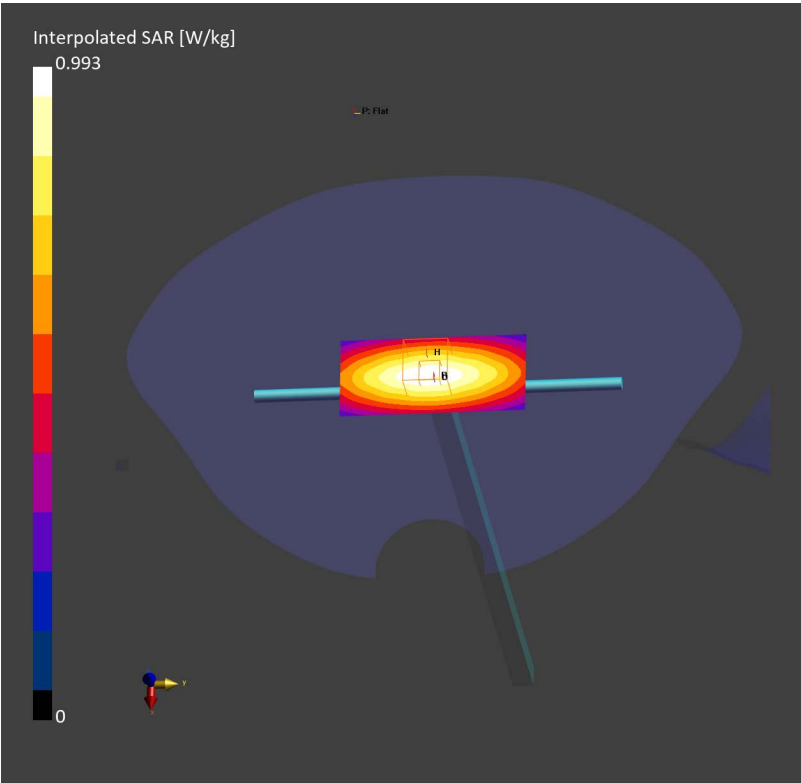
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL750	EX3DV4 – SN7812, 2024-06-25	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-26, 07:44	2025-04-26, 07:51
psSAR1g [W/Kg]	0.860	0.865
psSAR10g [W/Kg]	0.573	0.568
Power Drift [dB]	0.01	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D835V2 – SN4d302	835.0	HSL	20.0	1.0	0.3	15.9	–1.9

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	15	CW, 0--		835.000, 0	9.84	0.907	42.6

Hardware Setup

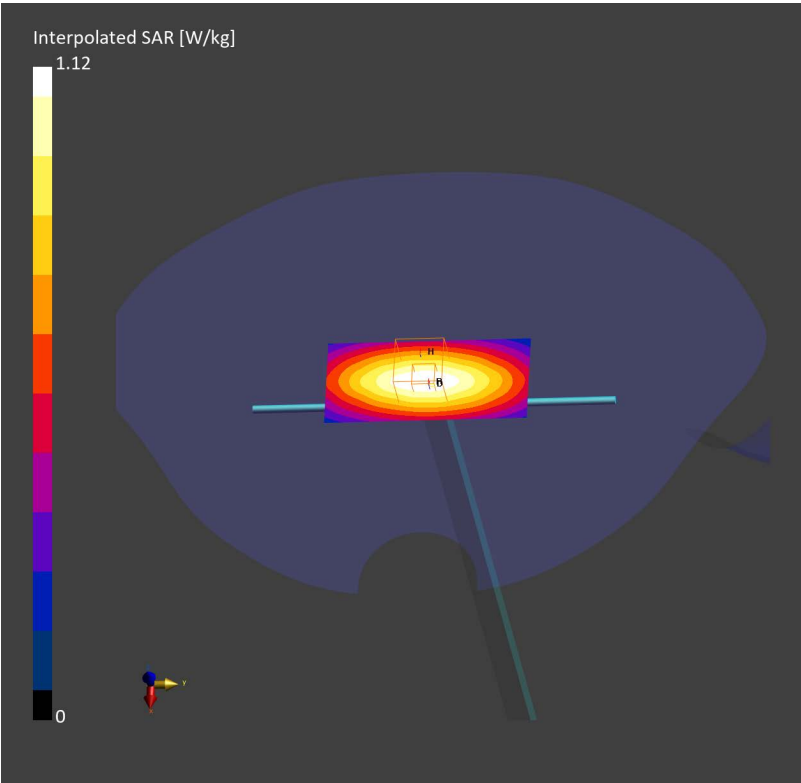
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL835	EX3DV4 – SN3624, 2025-01-15	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-22, 07:34	2025-04-22, 07:40
psSAR1g [W/Kg]	0.965	0.980
psSAR10g [W/Kg]	0.635	0.635
Power Drift [dB]	–0.02	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D835V2 – SN4d302	835.0	HSL	20.0	2.2	2.1	18.2	1.7

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	15	CW, 0--		835.000, 0	9.84	0.898	41.8

Hardware Setup

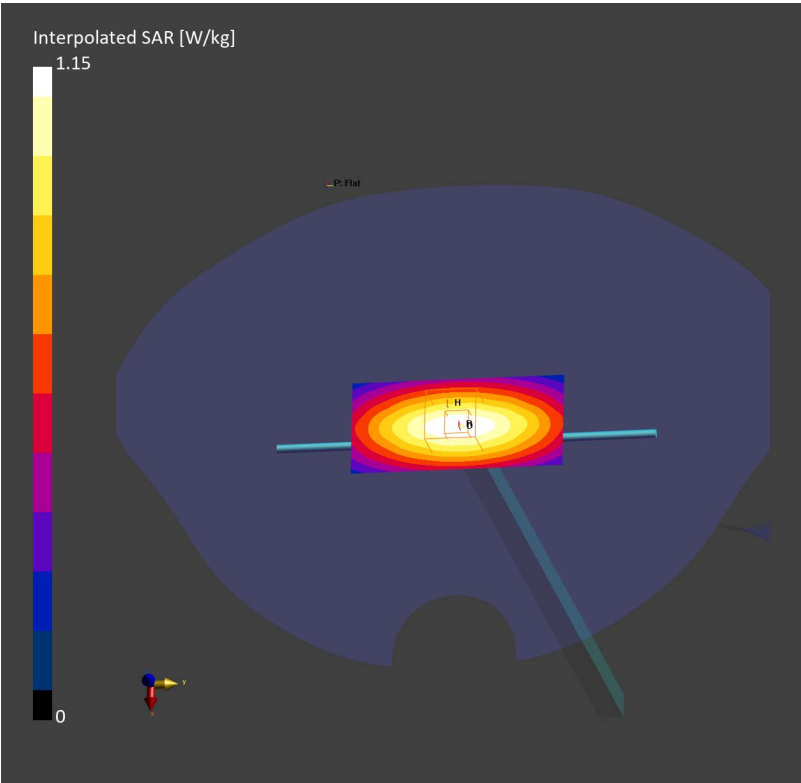
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL835	EX3DV4 – SN3624, 2025-01-15	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-05-06, 07:29	2025-05-06, 07:36
psSAR1g [W/Kg]	0.997	1.03
psSAR10g [W/Kg]	0.652	0.656
Power Drift [dB]	0.07	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D1750V2 – SN1115	1750.0	HSL	20.0	0.8	2.4	10.0	2.0

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	10		CW, 0--	1750.000, 0	8.54	1.41	41.0

Hardware Setup

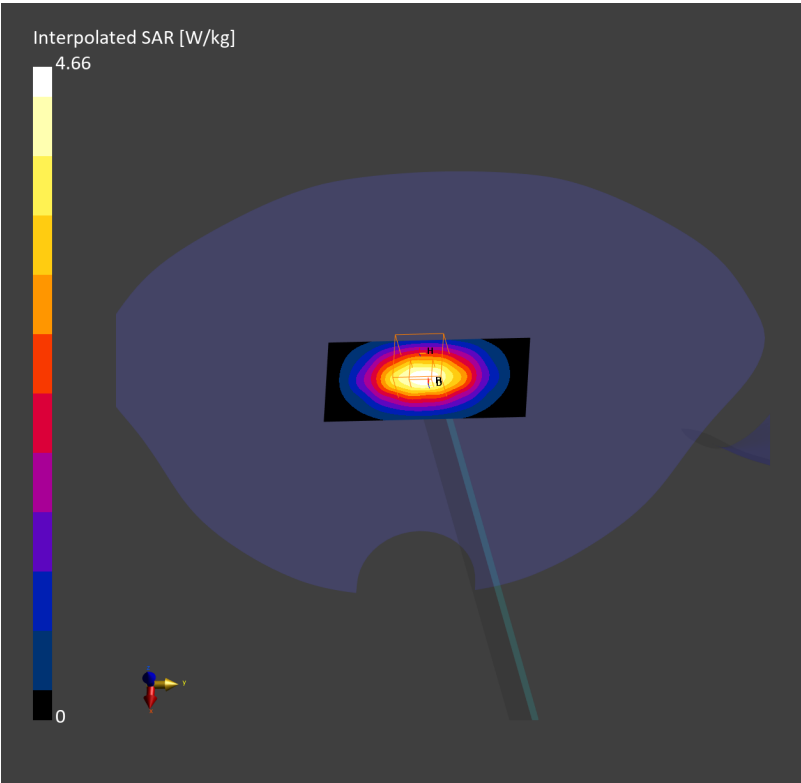
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL1750	EX3DV4 – SN3624, 2025-01-15	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-21, 14:59	2025-04-21, 15:06
psSAR1g [W/Kg]	3.76	3.76
psSAR10g [W/Kg]	2.02	2.01
Power Drift [dB]	-0.02	-0.00
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D1950V3 – SN1266	1950.0	HSL	20.0	2.2	3.4	9.3	–7.5

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	10		CW, 0--	1950.000, 0	8.21	1.46	40.5

Hardware Setup

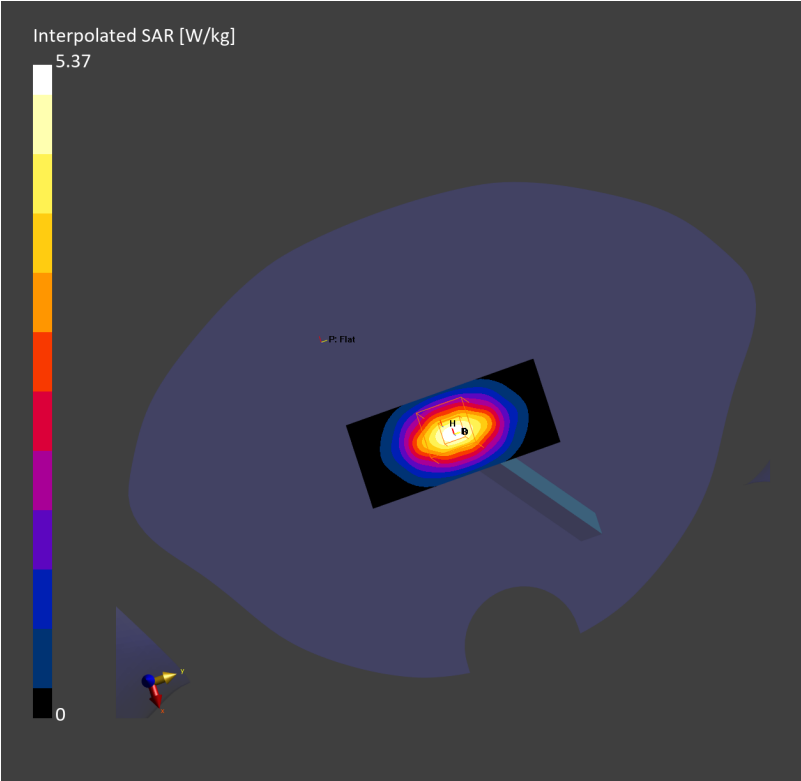
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL1950	EX3DV4 – SN3624, 2025-01-15	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	All points	All points
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-21, 23:37	2025-04-21, 23:47
psSAR1g [W/Kg]	4.25	4.18
psSAR10g [W/Kg]	2.14	2.16
Power Drift [dB]	–0.07	–0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D2450V2 – SN1099	2450.0	HSL	20.0	1.5	2.7	2.3	5.9

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	10		CW, 0--	2450.000, 0	7.27	1.84	40.8

Hardware Setup

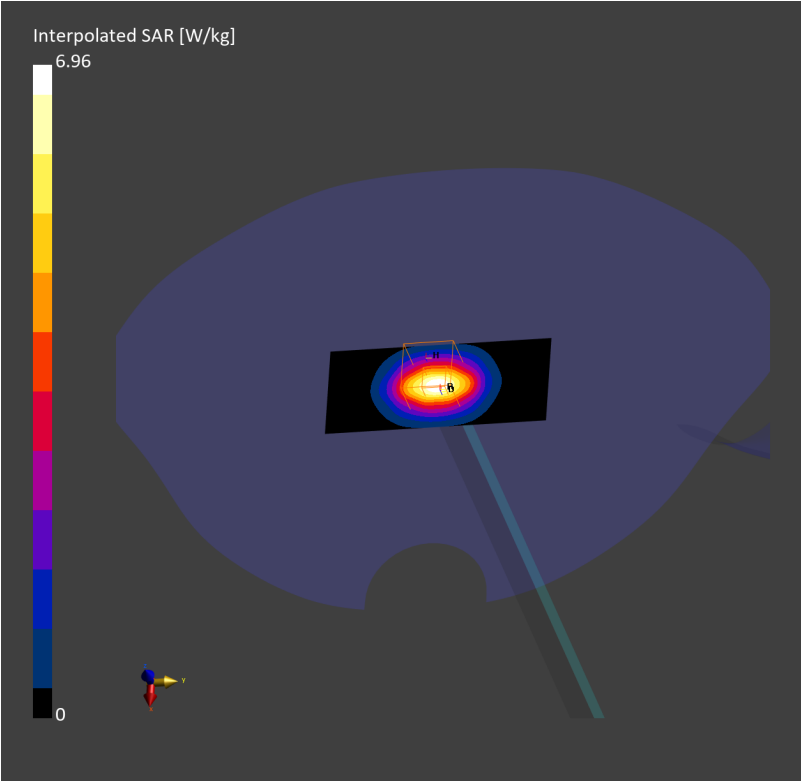
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL2450	EX3DV4 – SN7812, 2024-06-25	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 96.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 12.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-23, 07:57	2025-04-23, 08:04
psSAR1g [W/Kg]	5.28	5.22
psSAR10g [W/Kg]	2.45	2.45
Power Drift [dB]	0.00	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D2600V2 – SN1094	2600.0	HSL	20.0	−1.4	1.6	−0.5	6.1

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	10		CW, 0--	2600.000, 0	7.09	2.02	38.8

Hardware Setup

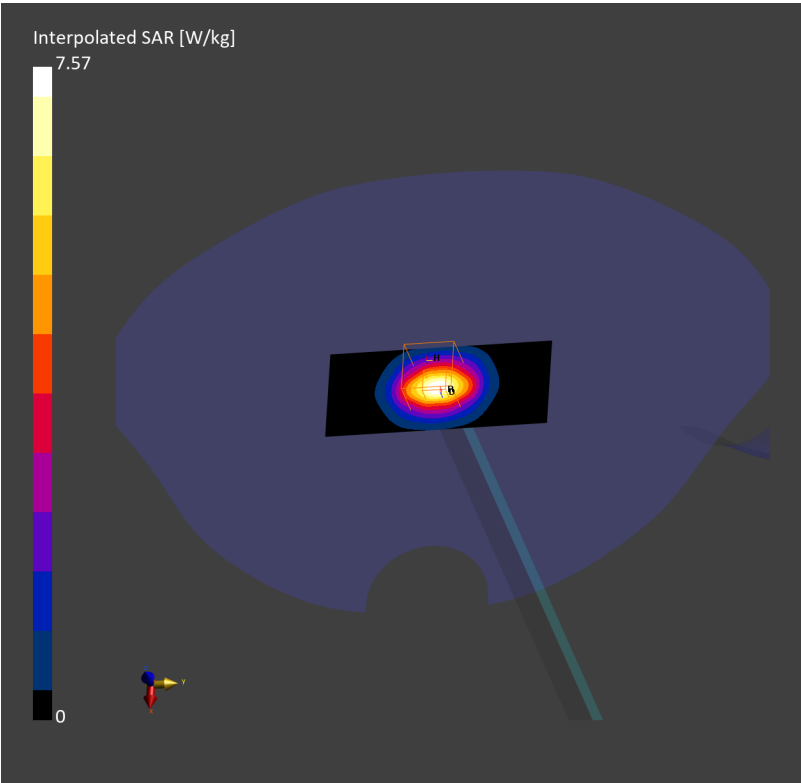
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL2600	EX3DV4 – SN7812, 2024-06-25	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 96.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 12.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-26, 07:32	2025-04-26, 07:39
psSAR1g [W/Kg]	5.67	5.63
psSAR10g [W/Kg]	2.55	2.56
Power Drift [dB]	−0.00	0.00
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D5GHzV2 – SN1371	5200.0	HSL	20.0	1.0	3.7	–1.0	9.3

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	10		CW, 0--	5200.000, 0	5.25	4.72	35.8

Hardware Setup

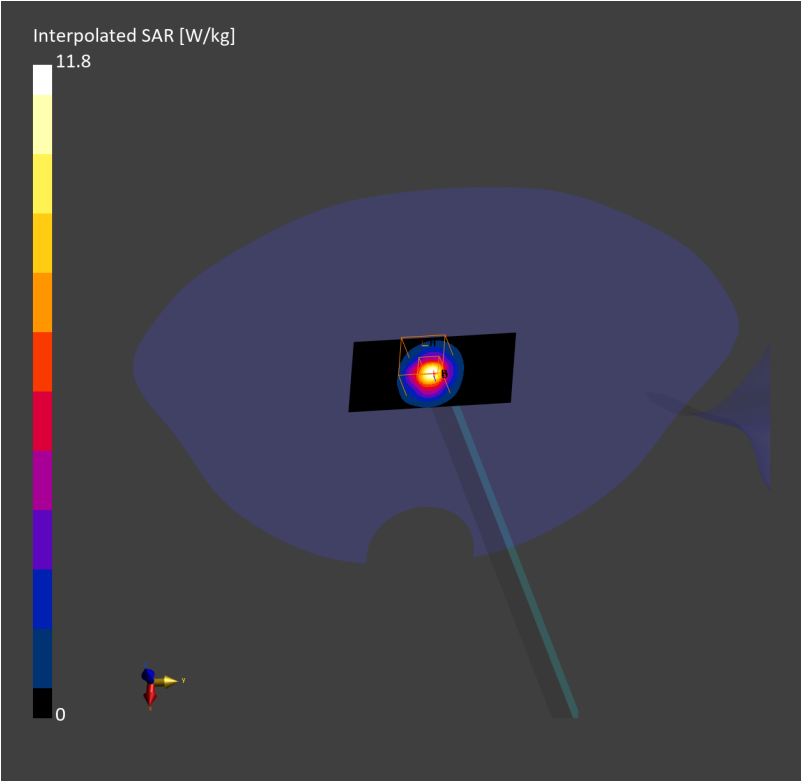
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL5GHz	EX3DV4 – SN7858, 2025-01-15	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-24, 08:52	2025-04-24, 08:59
psSAR1g [W/Kg]	7.31	7.98
psSAR10g [W/Kg]	2.13	2.32
Power Drift [dB]	0.00	0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D5GHzV2 – SN1371	5300.0	HSL	20.0	0.4	1.7	0.4	–9.2

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	10		CW, 0--	5300.000, 0	5.25	4.83	35.8

Hardware Setup

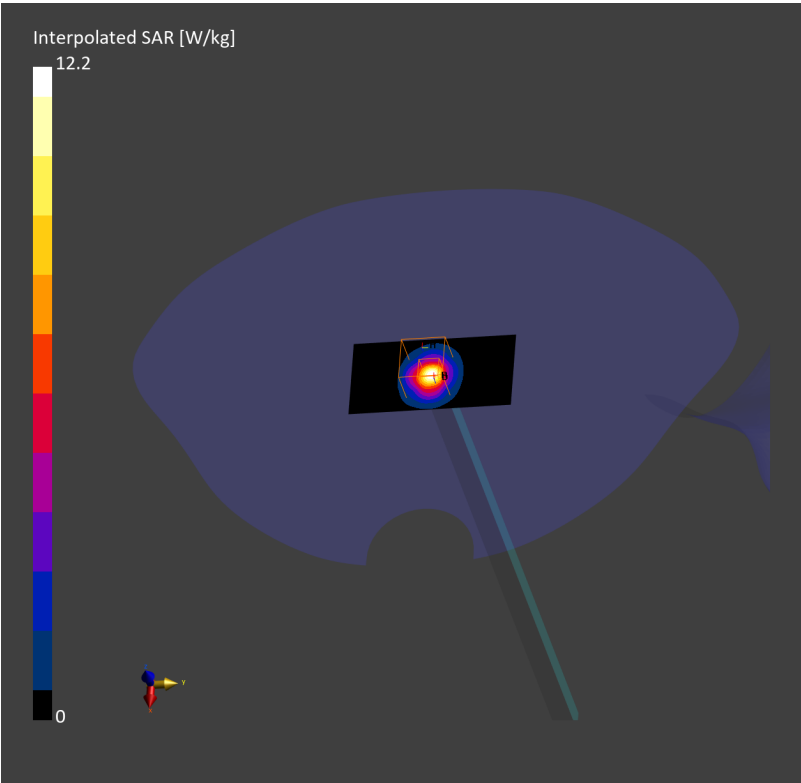
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL5GHz	EX3DV4 – SN7858, 2025-01-15	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-24, 12:03	2025-04-24, 12:09
psSAR1g [W/Kg]	7.54	8.12
psSAR10g [W/Kg]	2.17	2.35
Power Drift [dB]	0.01	–0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D5GHzV2 – SN1371	5600.0	HSL	20.0	0.7	1.9	–0.0	9.4

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	10		CW, 0--	5600.000, 0	4.65	5.19	34.9

Hardware Setup

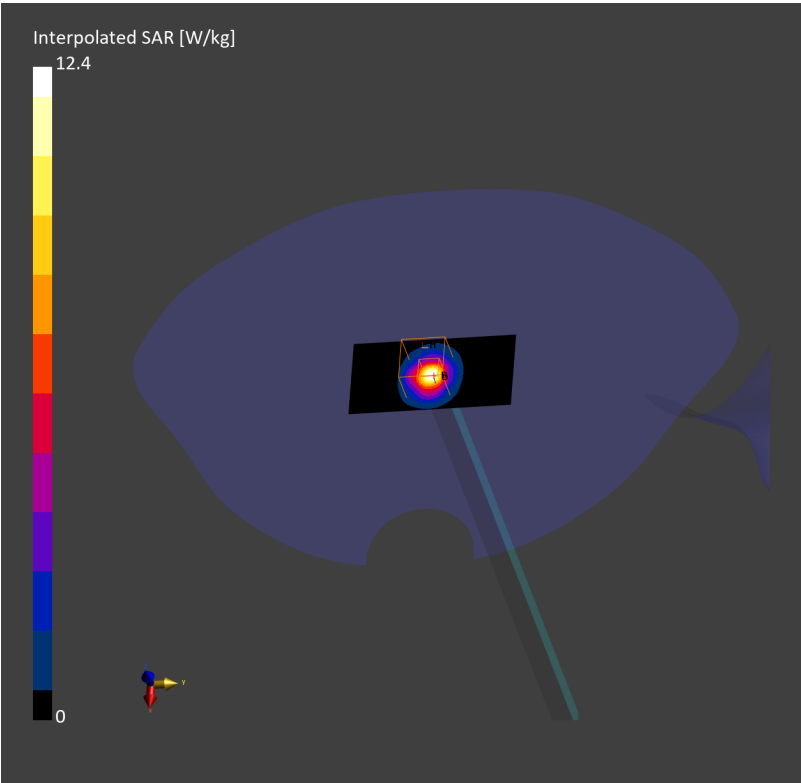
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL5GHz	EX3DV4 – SN7858, 2025-01-15	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-25, 11:12	2025-04-25, 11:19
psSAR1g [W/Kg]	7.75	8.31
psSAR10g [W/Kg]	2.21	2.38
Power Drift [dB]	0.01	–0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction



Summary

Dipole	Frequency [MHz]	TSL	Power [dBm]	Dev. 1g [%]	Dev. 10g [%]	Dev. Peak [%]	Iso. Error [%]
D5GHzV2 – SN1371	5800.0	HSL	20.0	–5.9	–3.8	–6.5	–9.5

Exposure Conditions

Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	10		CW, 0--	5800.000, 0	4.75	5.46	34.8

Hardware Setup

Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2168	HSL5GHz	EX3DV4 – SN7858, 2025-01-15	DAE4ip Sn1846, 2024-12-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-04-26, 10:32	2025-04-26, 10:38
psSAR1g [W/Kg]	7.03	7.52
psSAR10g [W/Kg]	2.01	2.16
Power Drift [dB]	0.01	–0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction

