

20240422_SystemPerformancecheck D2600V2_SN1178

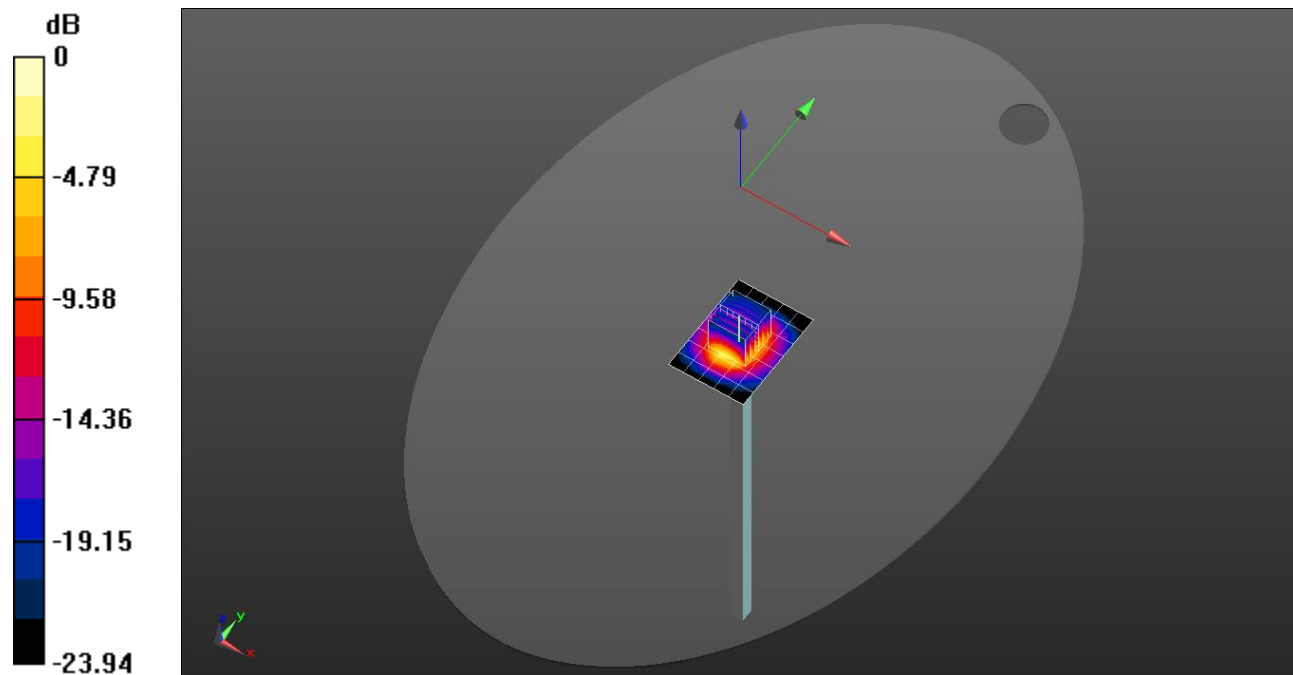
Frequency: 2600 MHz; Communication System Channel Number: 0; Duty Cycle: 1:1
 Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
 Medium parameters used: $f = 2600$ MHz; $\sigma = 1.913$ S/m; $\epsilon_r = 37.755$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 2/16/2024
- Probe: EX3DV4 - SN7545; ConvF(7.2, 7.2, 7.2) @ 2600 MHz; Calibrated: 8/25/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: ELI v6.0; Phantom section: Flat Section; Type: QDOVA003AA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Head/2600MHz/Area Scan (6x8x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 8.44 W/kg

Head/2600MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 68.65 V/m; Power Drift = -0.05 dB
 Peak SAR (extrapolated) = 14.1 W/kg
SAR(1 g) = 6.27 W/kg; SAR(10 g) = 2.8 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.2 mm
 Ratio of SAR at M2 to SAR at M1 = 44.3%
 Maximum value of SAR (measured) = 11.0 W/kg



0 dB = 11.0 W/kg = 10.41 dBW/kg

20240417_SystemPerformanceCheck D3900V2_SN1069

Frequency: 3900 MHz; Communication System Channel Number: 0; Duty Cycle: 1:1
 Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
 Medium parameters used: $f = 3900 \text{ MHz}$; $\sigma = 3.349 \text{ S/m}$; $\epsilon_r = 37.574$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7651; ConvF(6.36, 6.69, 6.04) @ 3900 MHz; Calibrated: 3/18/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: ELI v6.0; Phantom section: Flat Section; Type: QDOVA003AA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Head/3900MHz, Pin=100mW/Area Scan (5x7x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$
 Maximum value of SAR (measured) = 12.6 W/kg

Head/3900MHz, Pin=100mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$,
 $dz=1.4\text{mm}$

Reference Value = 61.23 V/m; Power Drift = 0.06 dB

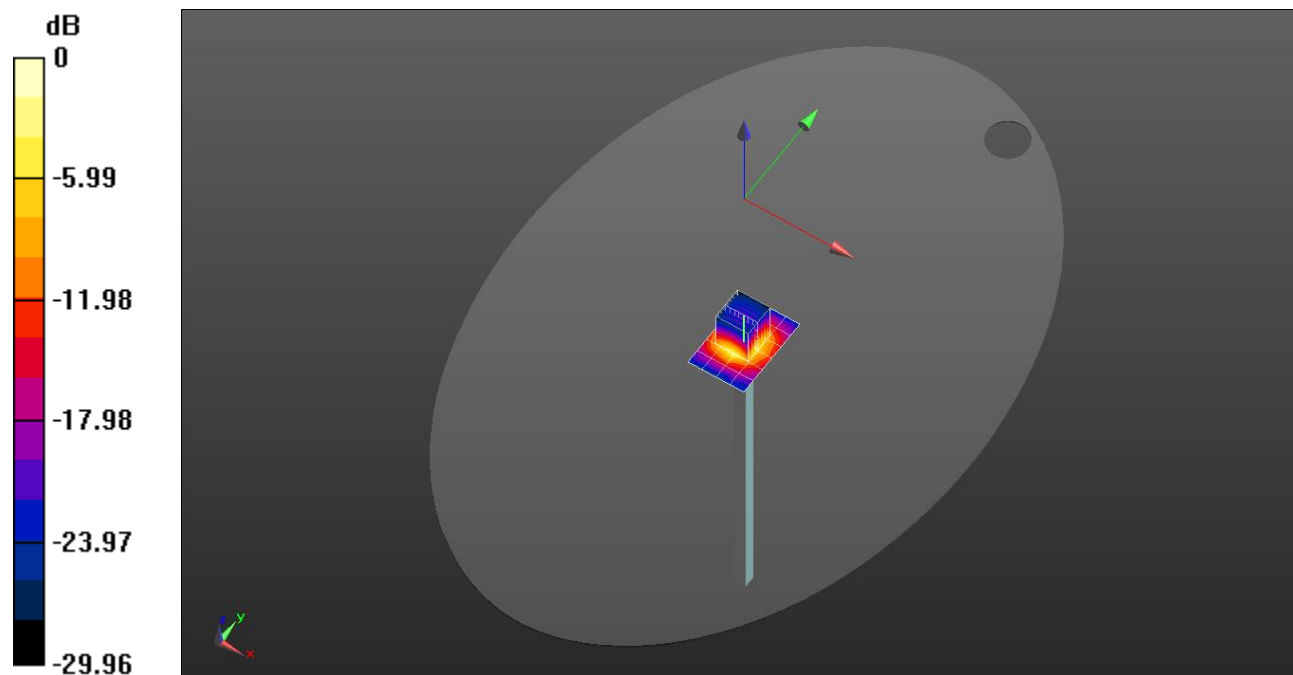
Peak SAR (extrapolated) = 15.4 W/kg

SAR(1 g) = 6.33 W/kg; SAR(10 g) = 2.52 W/kg

Smallest distance from peaks to all points 3 dB below = 8.4 mm

Ratio of SAR at M2 to SAR at M1 = 77.4%

Maximum value of SAR (measured) = 11.4 W/kg



0 dB = 11.4 W/kg = 10.57 dBW/kg

20240423_SystemPerformanceCheck D3500V2_SN1121

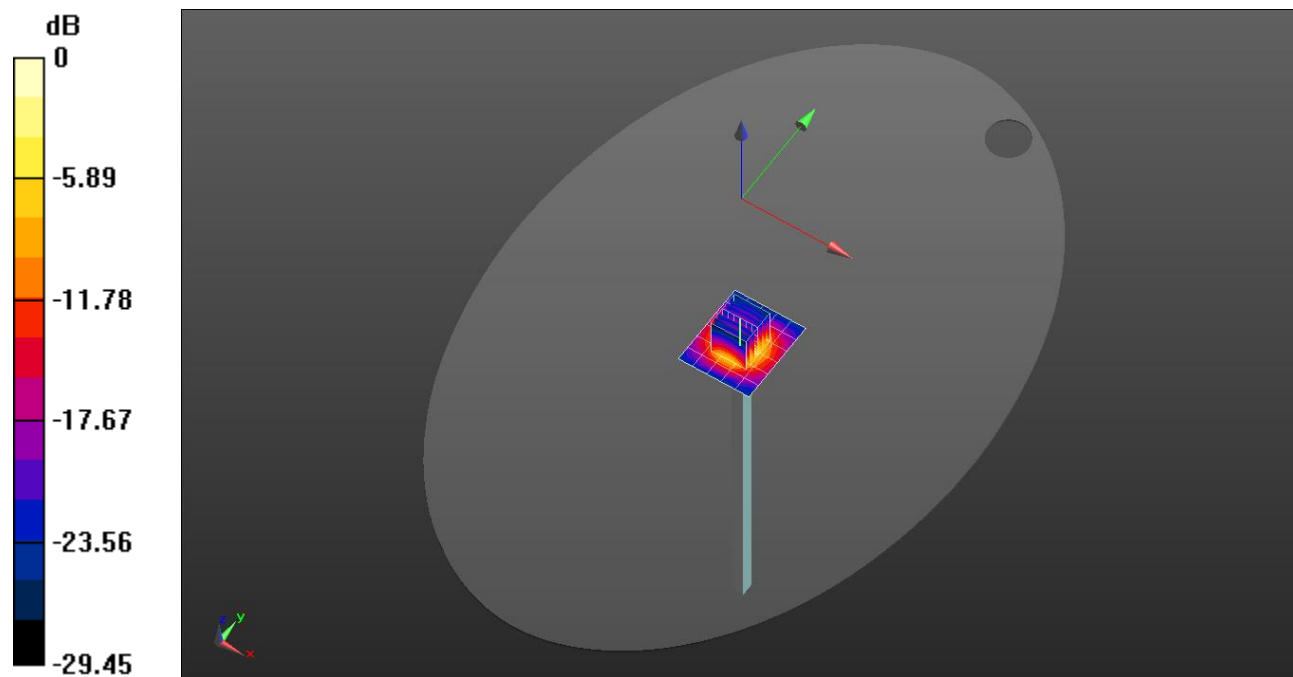
Frequency: 3500 MHz; Communication System Channel Number: 0; Duty Cycle: 1:1
 Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
 Medium parameters used: $f = 3500 \text{ MHz}$; $\sigma = 2.801 \text{ S/m}$; $\epsilon_r = 37.132$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7651; ConvF(6.64, 6.96, 6.29) @ 3500 MHz; Calibrated: 3/18/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: ELI v6.0; Phantom section: Flat Section; Type: QDOVA003AA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Head/3500MHz, Pin=100mW/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 8.31 W/kg

Head/3500MHz, Pin=100mW/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm
 Reference Value = 78.30 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 13.6 W/kg
SAR(1 g) = 6.02 W/kg; SAR(10 g) = 2.47 W/kg
 Smallest distance from peaks to all points 3 dB below = 8.9 mm
 Ratio of SAR at M2 to SAR at M1 = 79.7%
 Maximum value of SAR (measured) = 10.7 W/kg



0 dB = 10.7 W/kg = 10.29 dBW/kg

Measurement Report for Device, , , CW, Channel 0 (835.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	835.0	9.31	0.921	42.1

Hardware Setup

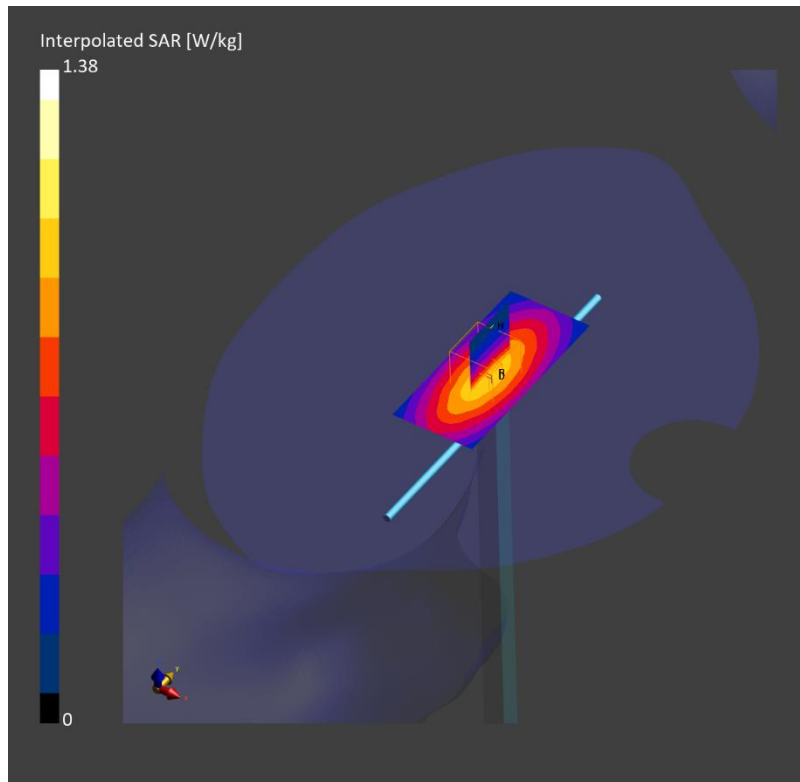
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN7314, 2023-05-26	DAE4 Sn1494, 2023-07-17

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.893	0.902
psSAR10g [W/Kg]	0.591	0.600
Power Drift [dB]		0.00
M2/M1 [%]		86.7
Dist 3dB Peak [mm]		19.0



Measurement Report for Device, , , CW, Channel 0 (750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	750.0	9.6	0.897	42.3

Hardware Setup

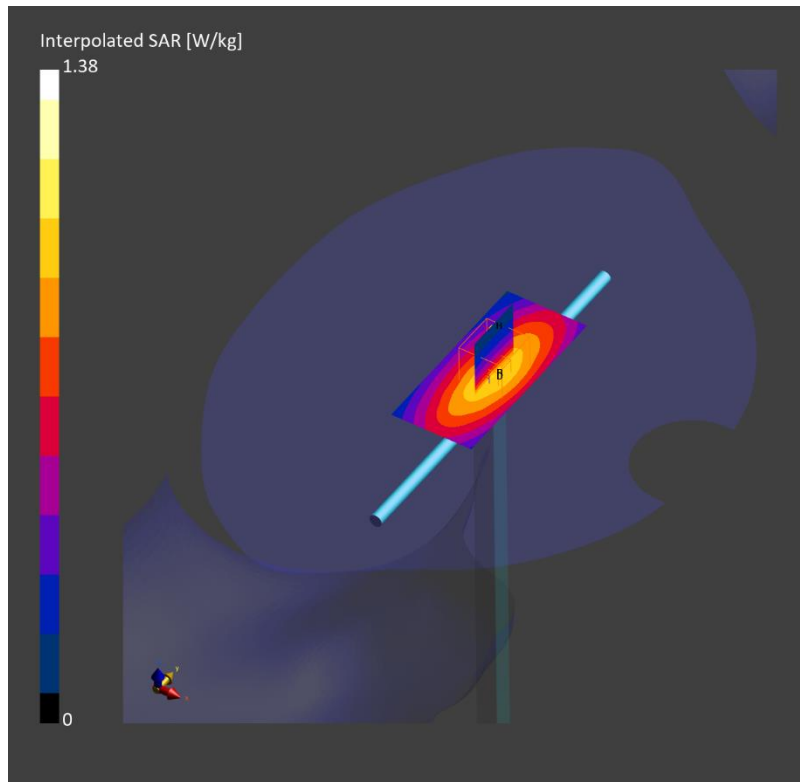
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN7314, 2023-05-26	DAE4 Sn1494, 2023-07-17

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.904	0.916
psSAR10g [W/Kg]	0.610	0.613
Power Drift [dB]		0.01
M2/M1 [%]		87.9
Dist 3dB Peak [mm]		> 15.0



Measurement Report for Device, , , CW, Channel 0 (1750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	1750.0	8.61	1.35	38.6

Hardware Setup

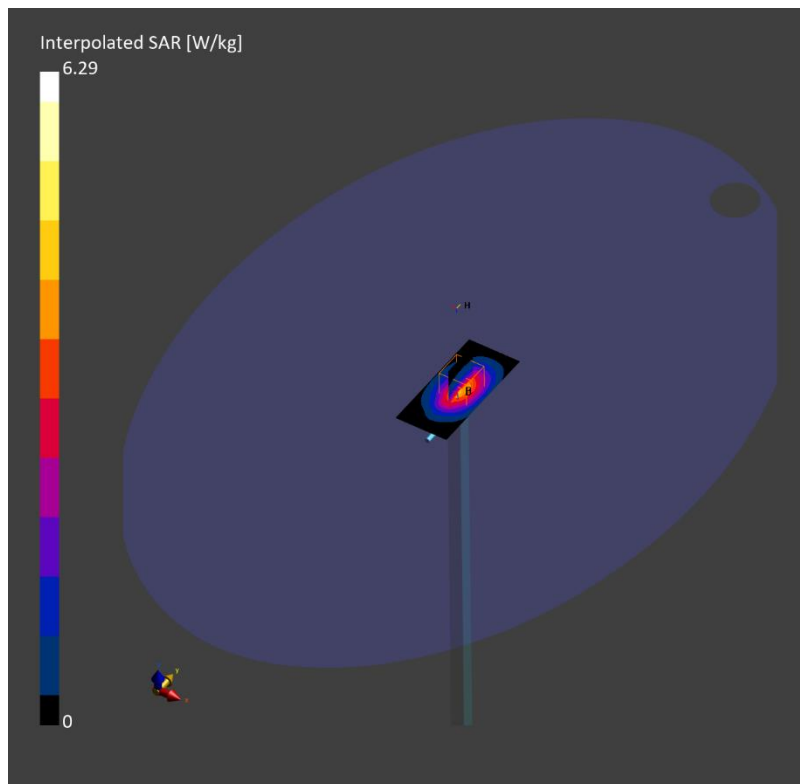
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2111	HBBL-600-10000	EX3DV4 - SN7376, 2023-07-25	DAE4 Sn1447, 2024-03-13

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.39	3.41
psSAR10g [W/Kg]	1.84	1.82
Power Drift [dB]	0.06	
M2/M1 [%]	82.0	
Dist 3dB Peak [mm]	10.8	



20240429_SystemPerformanceCheck-D1750V2_SN1180

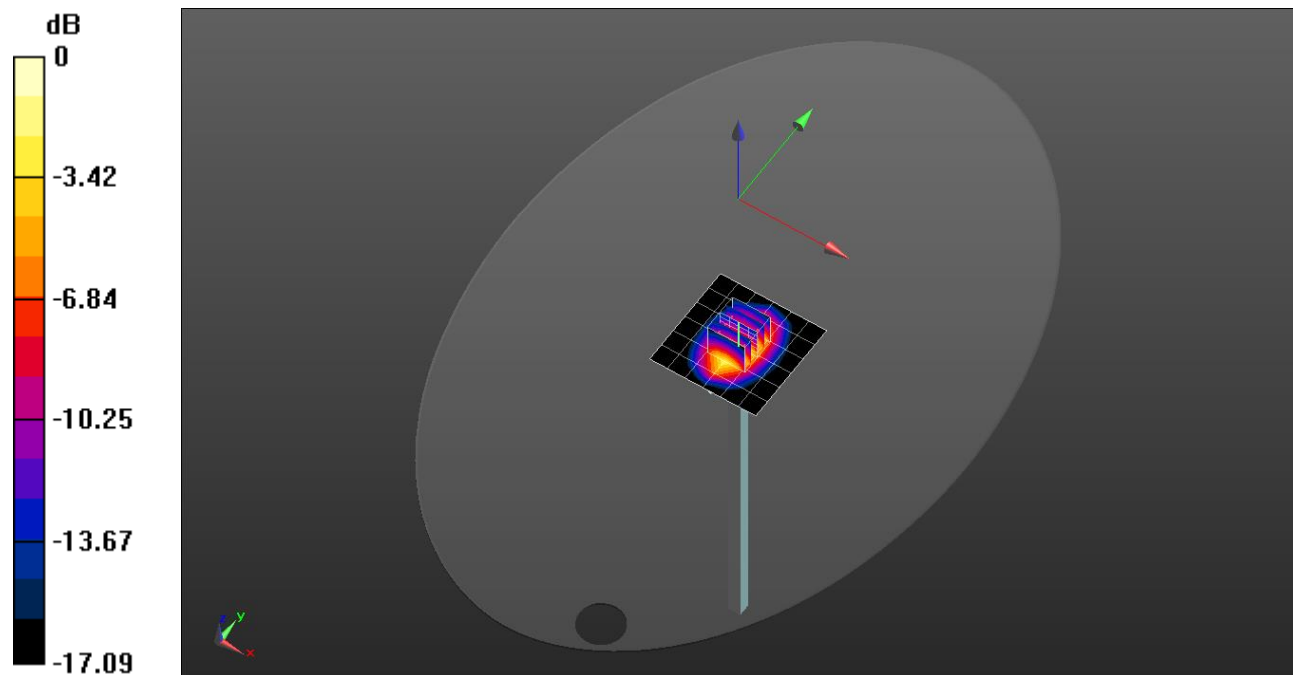
Frequency: 1750 MHz; Communication System Channel Number: 0; Duty Cycle: 1:1
 Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
 Medium parameters used: $f = 1750 \text{ MHz}$; $\sigma = 1.349 \text{ S/m}$; $\epsilon_r = 40.63$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1468; Calibrated: 8/24/2023
- Probe: EX3DV4 - SN7314; ConvF(8.4, 8.4, 8.4) @ 1750 MHz; Calibrated: 5/26/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: ELI V6.0 (20deg probe tilt); Phantom section: Flat Section ; Type: QD OVA 002 AA
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Head 2/Pin=100 mW 2/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 4.89 W/kg

Head 2/Pin=100 mW 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 55.42 V/m; Power Drift = -0.05 dB
 Peak SAR (extrapolated) = 5.89 W/kg
SAR(1 g) = 3.28 W/kg; SAR(10 g) = 1.75 W/kg
 Smallest distance from peaks to all points 3 dB below = 11.2 mm
 Ratio of SAR at M2 to SAR at M1 = 55.5%
 Maximum value of SAR (measured) = 5.00 W/kg



0 dB = 5.00 W/kg = 6.99 dBW/kg

System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5250.0	5.24	4.53	36.7

Hardware Setup

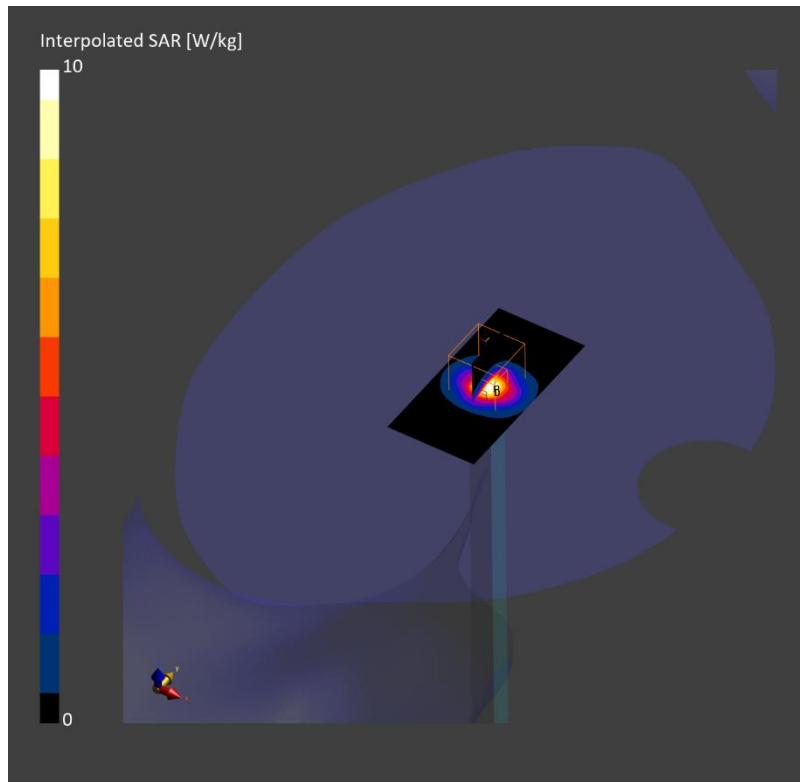
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000	EX3DV4 - SN7313, 2024-02-21	DAE4 Sn912, 2023-11-17

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	22.0 x 22.0 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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	6.75	7.45
psSAR10g [W/Kg]	1.92	2.16
Power Drift [dB]		0.10
M2/M1 [%]		64.0
Dist 3dB Peak [mm]		7.4



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	13.0	16.33	0.717	56.6

Hardware Setup

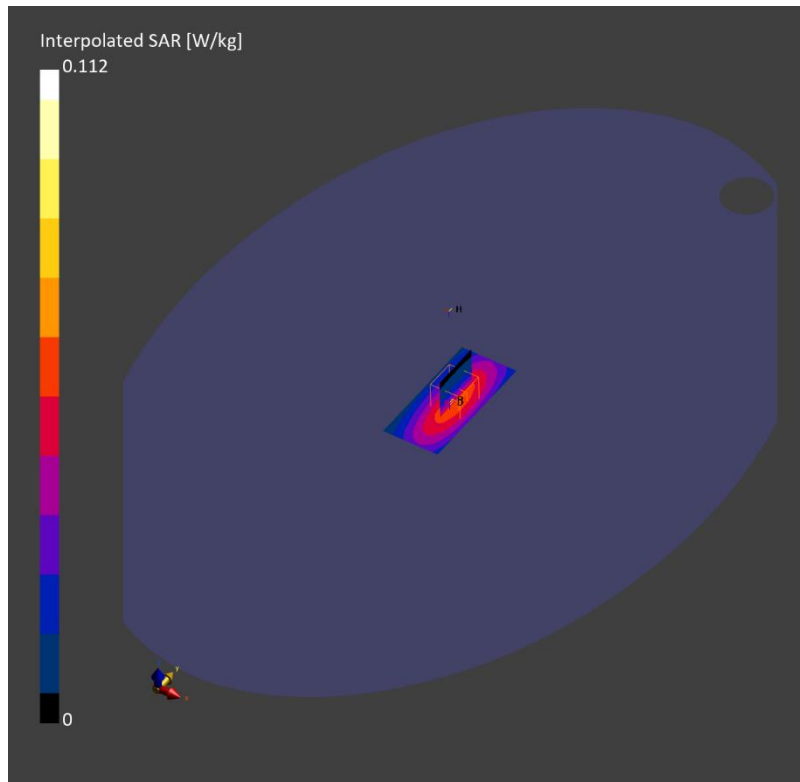
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
ELI V6.0 (20deg probe tilt) - 2005	HBBL-600-10000	EX3DV4 - SN7313, 2024-02-21	DAE4 Sn912, 2023-11-17

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.059	0.056
psSAR10g [W/Kg]	0.048	0.035
Power Drift [dB]	0.02	
M2/M1 [%]	75.7	
Dist 3dB Peak [mm]	15.6	



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2450.0	6.96	1.80	39.0

Hardware Setup

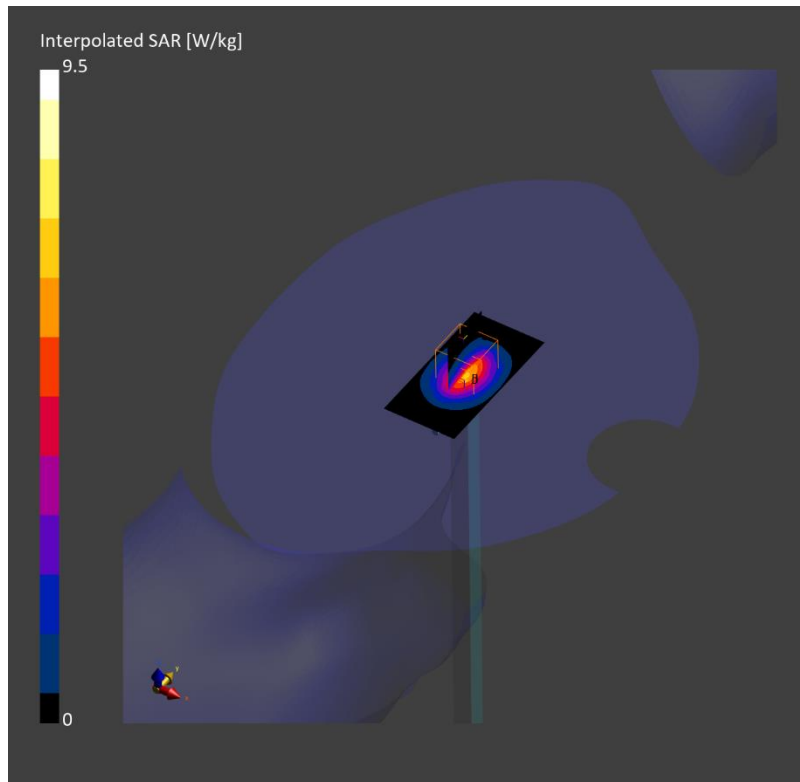
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2038	HBBL-600-10000	EX3DV4 - SN7645, 2023-09-20	DAE4 Sn1670, 2023-05-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	4.98	4.98
psSAR10g [W/Kg]	2.31	2.39
Power Drift [dB]		-0.00
M2/M1 [%]		82.7
Dist 3dB Peak [mm]		9.0



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	750.0	10.3	0.896	41.7

Hardware Setup

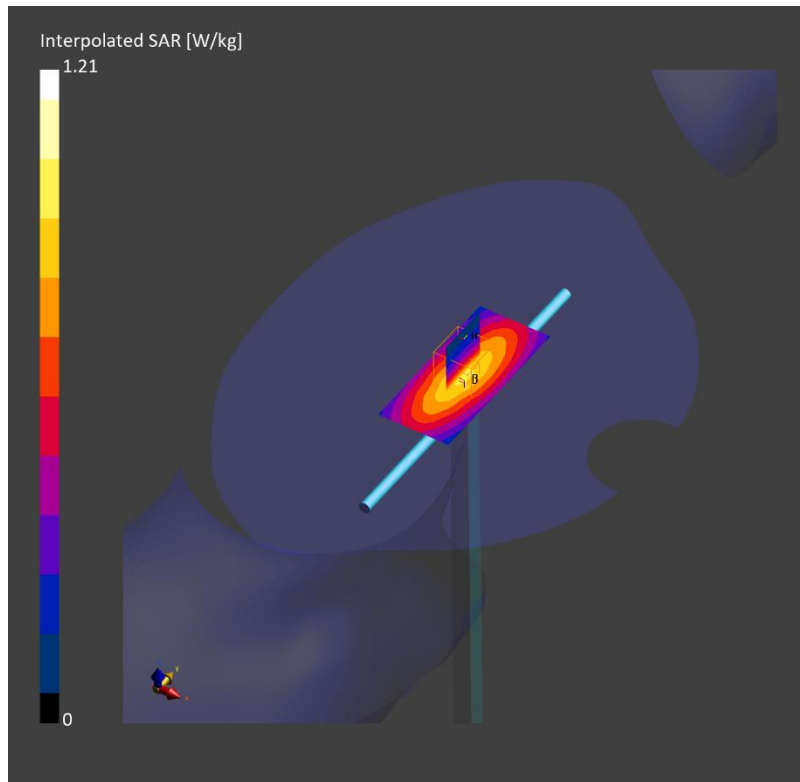
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000	EX3DV4 - SN7330, 2024-01-22	DAE4 Sn474, 2023-11-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.811	0.814
psSAR10g [W/Kg]	0.541	0.544
Power Drift [dB]		0.04
M2/M1 [%]		88.7
Dist 3dB Peak [mm]		21.3



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	835.0	10.11	0.983	40.6

Hardware Setup

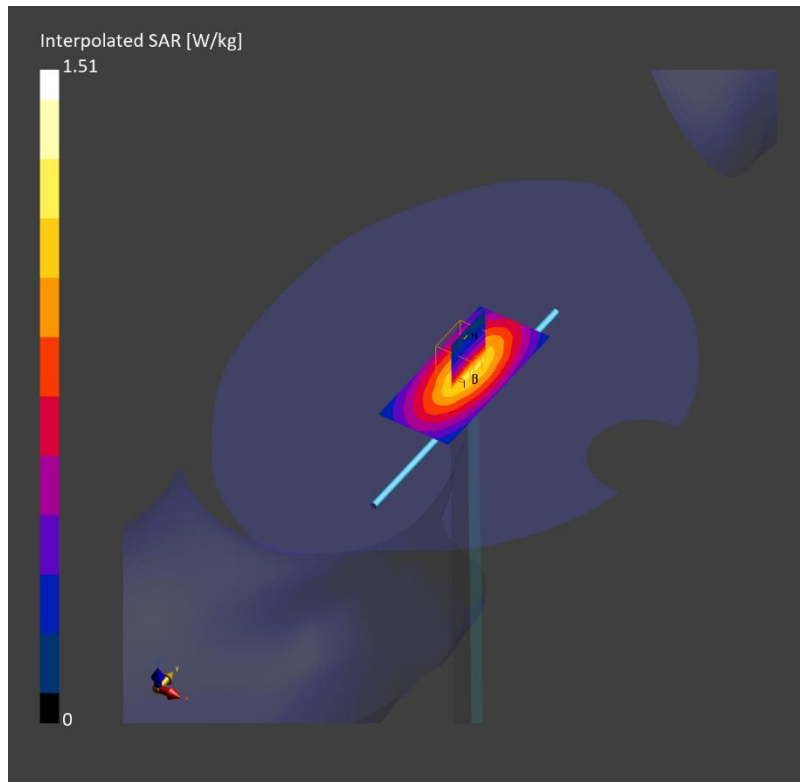
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000	EX3DV4 - SN7330, 2024-01-22	DAE4 Sn474, 2023-11-10

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	1.02	1.02
psSAR10g [W/Kg]	0.674	0.678
Power Drift [dB]		0.01
M2/M1 [%]		88.0
Dist 3dB Peak [mm]		16.1



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	1900.0	7.43	1.41	39.0

Hardware Setup

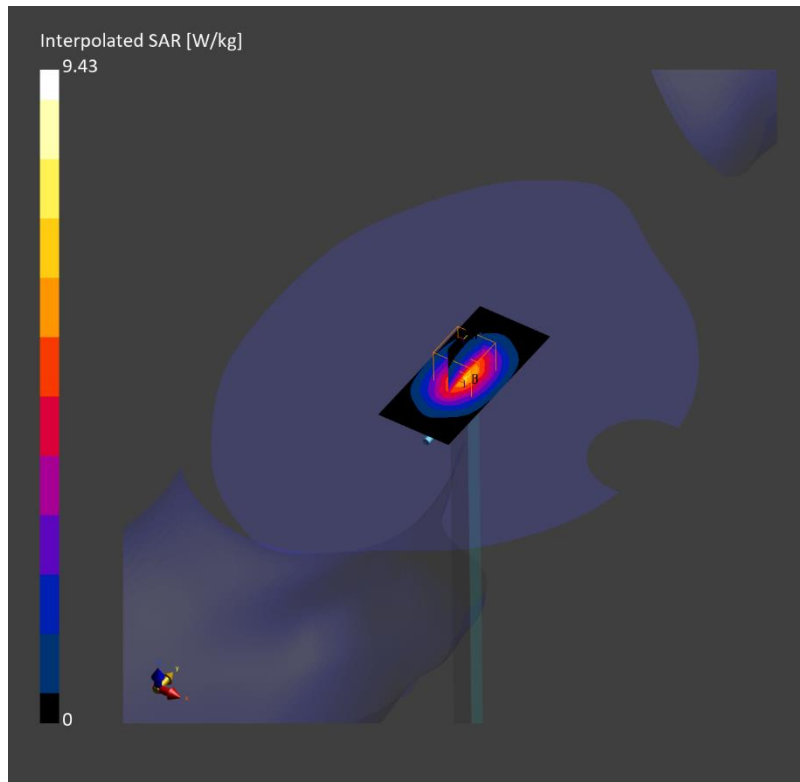
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2046	HBBL-600-10000	EX3DV4 - SN7313, 2024-02-21	DAE4 Sn1468, 2023-08-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	5.21	5.18
psSAR10g [W/Kg]	2.70	2.76
Power Drift [dB]		-0.03
M2/M1 [%]		82.7
Dist 3dB Peak [mm]		10.3



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2600.0	7.08	1.93	37.7

Hardware Setup

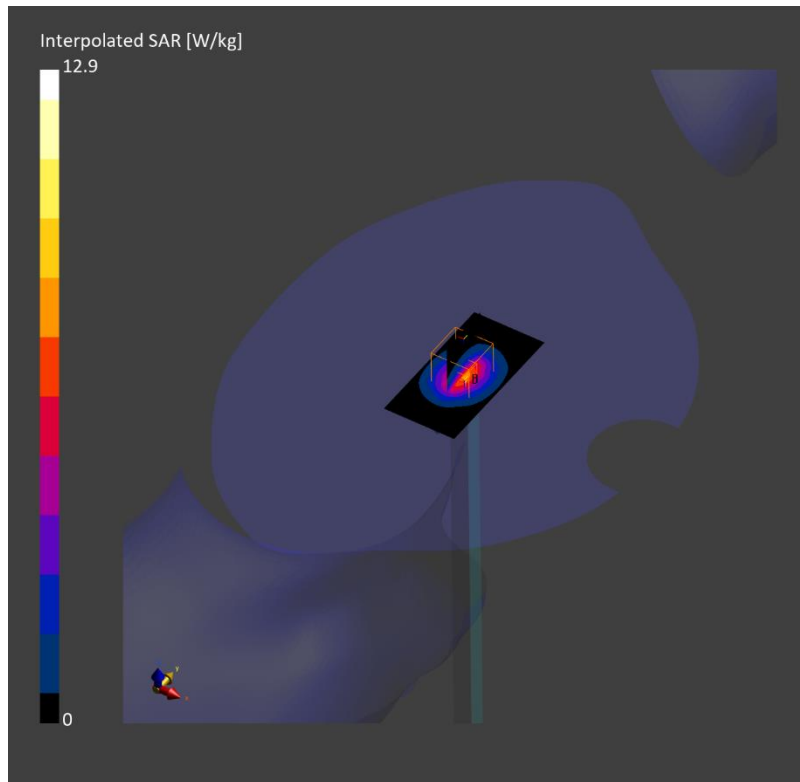
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2046	HBBL-600-10000	EX3DV4 - SN7313, 2024-02-21	DAE4 Sn1468, 2023-08-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	6.05	6.08
psSAR10g [W/Kg]	2.71	2.77
Power Drift [dB]		-0.06
M2/M1 [%]		78.9
Dist 3dB Peak [mm]		9.0



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	3700.0	6.44	3.05	37.3

Hardware Setup

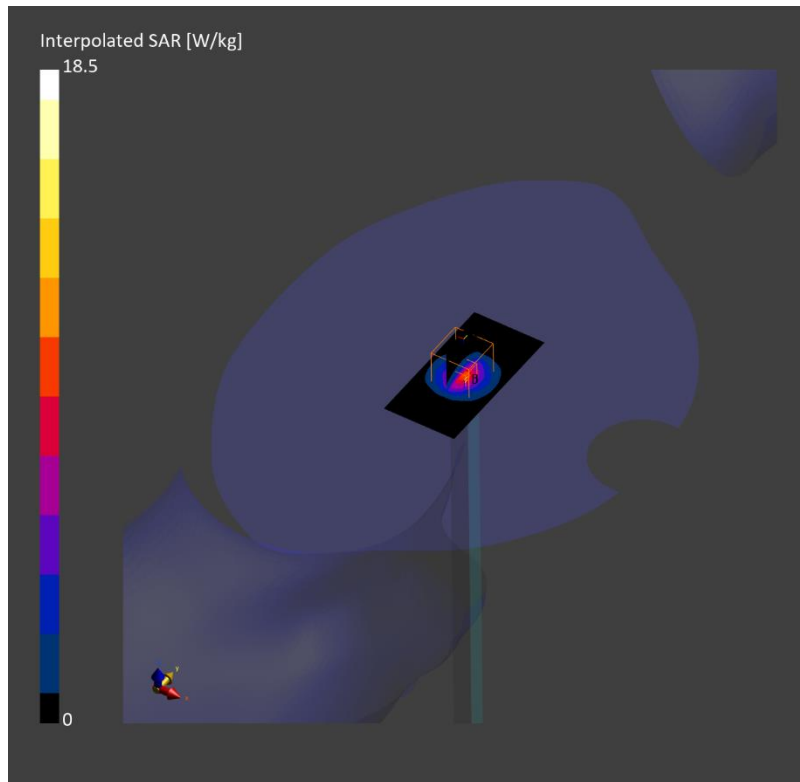
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2046	HBBL-600-10000	EX3DV4 - SN7313, 2024-02-21	DAE4 Sn1468, 2023-08-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	7.01	7.10
psSAR10g [W/Kg]	2.60	2.68
Power Drift [dB]		0.01
M2/M1 [%]		75.5
Dist 3dB Peak [mm]		8.6



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5600.0	4.98	4.96	35.6

Hardware Setup

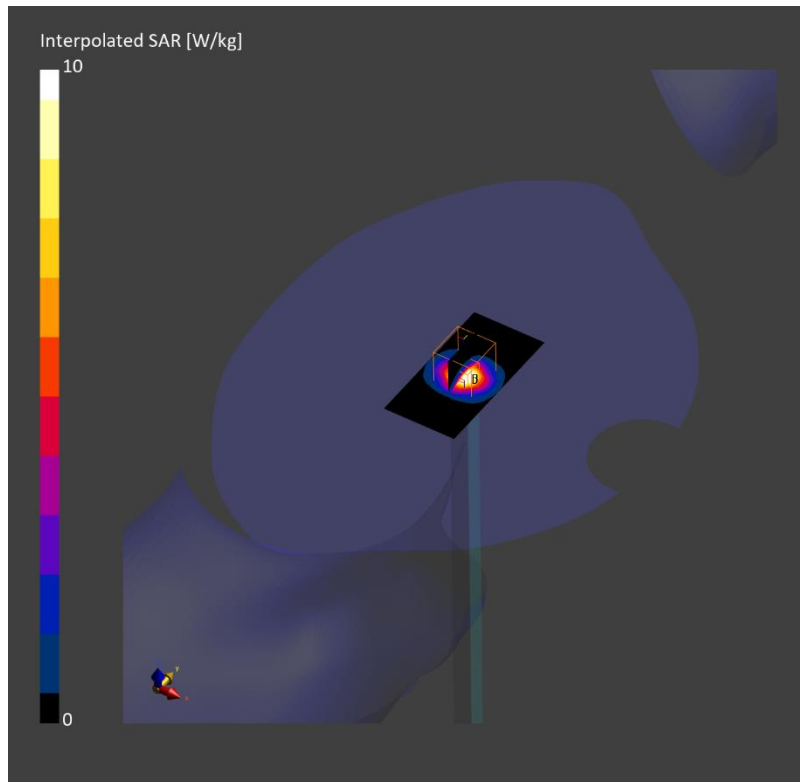
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2046	HBBL-600-10000	EX3DV4 - SN7376, 2023-07-25	DAE4 Sn1468, 2023-08-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	22.0 x 22.0 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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	8.36	8.86
psSAR10g [W/Kg]	2.37	2.57
Power Drift [dB]		0.02
M2/M1 [%]		65.1
Dist 3dB Peak [mm]		7.4



System Performance Check Report

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2600.0	8.01	1.92	39.5

Hardware Setup

Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2141	HBBL-600-10000	EX3DV4 - SN3871, 2023-08-25	DAE4 Sn1 798, 2023-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	6.05	6.09
psSAR10g [W/Kg]	2.75	2.81
Power Drift [dB]		-0.18
M2/M1 [%]		79.7
Dist 3dB Peak [mm]		9.0

