
Appendix for the Report

Dosimetric Assessment of the Ascom WH1-AAAA/PF (FCC ID: BXZWH1)

According to the FCC and IC Requirements

SAR Distribution Plots

September 20, 2010
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The test results only relate to the items tested. This report shall not be reproduced except in full without the written approval of the testing laboratory.

Table of Contents

1	SAR DISTRIBUTION PLOTS, IEEE 802.11 B HEAD	3
2	SAR DISTRIBUTION PLOTS, IEEE 802.11 B BODY	7
3	SAR DISTRIBUTION PLOTS, IEEE 802.11 N HEAD (2.45 GHZ RANGE).....	9
4	SAR DISTRIBUTION PLOTS, IEEE 802.11 N BODY (2.45 GHZ RANGE)	11
5	SAR DISTRIBUTION PLOTS, IEEE 802.11 A HEAD (5200 MHZ RANGE)	12
6	SAR DISTRIBUTION PLOTS, IEEE 802.11 A BODY (5200 MHZ RANGE)	16
7	SAR DISTRIBUTION PLOTS, IEEE 802.11 A HEAD (5500 MHZ RANGE)	17
8	SAR DISTRIBUTION PLOTS, IEEE 802.11 A BODY (5500 MHZ RANGE)	21
9	SAR DISTRIBUTION PLOTS, IEEE 802.11 A HEAD (5800 MHZ RANGE)	22
10	SAR DISTRIBUTION PLOTS, IEEE 802.11 A BODY (5800 MHZ RANGE)	26
11	SAR DISTRIBUTION PLOTS, IEEE 802.11 N HEAD (5200 MHZ RANGE)	27
12	SAR DISTRIBUTION PLOTS, IEEE 802.11 N BODY (5200 MHZ RANGE)	31
13	SAR DISTRIBUTION PLOTS, IEEE 802.11 N HEAD (5500 MHZ RANGE)	33
14	SAR DISTRIBUTION PLOTS, IEEE 802.11 N BODY (5500 MHZ RANGE)	40
15	SAR DISTRIBUTION PLOTS, IEEE 802.11 N HEAD (5800 MHZ RANGE)	42
16	SAR DISTRIBUTION PLOTS, IEEE 802.11 N BODY (5800 MHZ RANGE)	46
17	SAR Z-AXIS SCANS (VALIDATION)	48
18	SAR Z-AXIS SCANS (MEASUREMENTS).....	52

1 SAR Distribution Plots, IEEE 802.11 b Head

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_ywlm_1_CH6_b_cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.59, 7.59, 7.59); Calibrated: 18.09.2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn335; Calibrated: 10.02.2010

- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.281 mW/g

Cheek Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.0 V/m; Power Drift = -0.075 dB

Peak SAR (extrapolated) = 0.581 W/kg

SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.160 mW/g

Maximum value of SAR (measured) = 0.330 mW/g

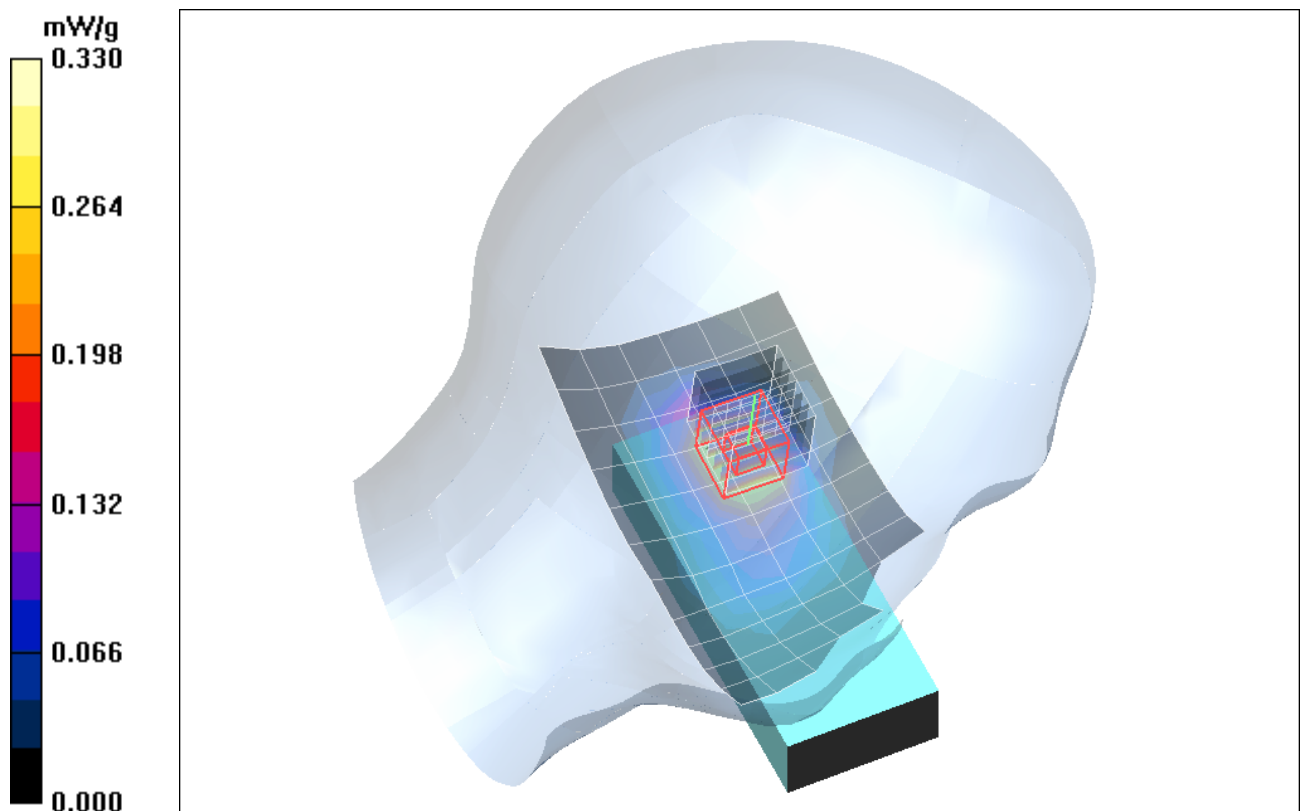


Fig. 1: SAR distribution for IEEE 802.11 b, channel 6, cheek position, left side of head (August 26, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.8° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_ywlm 2 CH6 b cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.59, 7.59, 7.59); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Left/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.245 mW/g

Tilted Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.9 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 0.460 W/kg

SAR(1 g) = 0.238 mW/g; SAR(10 g) = 0.124 mW/g

Maximum value of SAR (measured) = 0.259 mW/g

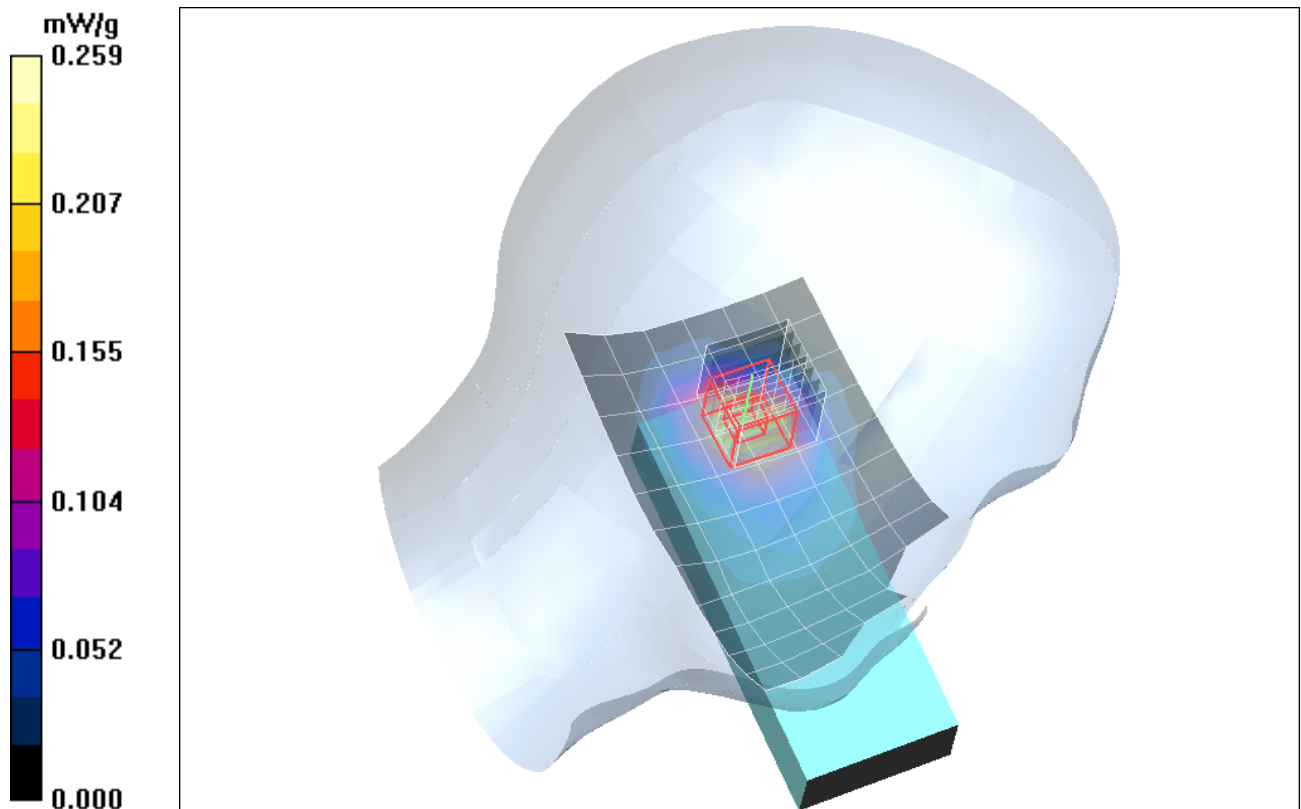


Fig. 2: SAR distribution for IEEE 802.11 b, channel 6, tilted position, left side of head (August 26, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.8° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_ywrm_1_CH6_b_cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.59, 7.59, 7.59); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.248 mW/g

Cheek Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.1 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 0.424 W/kg

SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.131 mW/g

Maximum value of SAR (measured) = 0.245 mW/g

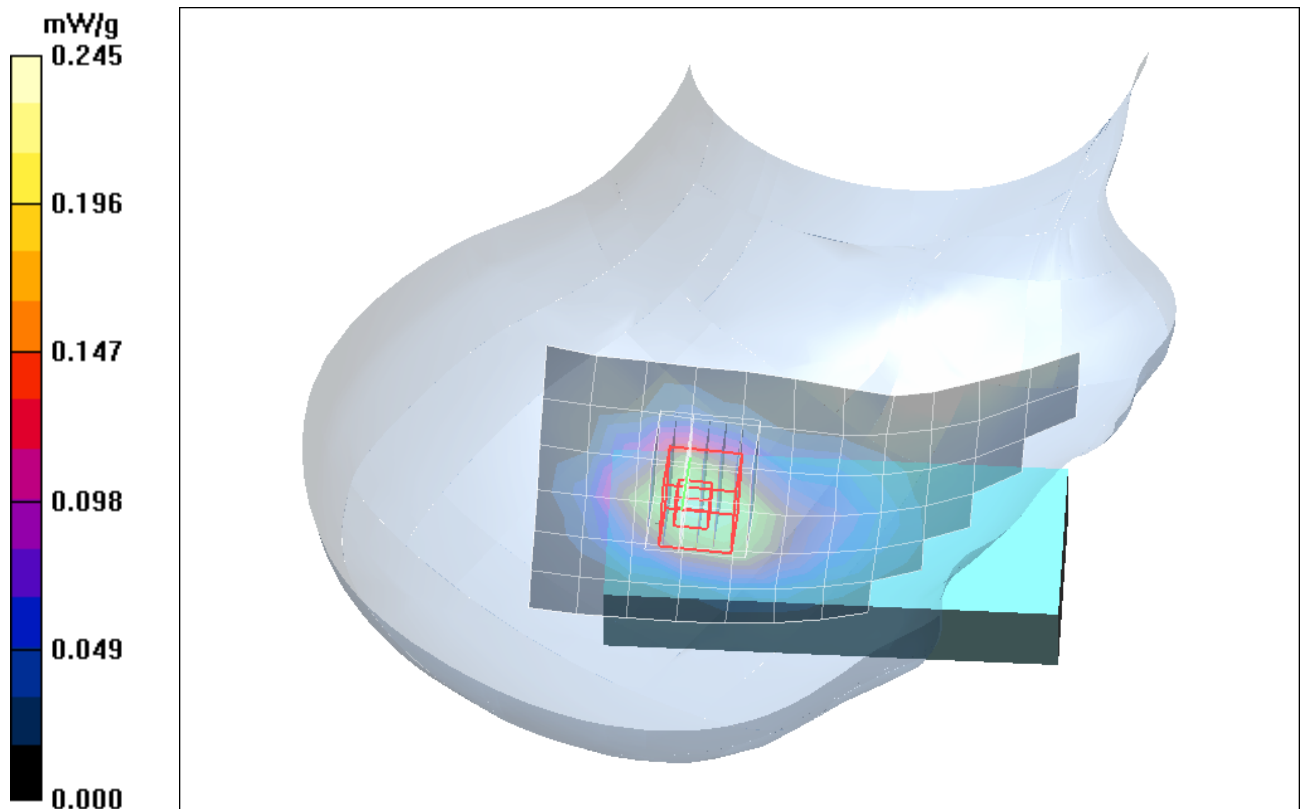


Fig. 3: SAR distribution for IEEE 802.11 b, channel 6, cheek position, right side of head (August 26, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.8° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_ywrm 2 CH6 b cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.59, 7.59, 7.59); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.215 mW/g

Tilted Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 0.414 W/kg

SAR(1 g) = 0.215 mW/g; SAR(10 g) = 0.112 mW/g

Maximum value of SAR (measured) = 0.233 mW/g

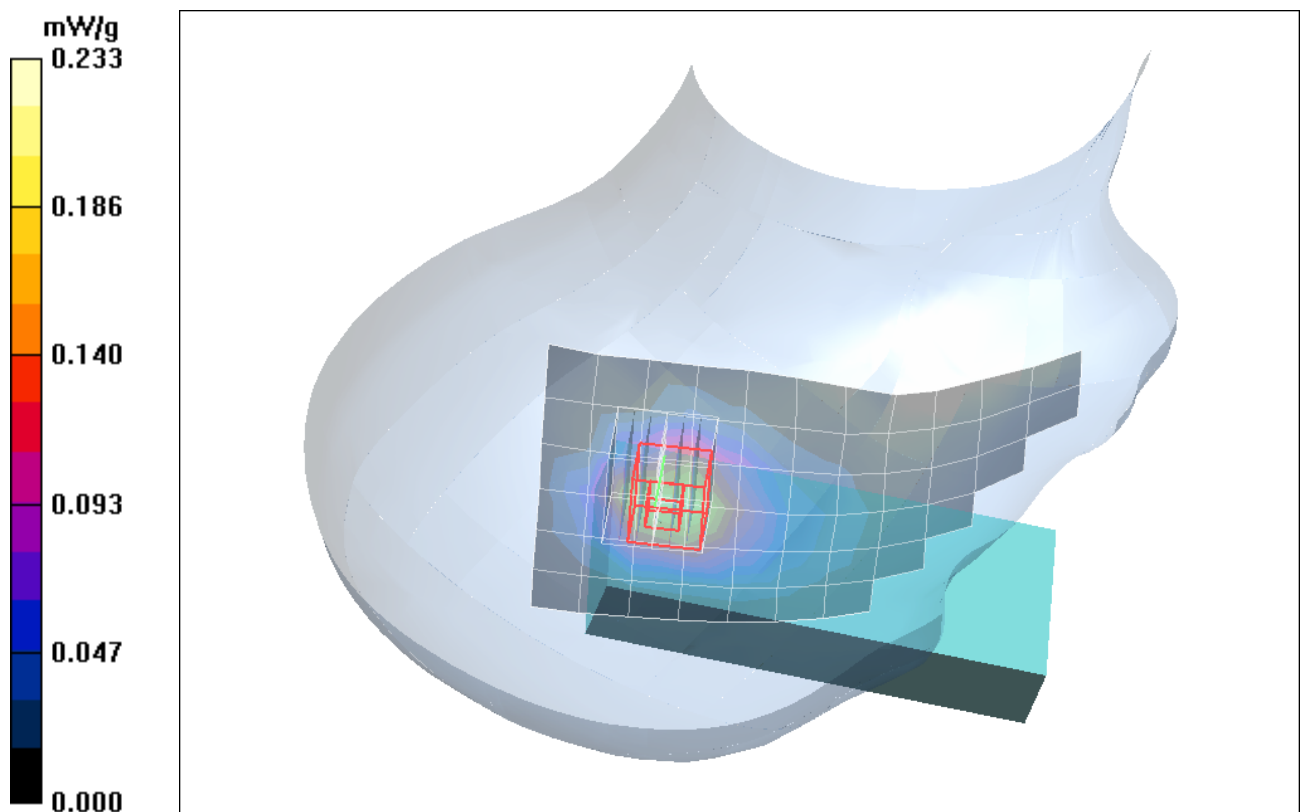


Fig. 4: SAR distribution for IEEE 802.11 b, channel 6, tilted position, right side of head (August 26, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.8° C).

2 SAR Distribution Plots, IEEE 802.11 b Body

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_yphm_1_b_hs_up.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.57, 7.57, 7.57); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (7x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.348 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 6.33 V/m; Power Drift = -0.126 dB

Peak SAR (extrapolated) = 0.646 W/kg

SAR(1 g) = 0.340 mW/g; SAR(10 g) = 0.187 mW/g

Maximum value of SAR (measured) = 0.373 mW/g

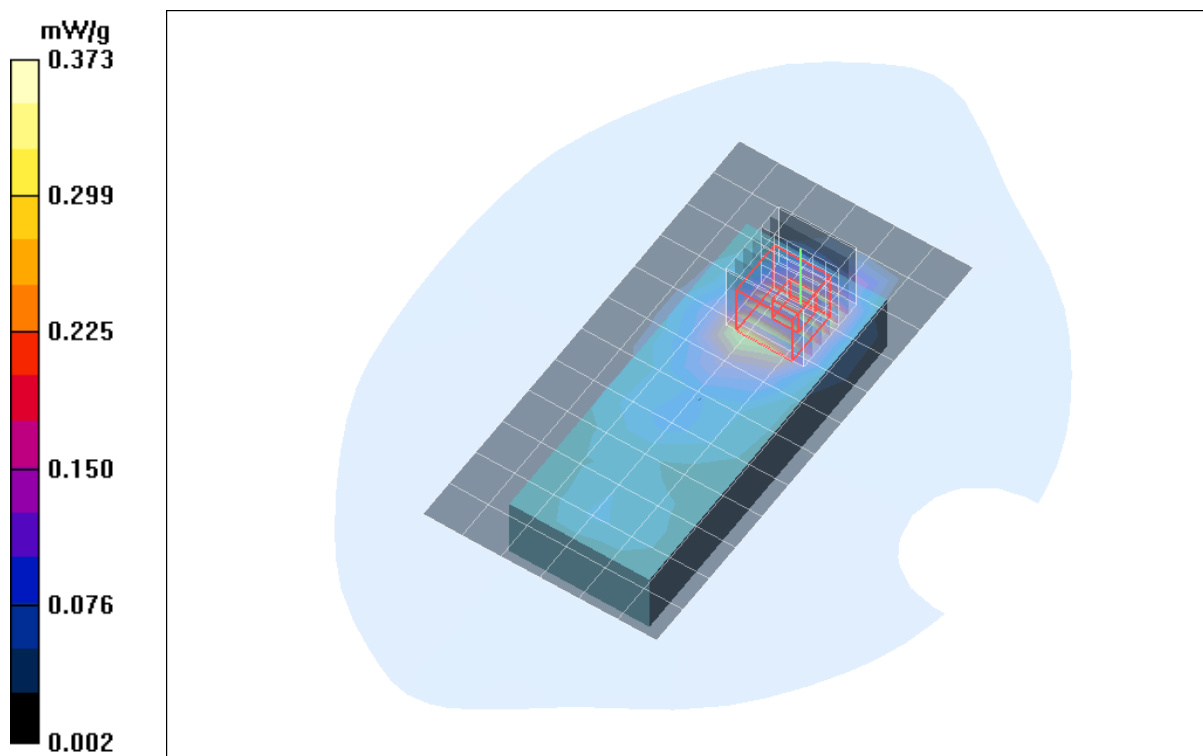


Fig. 5: SAR distribution for IEEE 802.11 b, channel 6, body worn configuration, display towards the phantom, 0 mm distance (August 30, 2010; Ambient Temperature: 21.5° C; Liquid Temperature: 21.2° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_yphm_1_b_hs_down.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.57, 7.57, 7.57); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.183 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.84 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 0.359 W/kg

SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.217 mW/g

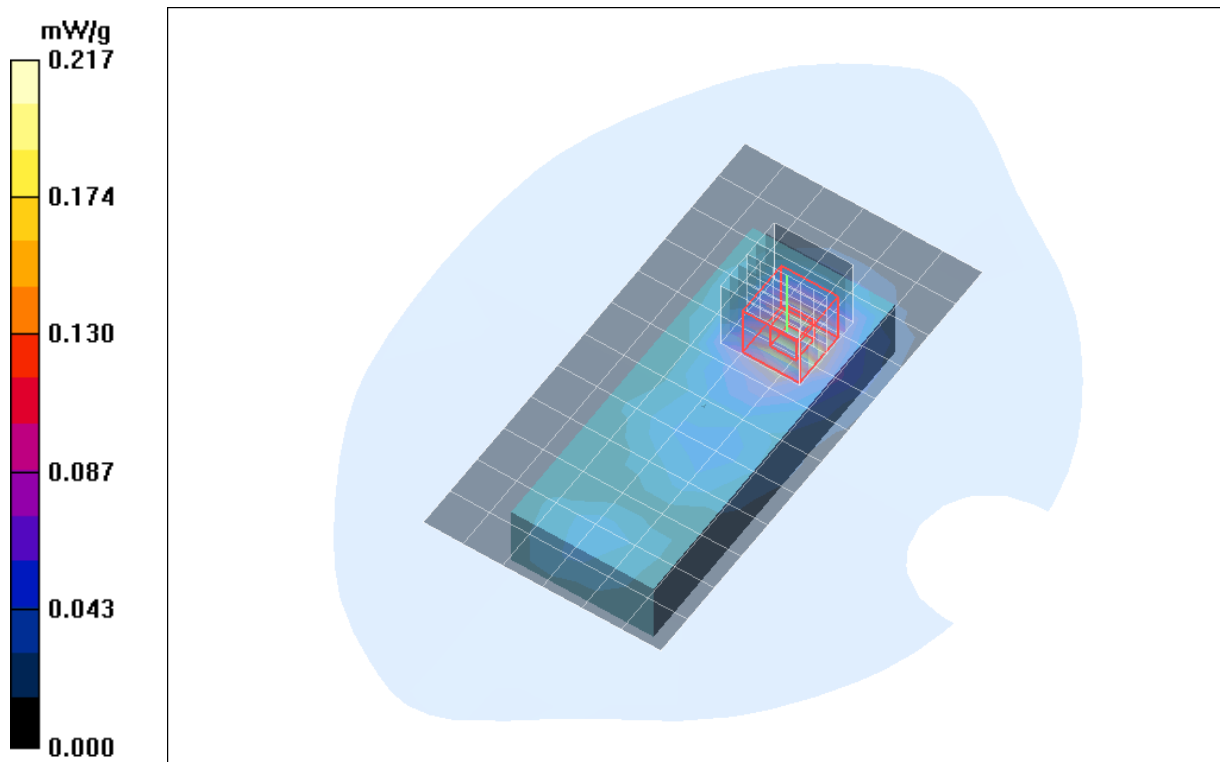


Fig. 6: SAR distribution for IEEE 802.11 b, channel 6, body worn configuration, display towards the ground, 0 mm distance (August 30, 2010; Ambient Temperature: 21.5° C; Liquid Temperature: 21.2° C).

3 SAR Distribution Plots, IEEE 802.11 n Head (2.45 GHz Range)

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_ywlm_1_CH6_n_cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.59, 7.59, 7.59); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.092 mW/g

Cheek Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.08 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 0.191 W/kg

SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.053 mW/g

Maximum value of SAR (measured) = 0.112 mW/g

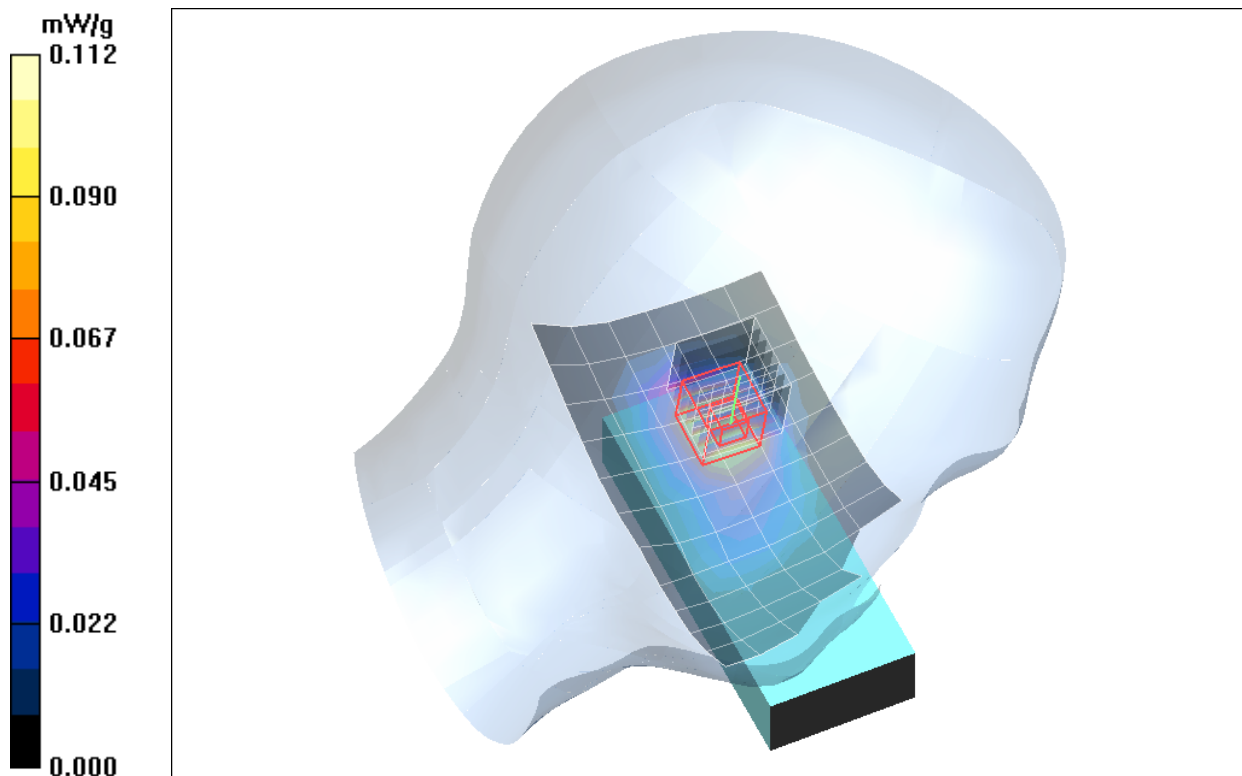


Fig. 7: SAR distribution for IEEE 802.11 n, channel 6, cheek position, left side of head (August 26, 2010; Ambient Temperature: 21.5° C; Liquid Temperature: 21.1° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_ywrm_1_CH6_n_cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.59, 7.59, 7.59); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (7x12x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.086 mW/g

Cheek Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 6.65 V/m; Power Drift = 0.064 dB

Peak SAR (extrapolated) = 0.153 W/kg

SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.045 mW/g

Maximum value of SAR (measured) = 0.088 mW/g

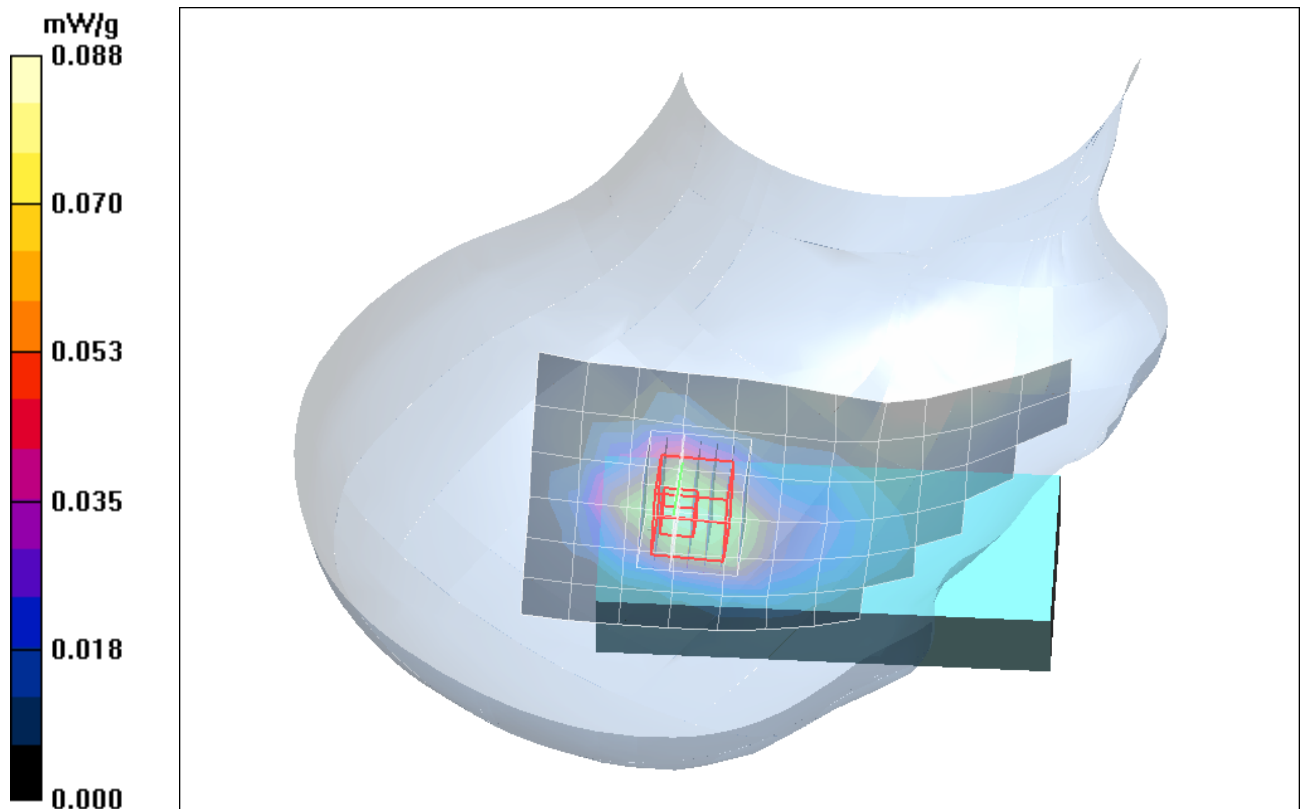


Fig. 8: SAR distribution for IEEE 802.11 n, channel 6, cheek position, right side of head (August 26, 2010; Ambient Temperature: 21.5° C; Liquid Temperature: 21.1° C).

4 SAR Distribution Plots, IEEE 802.11 n Body (2.45 GHz Range)

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [AAAA_yphm_3_n_hs_up.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.57, 7.57, 7.57); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (7x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.127 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 3.25 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.242 W/kg

SAR(1 g) = 0.124 mW/g; SAR(10 g) = 0.065 mW/g

Maximum value of SAR (measured) = 0.136 mW/g

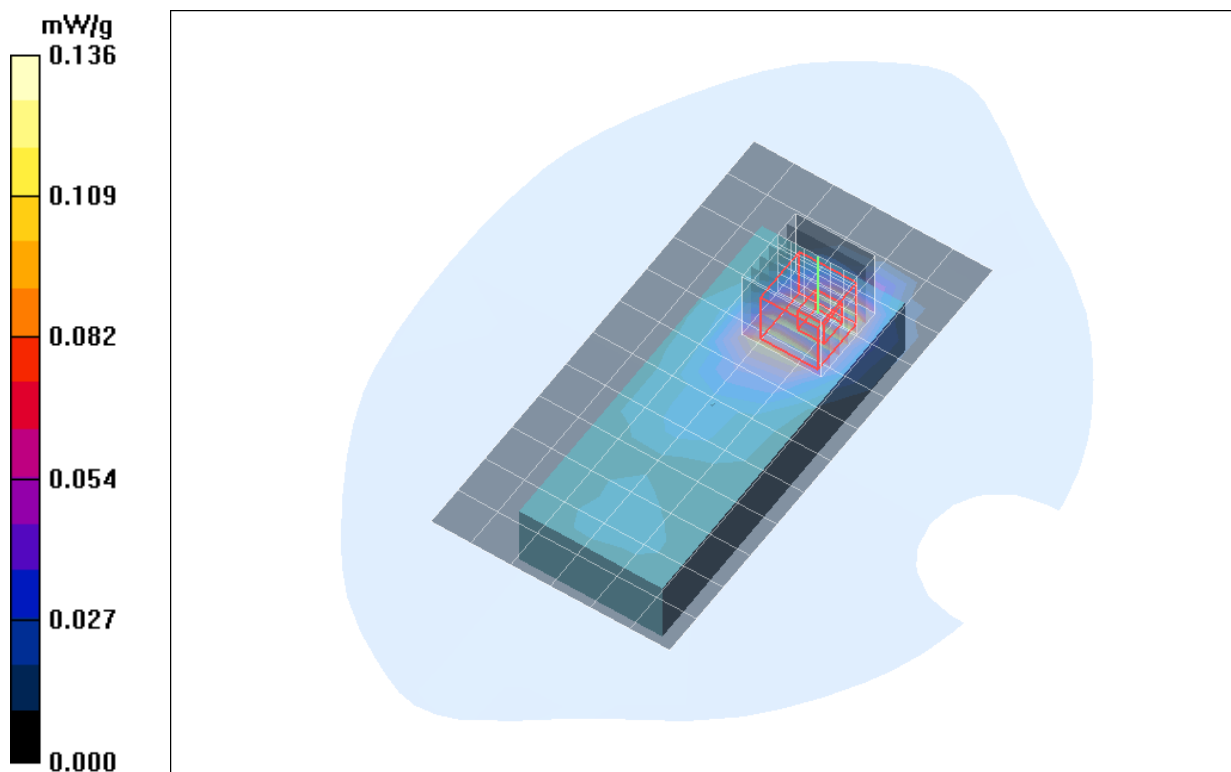


Fig. 9: SAR distribution for IEEE 802.11 n, channel 6, body worn configuration, display towards the phantom, 0 mm distance (August 30, 2010; Ambient Temperature: 21.5° C; Liquid Temperature: 21.2° C).

5 SAR Distribution Plots, IEEE 802.11 a Head (5200 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 1 CH52 a cw.da4](#)

DUT: ASCOM; Type: AAAA; Serial: T26103XMGU

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.81$ mho/m; $\epsilon_r = 34.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.96, 4.96, 4.96); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.350 mW/g

Cheek Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.55 V/m; Power Drift = 0.187 dB

Peak SAR (extrapolated) = 0.994 W/kg

SAR(1 g) = 0.309 mW/g; SAR(10 g) = 0.092 mW/g

Maximum value of SAR (measured) = 0.378 mW/g

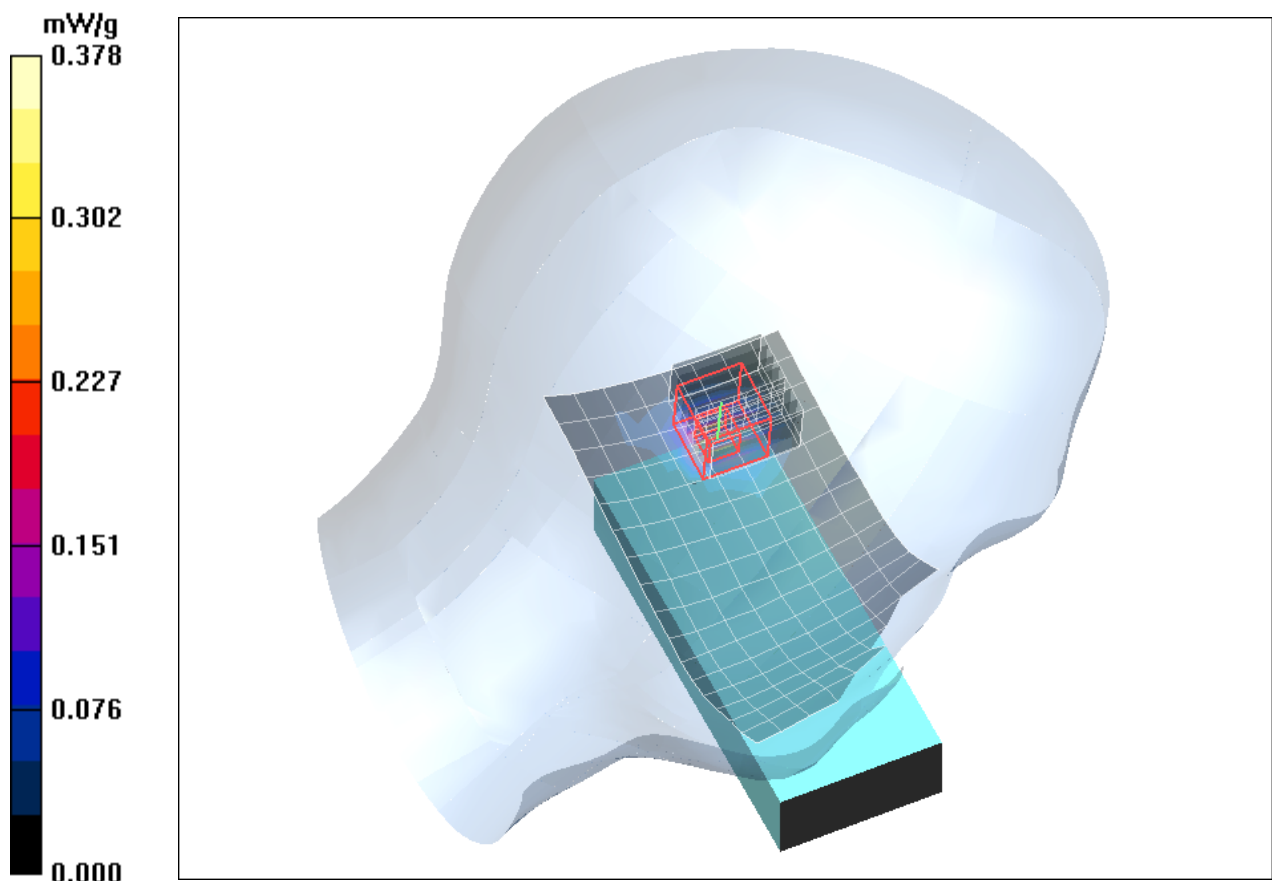


Fig. 10: SAR distribution for IEEE 802.11 a, channel 52, cheek position, left side of head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 2 CH52 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.81$ mho/m; $\epsilon_r = 34.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.96, 4.96, 4.96); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.466 mW/g

Tilted Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.33 V/m; Power Drift = -0.140 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.370 mW/g; SAR(10 g) = 0.113 mW/g

Maximum value of SAR (measured) = 0.420 mW/g

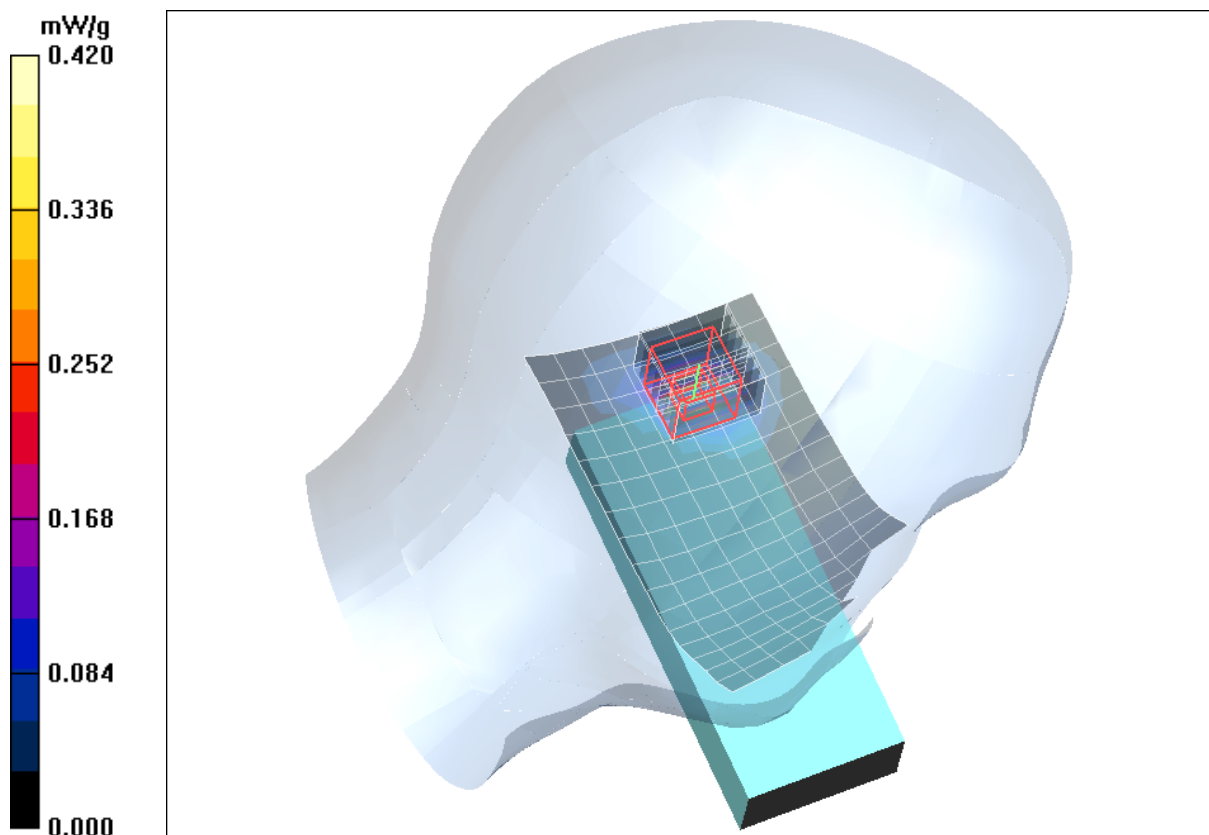


Fig. 11: SAR distribution for IEEE 802.11 a, channel 52, tilted position, left side of head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 1 CH52 a cw.da4](#)

DUT: ASCOM; Type: AAAA; Serial: T26103XMGU

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.81$ mho/m; $\epsilon_r = 34.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.96, 4.96, 4.96); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (9x17x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.371 mW/g

Cheek Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 9.01 V/m; Power Drift = 0.164 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.108 mW/g

Maximum value of SAR (measured) = 0.391 mW/g

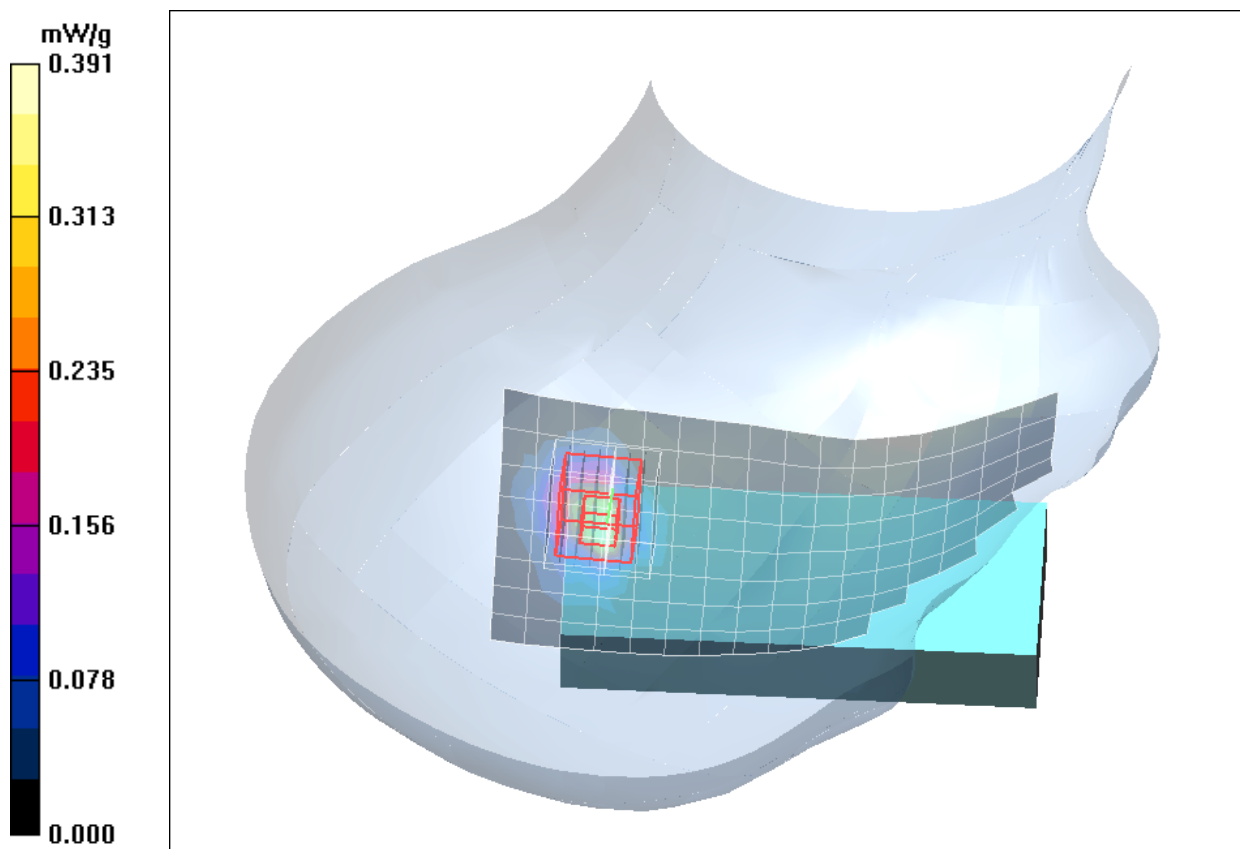


Fig. 12: SAR distribution for IEEE 802.11 a, channel 52, cheek position, right side of head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH52 a cw.da4](#)

DUT: ASCOM; Type: AAAA; Serial: T26103XMGU

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.81$ mho/m; $\epsilon_r = 34.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.96, 4.96, 4.96); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.433 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.78 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.137 mW/g

Maximum value of SAR (measured) = 0.510 mW/g

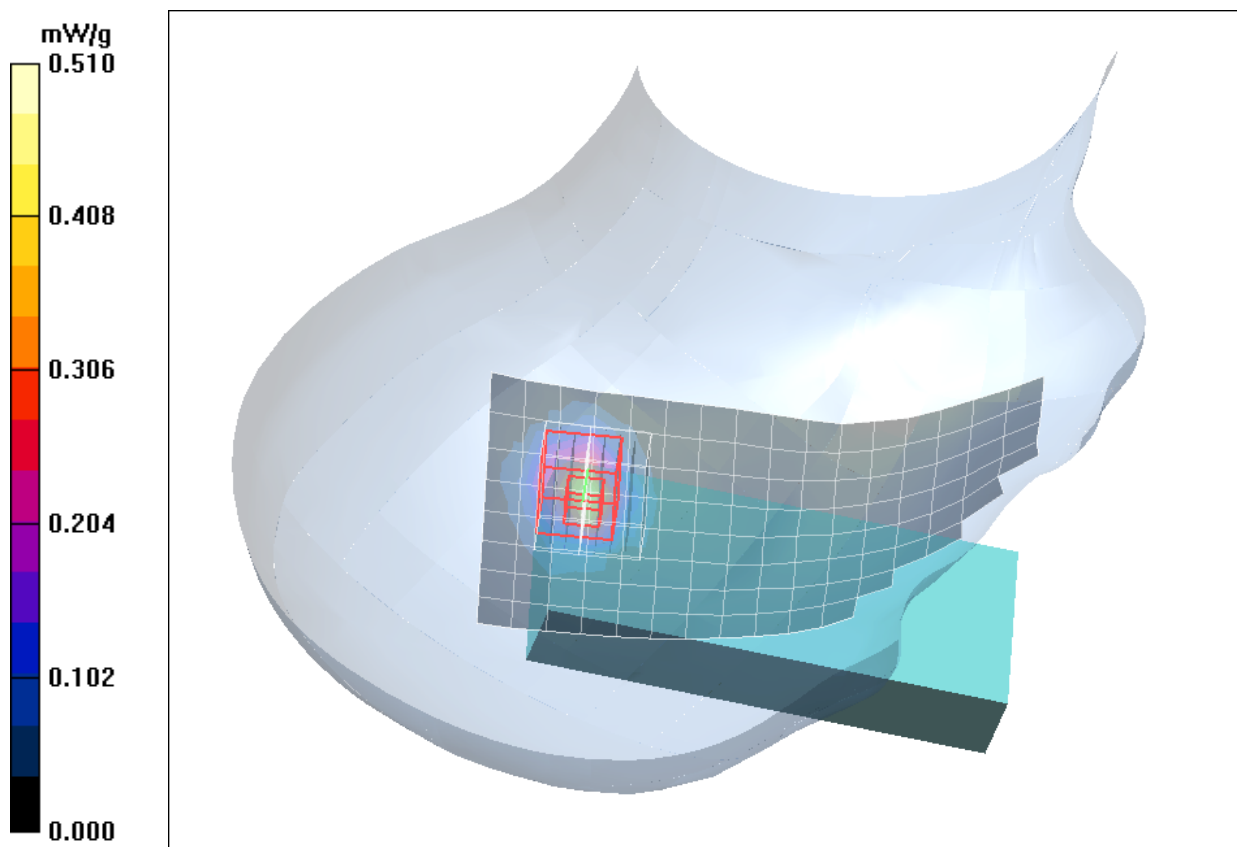


Fig. 13: SAR distribution for IEEE 802.11 a, channel 52, tilted position, right side of head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

6 SAR Distribution Plots, IEEE 802.11 a Body (5200 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA_bwhm_1_CH52_a_hs_up.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 5.19$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.37, 4.37, 4.37); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.280 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 7.36 V/m; Power Drift = 0.117 dB

Peak SAR (extrapolated) = 0.898 W/kg

SAR(1 g) = 0.280 mW/g; SAR(10 g) = 0.076 mW/g

Maximum value of SAR (measured) = 0.358 mW/g

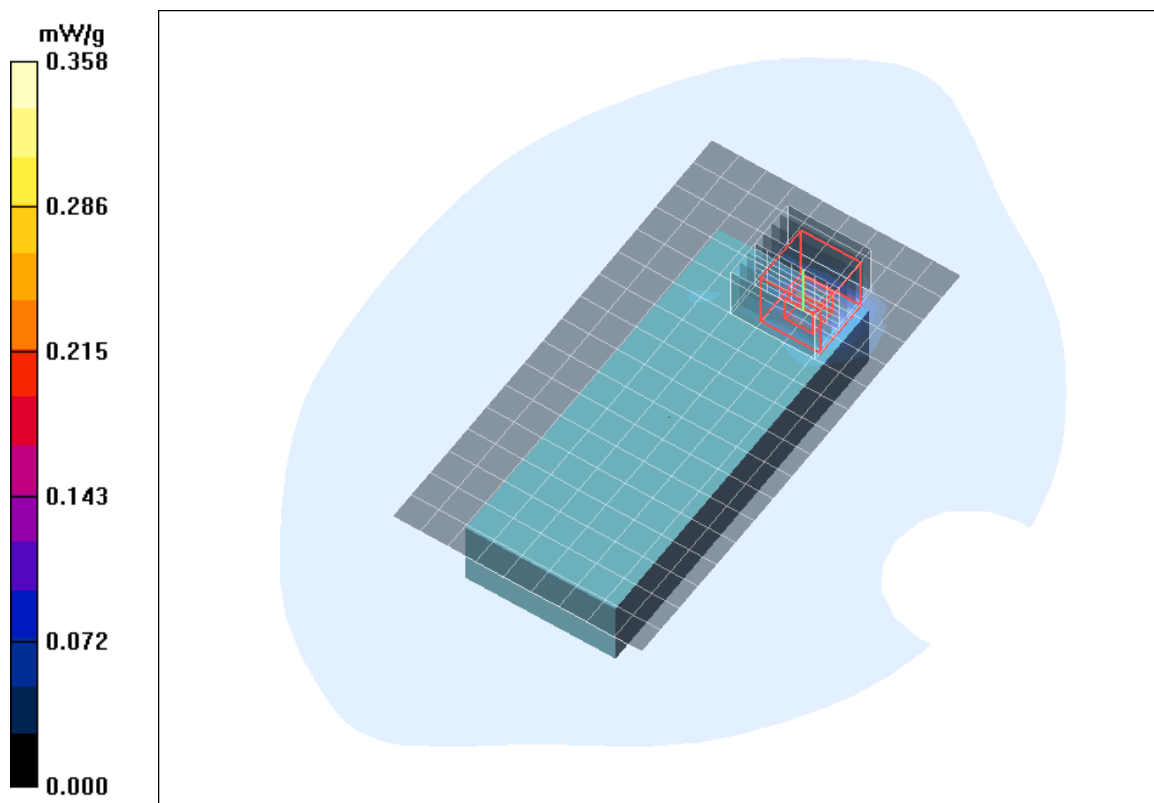


Fig. 14: SAR distribution for IEEE 802.11 a, channel 52, body worn configuration, display towards the phantom, 0 mm distance (September 07, 2010; Ambient Temperature: 21.3° C; Liquid Temperature: 20.9° C).

7 SAR Distribution Plots, IEEE 802.11 a Head (5500 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 1 CH104 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA; Serial: T26103XMGU

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.13$ mho/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.807 mW/g

Cheek Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 12.2 V/m; Power Drift = -0.156 dB

Peak SAR (extrapolated) = 2.14 W/kg

SAR(1 g) = 0.669 mW/g; SAR(10 g) = 0.211 mW/g

Maximum value of SAR (measured) = 0.755 mW/g

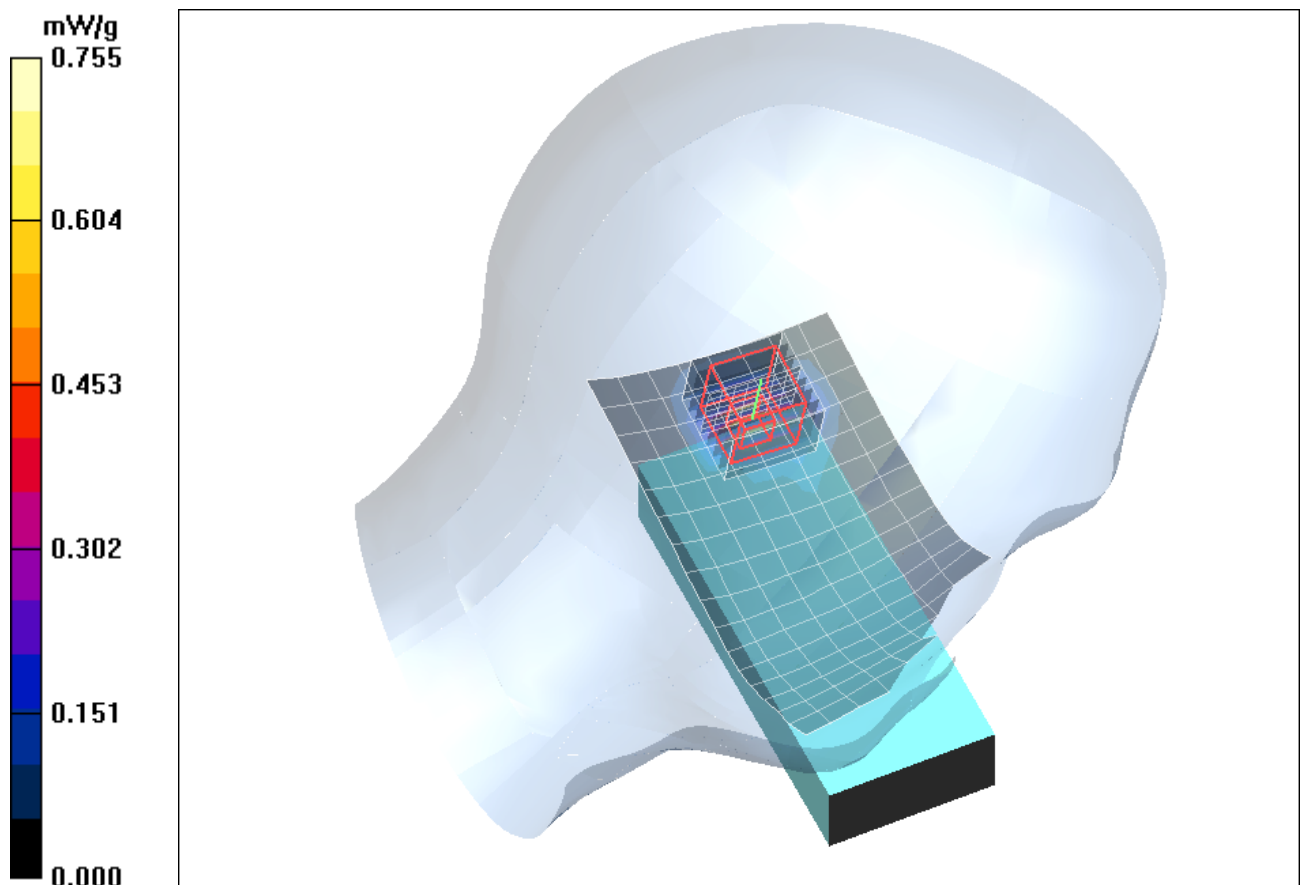


Fig. 15: SAR distribution for IEEE 802.11 a, channel 104, cheek position, left side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 2 CH104 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA; Serial: T26103XMGU

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5520 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.13$ mho/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.919 mW/g

Tilted Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 13.0 V/m; Power Drift = -0.191 dB

Peak SAR (extrapolated) = 2.34 W/kg

SAR(1 g) = 0.721 mW/g; SAR(10 g) = 0.225 mW/g

Maximum value of SAR (measured) = 0.802 mW/g

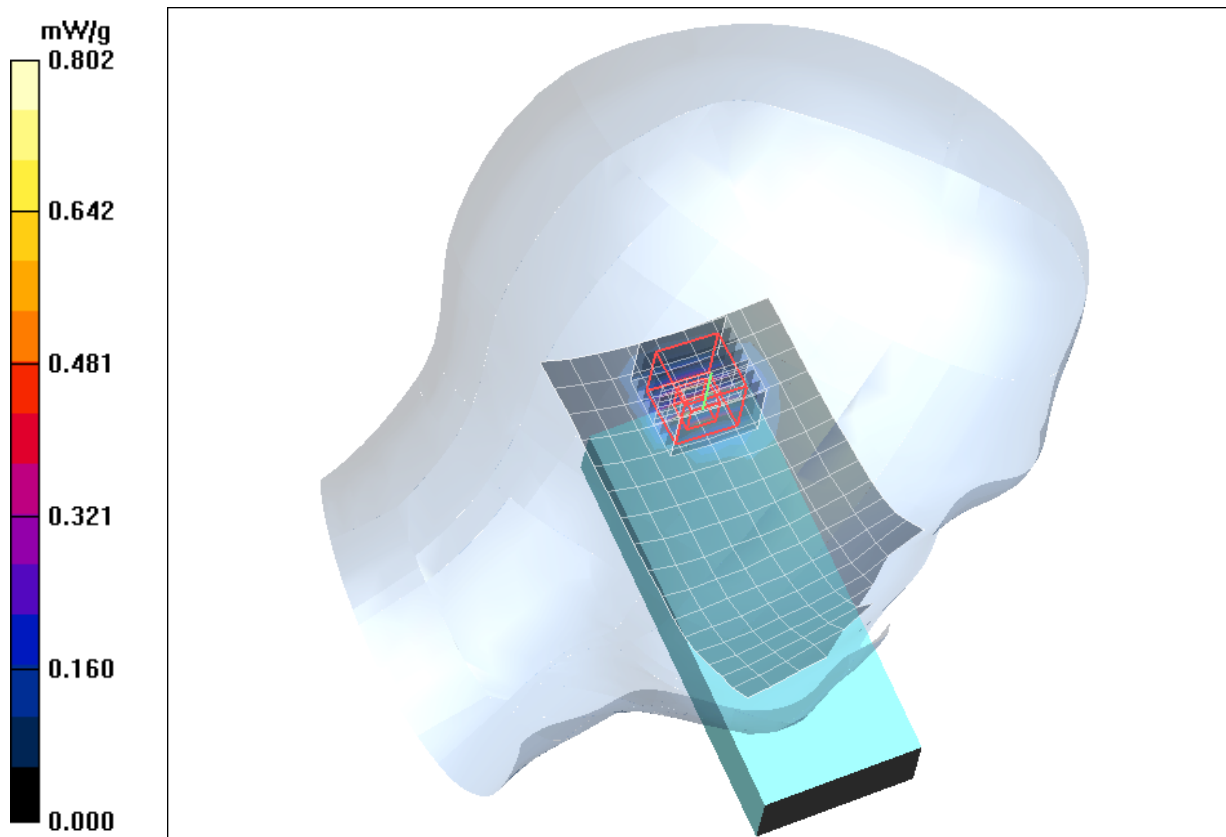


Fig. 16: SAR distribution for IEEE 802.11 a, channel 104, tilted position, left side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 1 CH104 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA; Serial: T26103XMGU

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5520 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.13$ mho/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.908 mW/g

Cheek Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 12.6 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 2.23 W/kg

SAR(1 g) = 0.697 mW/g; SAR(10 g) = 0.226 mW/g

Maximum value of SAR (measured) = 0.775 mW/g

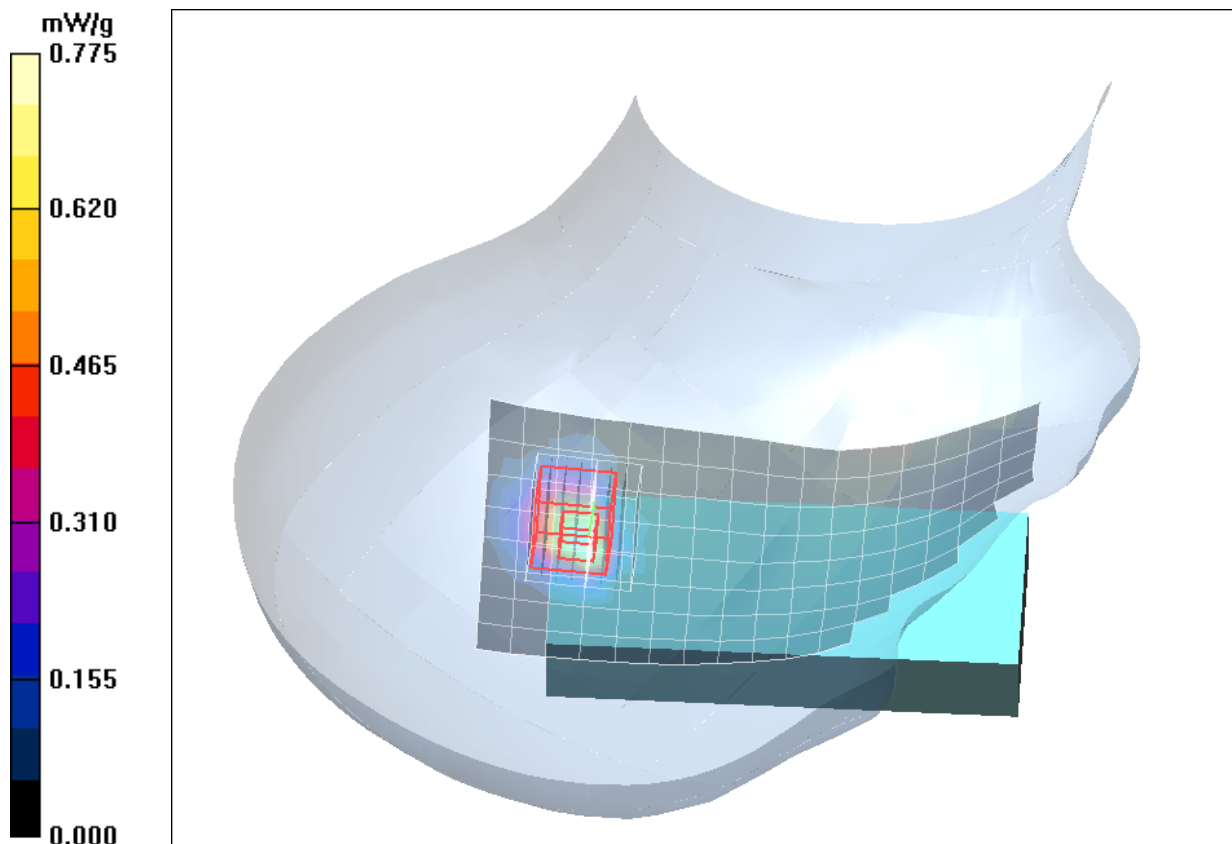


Fig. 17: SAR distribution for IEEE 802.11 a, channel 104, cheek position, right side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH104 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA; Serial: T26103XMGU

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5520 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.13$ mho/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.06 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 13.6 V/m; Power Drift = -0.066 dB

Peak SAR (extrapolated) = 2.57 W/kg

SAR(1 g) = 0.789 mW/g; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 0.921 mW/g

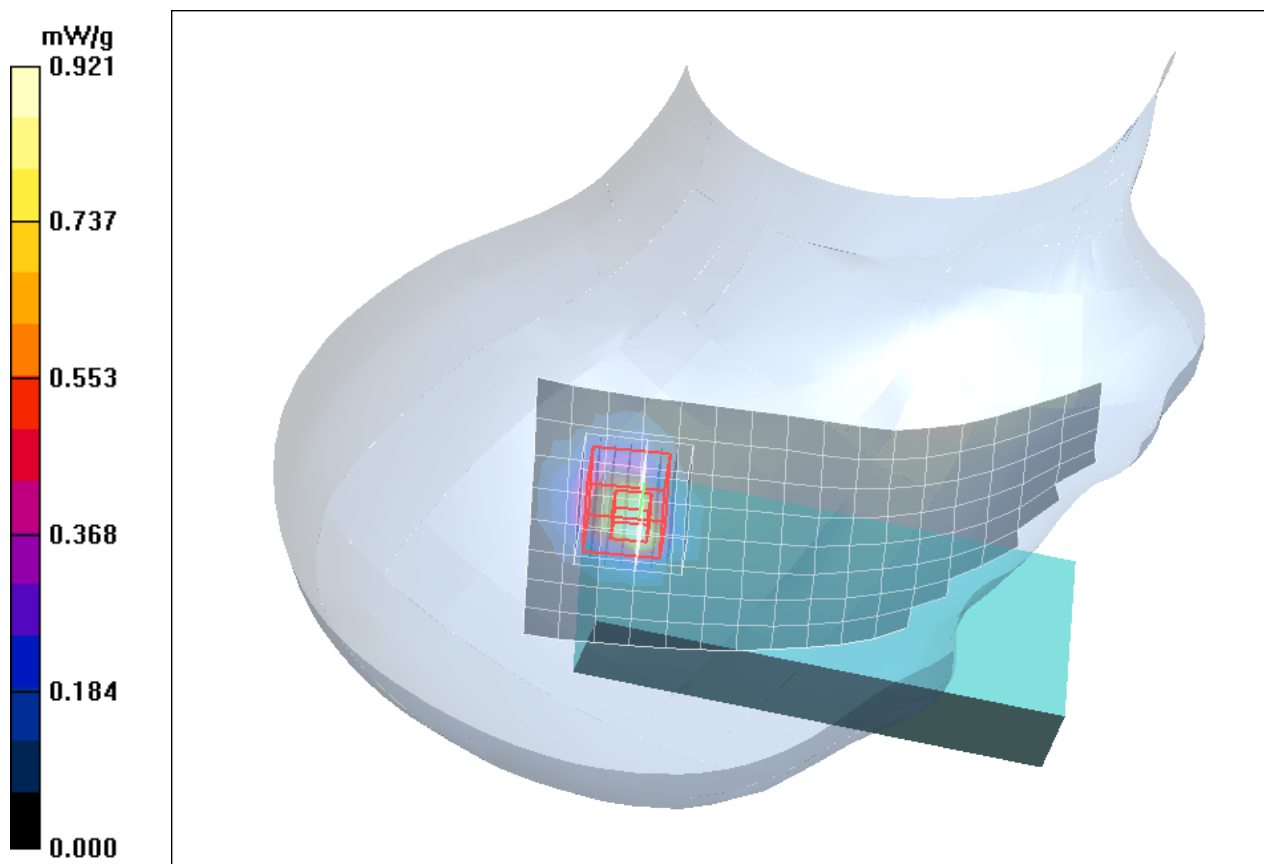


Fig. 18: SAR distribution for IEEE 802.11 a, channel 104, tilted position, right side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

8 SAR Distribution Plots, IEEE 802.11 a Body (5500 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwhm 1 CH104 a hs up.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.79$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.22, 4.22, 4.22); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.725 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 11.0 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 2.10 W/kg

SAR(1 g) = 0.608 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 0.714 mW/g

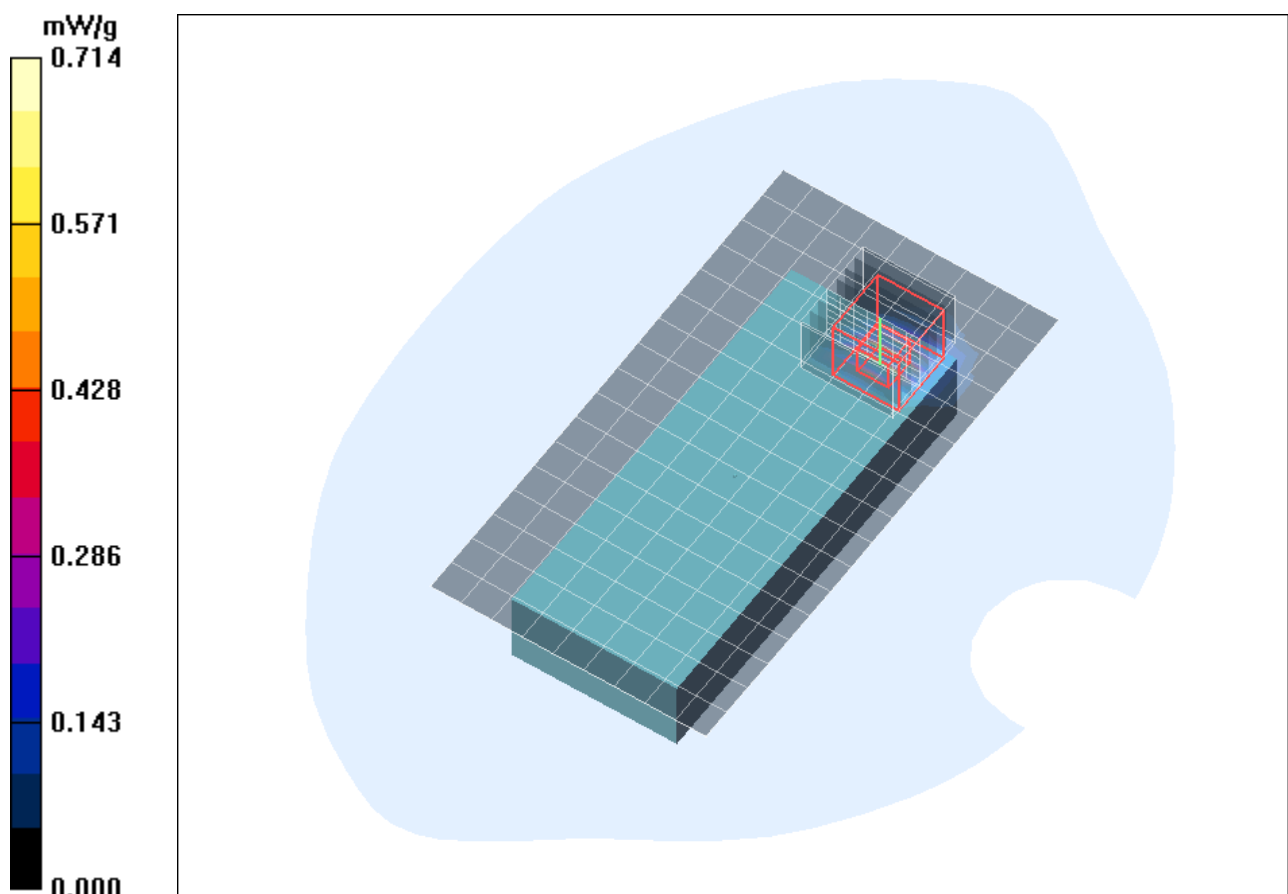


Fig. 19: SAR distribution for IEEE 802.11 a, channel 104, body worn configuration, display towards the phantom, 0 mm distance (September 06, 2010; Ambient Temperature: 21.3° C; Liquid Temperature: 20.8° C).

9 SAR Distribution Plots, IEEE 802.11 a Head (5800 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 1 CH153 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 33.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.63, 4.63, 4.63); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.568 mW/g

Cheek Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 10.3 V/m; Power Drift = 0.113 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.563 mW/g

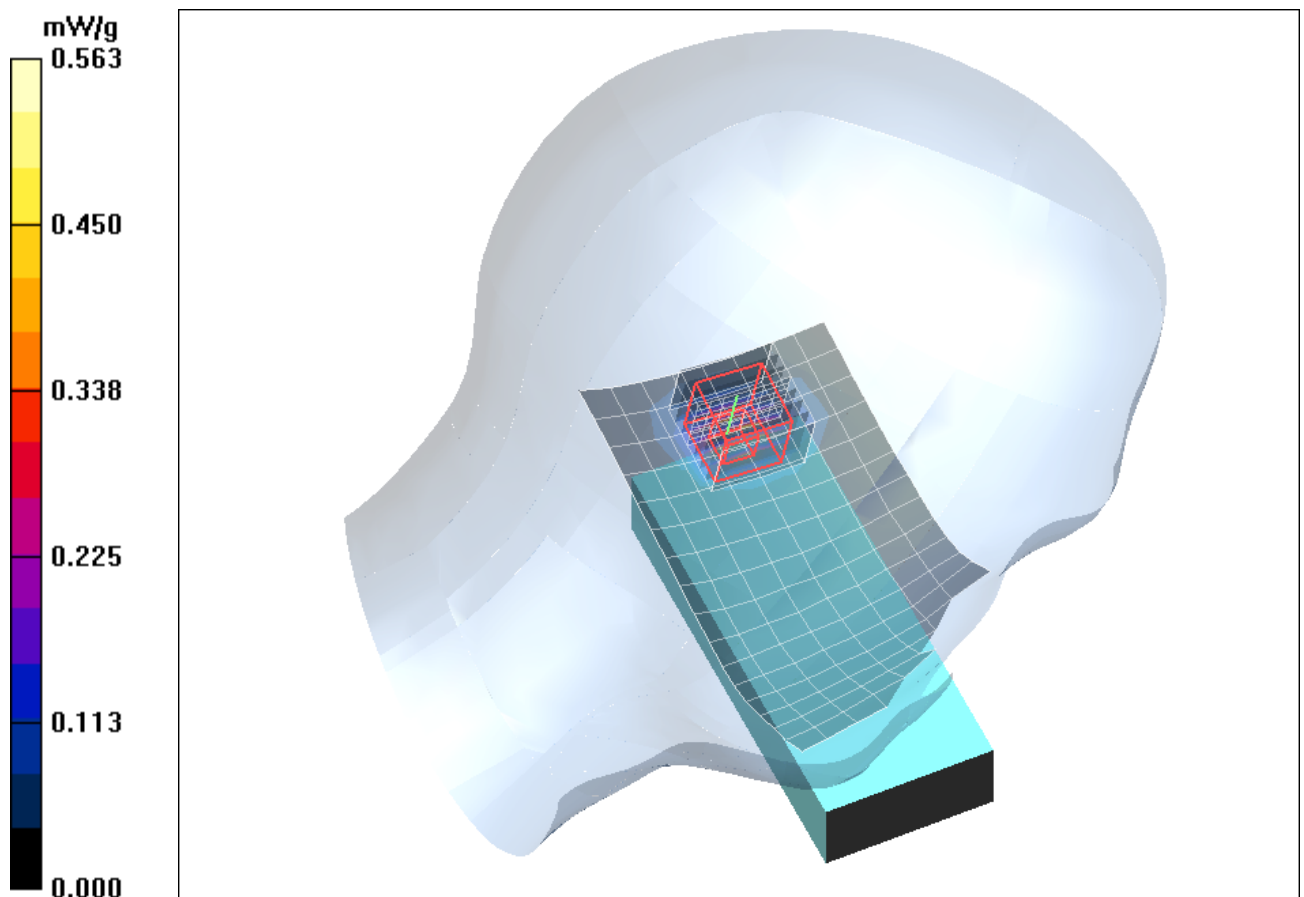


Fig. 20: SAR distribution for IEEE 802.11 a, channel 153, cheek position, left side of head (August 18, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 2 CH153 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 33.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.63, 4.63, 4.63); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.682 mW/g

Tilted Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 11.3 V/m; Power Drift = 0.118 dB

Peak SAR (extrapolated) = 2.03 W/kg

SAR(1 g) = 0.604 mW/g; SAR(10 g) = 0.186 mW/g

Maximum value of SAR (measured) = 0.685 mW/g

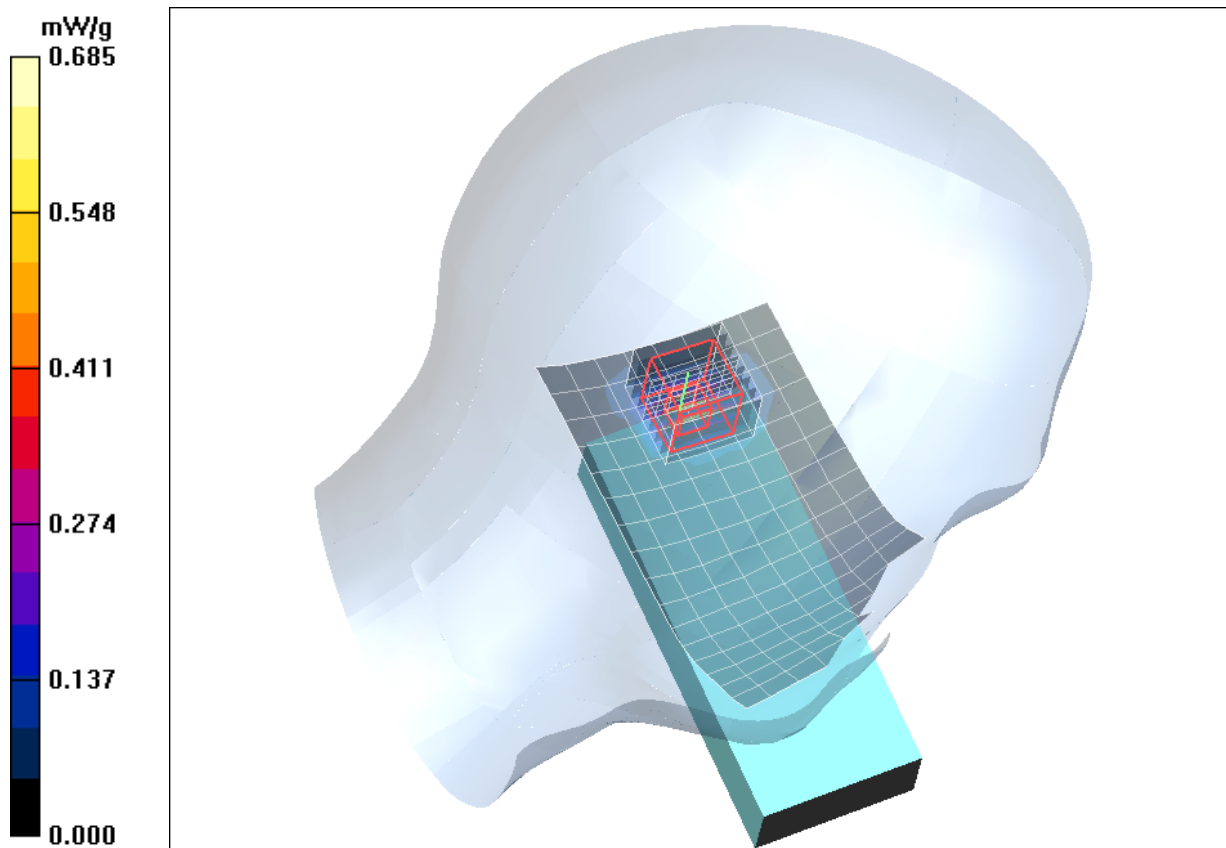


Fig. 21: SAR distribution for IEEE 802.11 a, channel 153 tilted position, left side of head (August 18, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 1 CH153 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 33.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.63, 4.63, 4.63); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.588 mW/g

Cheek Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 11.0 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 1.86 W/kg

SAR(1 g) = 0.545 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 0.628 mW/g

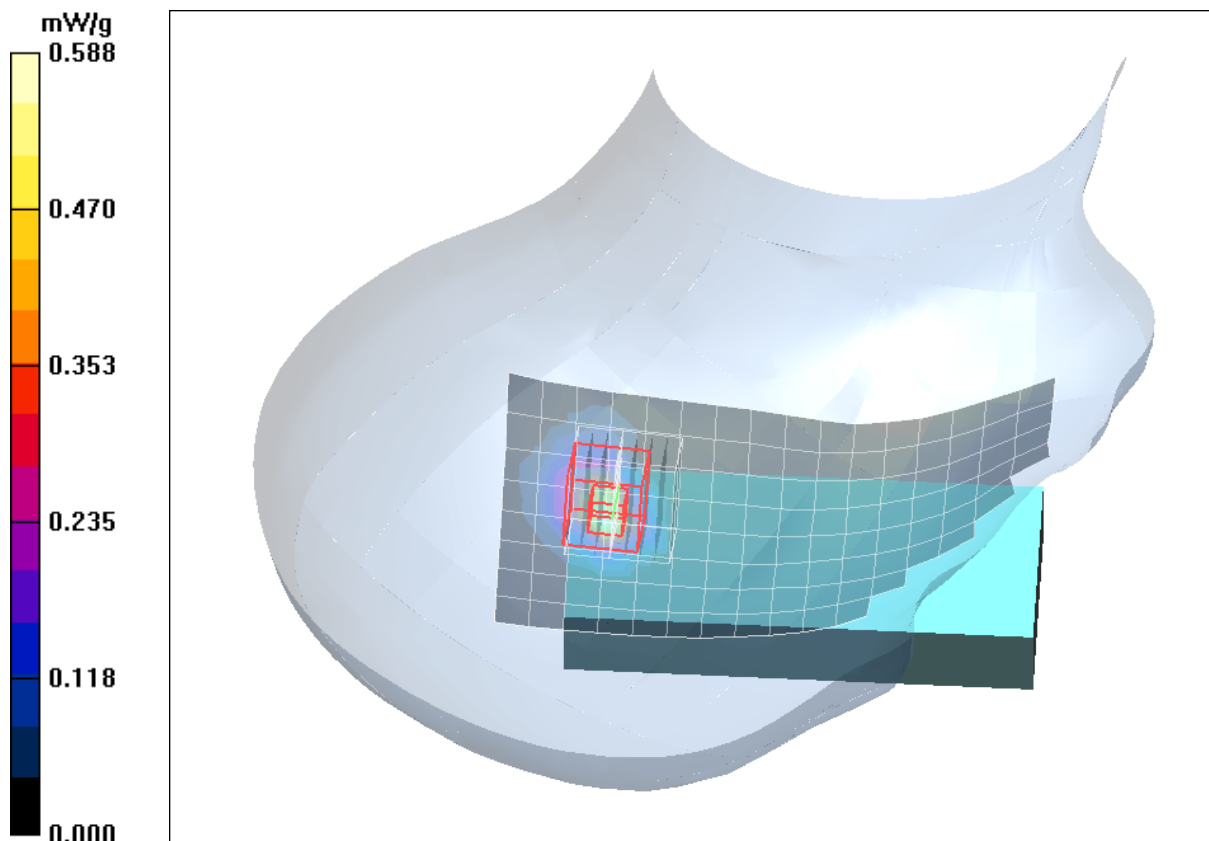


Fig. 22: SAR distribution for IEEE 802.11 a, channel 153, cheek position, right side of head (August 18, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH153 a cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 33.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.63, 4.63, 4.63); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.767 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 12.2 V/m; Power Drift = 0.138 dB

Peak SAR (extrapolated) = 2.24 W/kg

SAR(1 g) = 0.651 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.751 mW/g

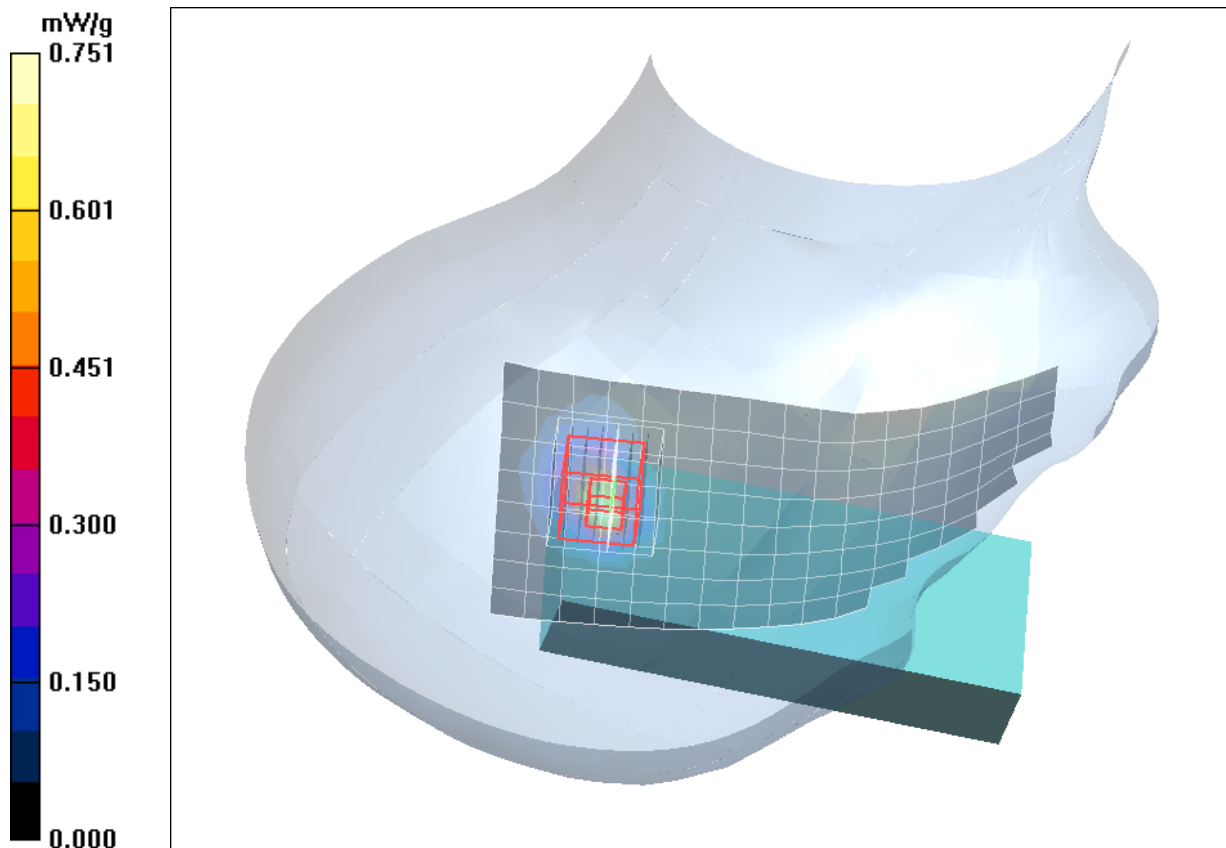


Fig. 23: SAR distribution for IEEE 802.11 a, channel 153, tilted position, right side of head (August 18, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

10 SAR Distribution Plots, IEEE 802.11 a Body (5800 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwhm 1 CH153 a hs up.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 a

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 6.14$ mho/m; $\epsilon_r = 47.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.2, 4.2, 4.2); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.713 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 10.1 V/m; Power Drift = -0.098 dB

Peak SAR (extrapolated) = 1.83 W/kg

SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.151 mW/g

Maximum value of SAR (measured) = 0.612 mW/g

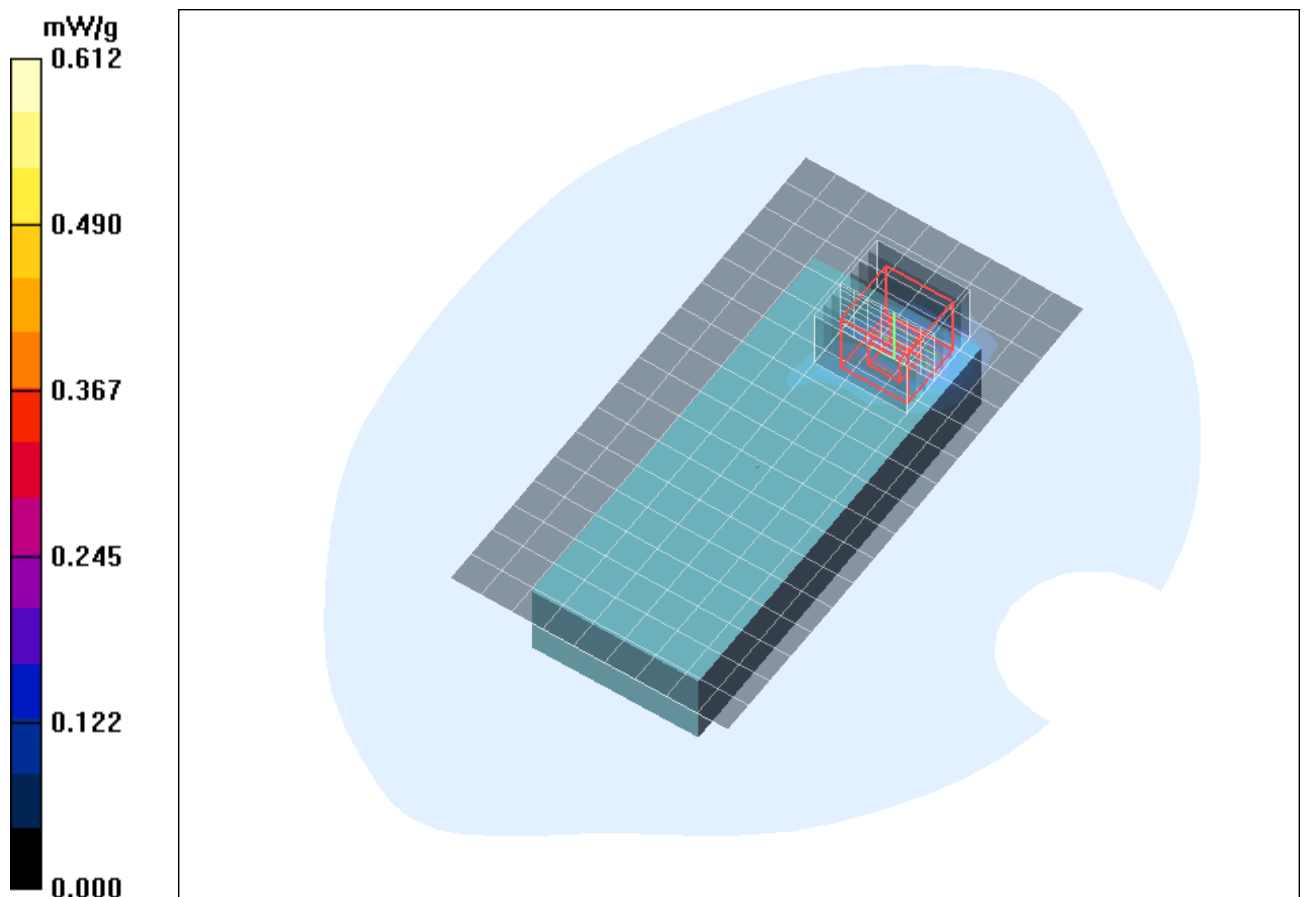


Fig. 24: SAR distribution for IEEE 802.11 a, channel 153, body worn configuration, display towards the phantom, 0 mm distance (September 03, 2010; Ambient Temperature: 20.9° C; Liquid Temperature: 20.6° C).

11 SAR Distribution Plots, IEEE 802.11 n Head (5200 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 1 CH60 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.86$ mho/m; $\epsilon_r = 34.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.96, 4.96, 4.96); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.406 mW/g

Cheek Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.29 V/m; Power Drift = 0.134 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.384 mW/g; SAR(10 g) = 0.114 mW/g

Maximum value of SAR (measured) = 0.475 mW/g

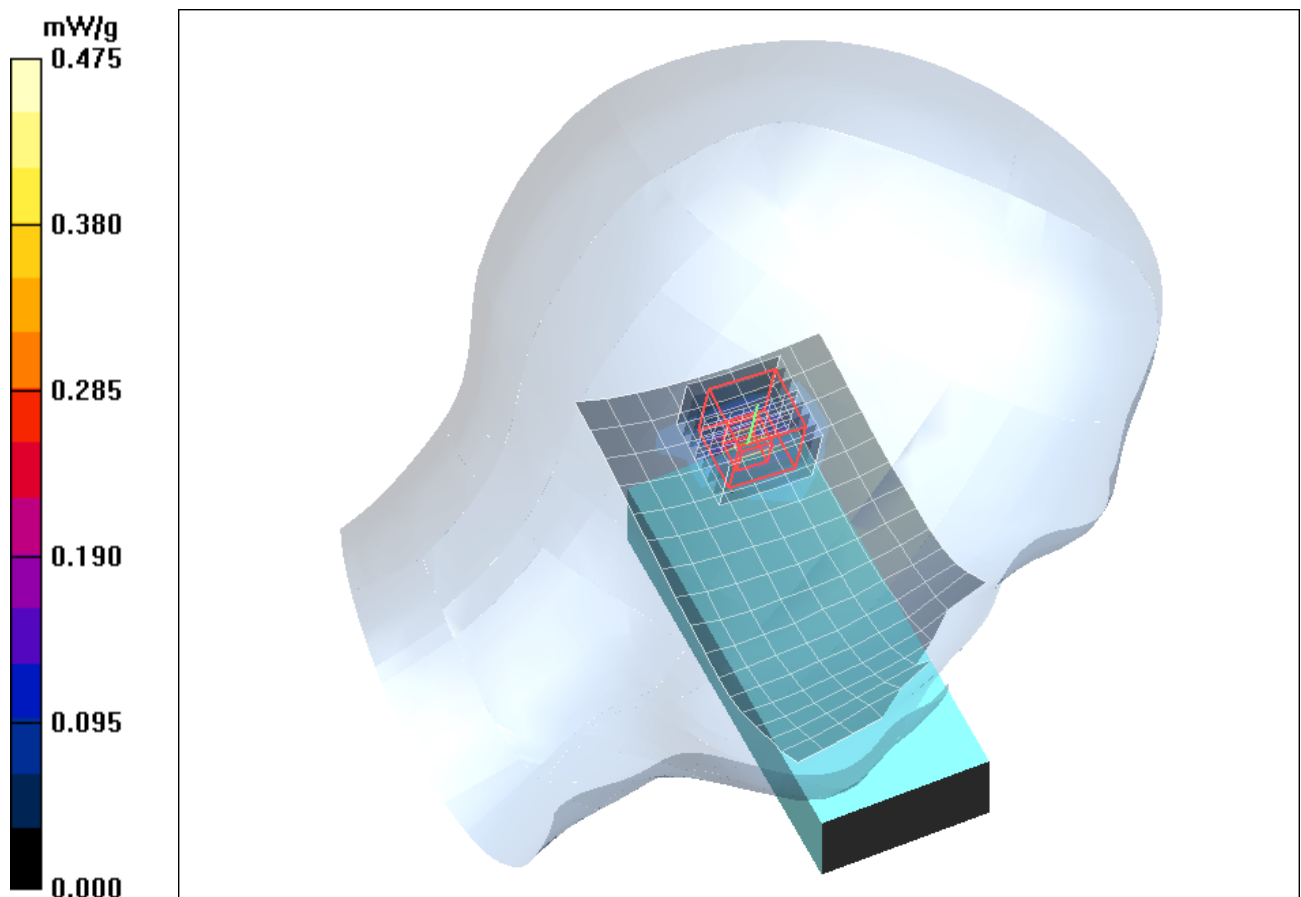


Fig. 25: SAR distribution for IEEE 802.11 n, channel 60, cheek position, left side of head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 2 CH60 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.86$ mho/m; $\epsilon_r = 34.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.96, 4.96, 4.96); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.414 mW/g

Tilted Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.18 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.413 mW/g; SAR(10 g) = 0.127 mW/g

Maximum value of SAR (measured) = 0.505 mW/g

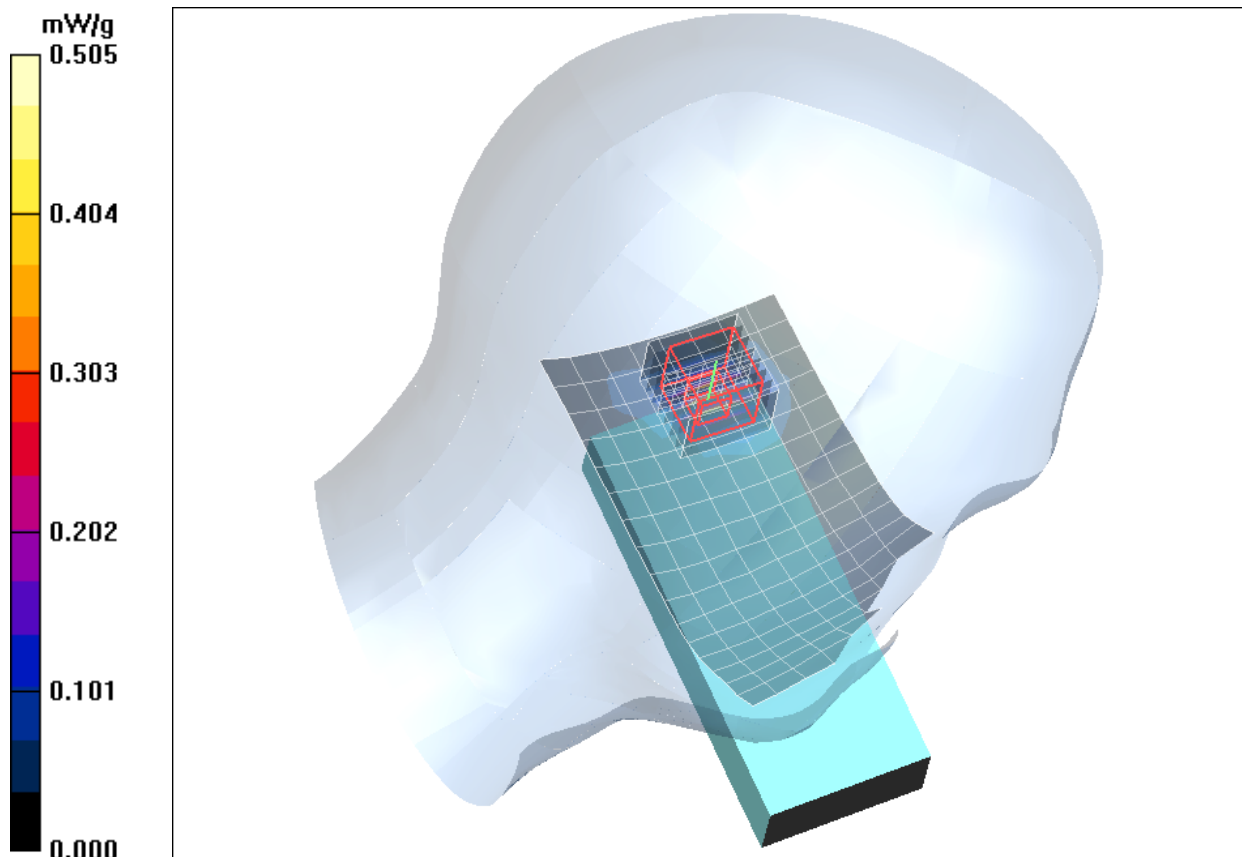


Fig. 26: SAR distribution for IEEE 802.11 n, channel 60, tilted position, left side of head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 1 CH60 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5300 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.86$ mho/m; $\epsilon_r = 34.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.96, 4.96, 4.96); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.447 mW/g

Cheek Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 9.93 V/m; Power Drift = -0.092 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.129 mW/g

Maximum value of SAR (measured) = 0.464 mW/g

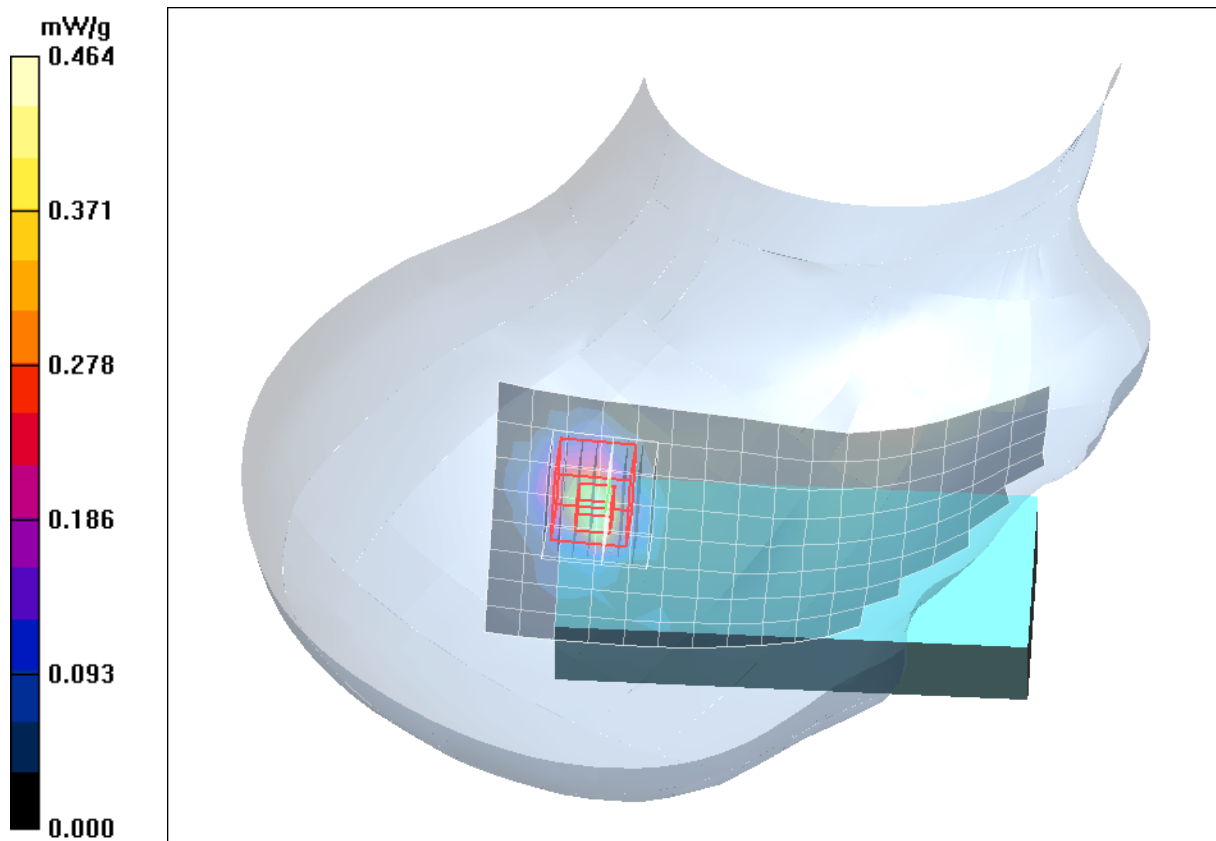


Fig. 27: SAR distribution for IEEE 802.11 n, channel 60, cheek position, right side of head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH60 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5300 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.86$ mho/m; $\epsilon_r = 34.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.96, 4.96, 4.96); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.573 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 10.7 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.473 mW/g; SAR(10 g) = 0.156 mW/g

Maximum value of SAR (measured) = 0.541 mW/g

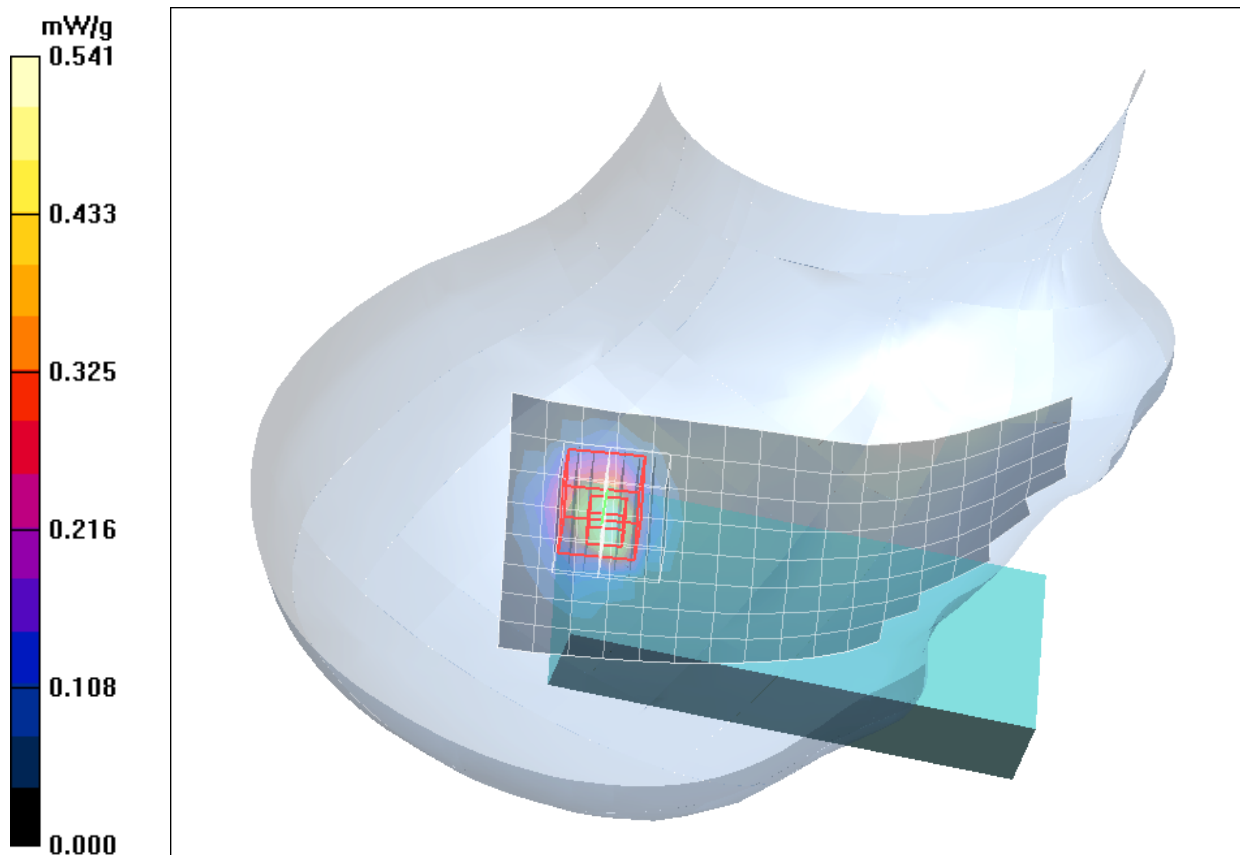


Fig. 28: SAR distribution for IEEE 802.11 n, channel 60, tilted position, right side of head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

12 SAR Distribution Plots, IEEE 802.11 n Body (5200 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwhm 1 CH60 n hs up.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.29$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.37, 4.37, 4.37); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.350 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 8.33 V/m; Power Drift = 0.108 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.313 mW/g; SAR(10 g) = 0.083 mW/g

Maximum value of SAR (measured) = 0.410 mW/g

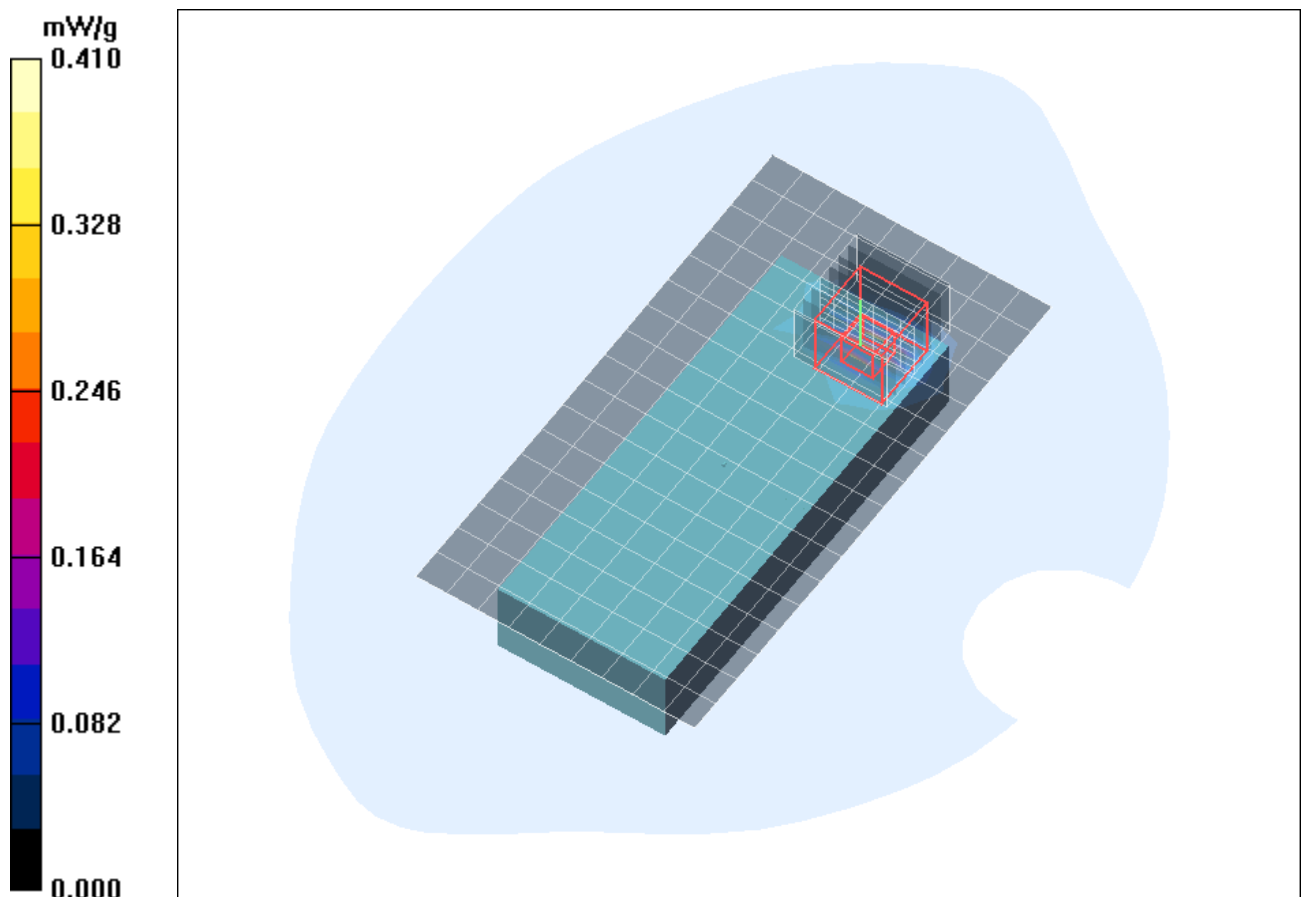


Fig. 29: SAR distribution for IEEE 802.11 n, channel 60, body worn configuration, display towards the phantom, 0 mm distance (September 07, 2010; Ambient Temperature: 21.3° C; Liquid Temperature: 20.9° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwhm 2 CH60 n hs down.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5300$ MHz; $\sigma = 5.29$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.37, 4.37, 4.37); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.016 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 1.62 V/m; Power Drift = 0.119 dB

Peak SAR (extrapolated) = 0.121 W/kg

SAR(1 g) = 0.00801 mW/g; SAR(10 g) = 0.00083 mW/g

Maximum value of SAR (measured) = 0.024 mW/g

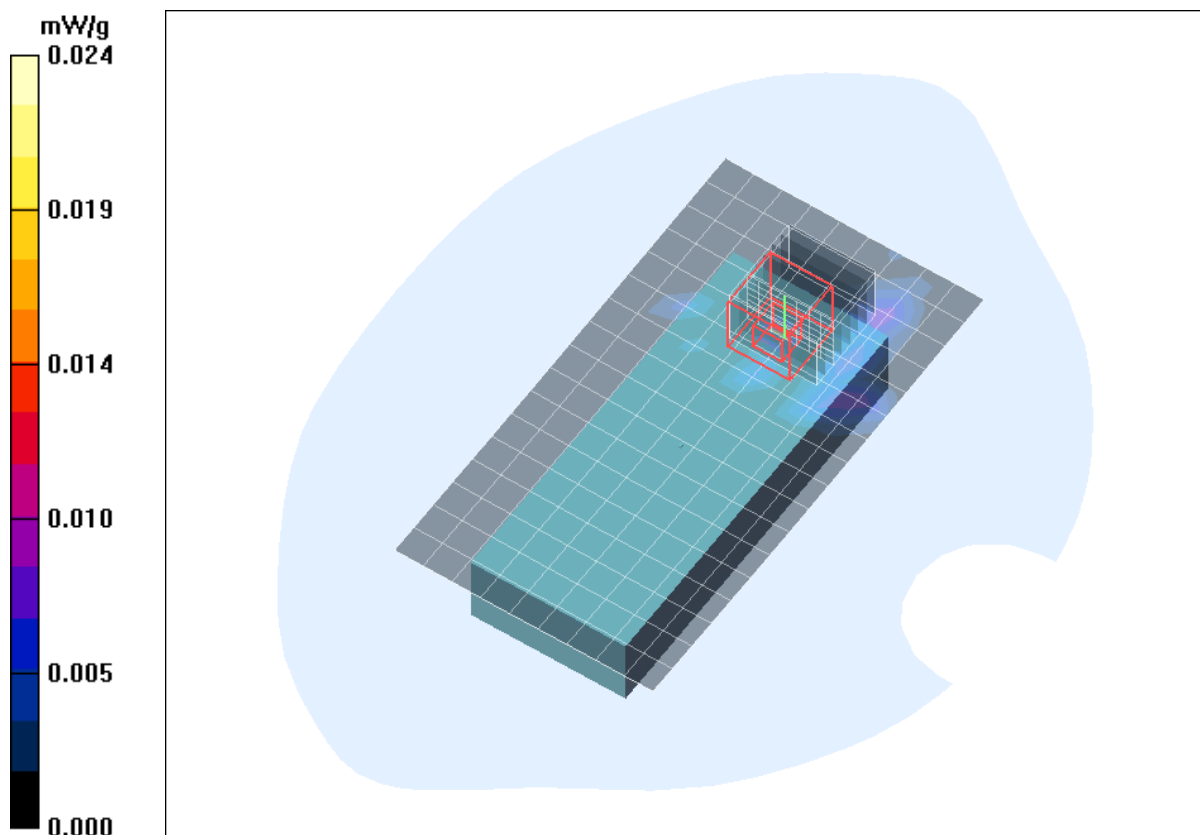


Fig. 30: SAR distribution for IEEE 802.11 n, channel 60, body worn configuration, display towards the ground, 0 mm distance (September 07, 2010; Ambient Temperature: 21.3° C; Liquid Temperature: 20.9° C).

13 SAR Distribution Plots, IEEE 802.11 n Head (5500 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 1 CH104 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.13$ mho/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.03 mW/g

Cheek Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 13.4 V/m; Power Drift = -0.093 dB

Peak SAR (extrapolated) = 2.55 W/kg

SAR(1 g) = 0.789 mW/g; SAR(10 g) = 0.248 mW/g

Maximum value of SAR (measured) = 0.889 mW/g

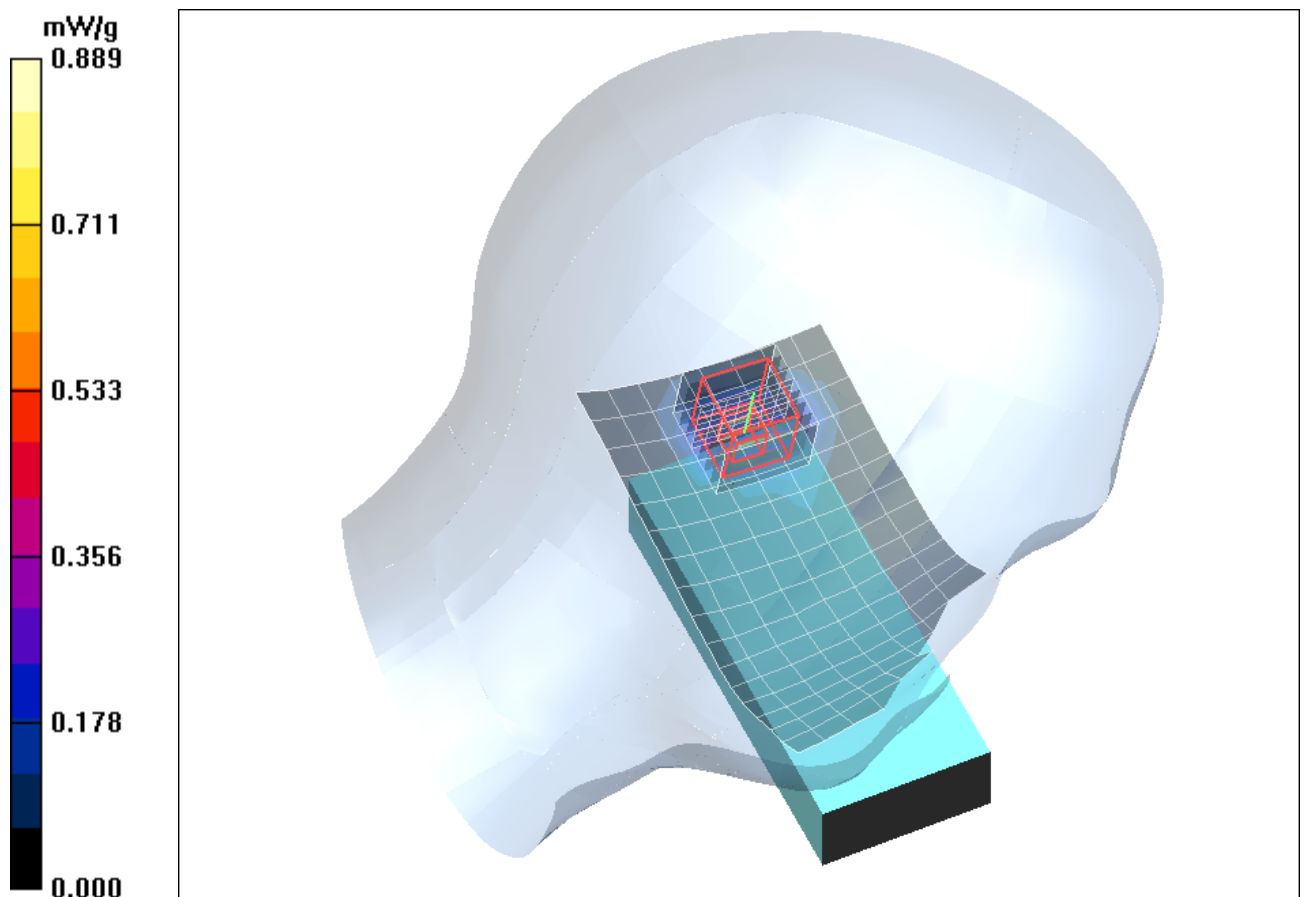


Fig. 31: SAR distribution for IEEE 802.11 n, channel 104, cheek position, left side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 2 CH104 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.13$ mho/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.797 mW/g

Tilted Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 12.5 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 2.67 W/kg

SAR(1 g) = 0.820 mW/g; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 0.960 mW/g

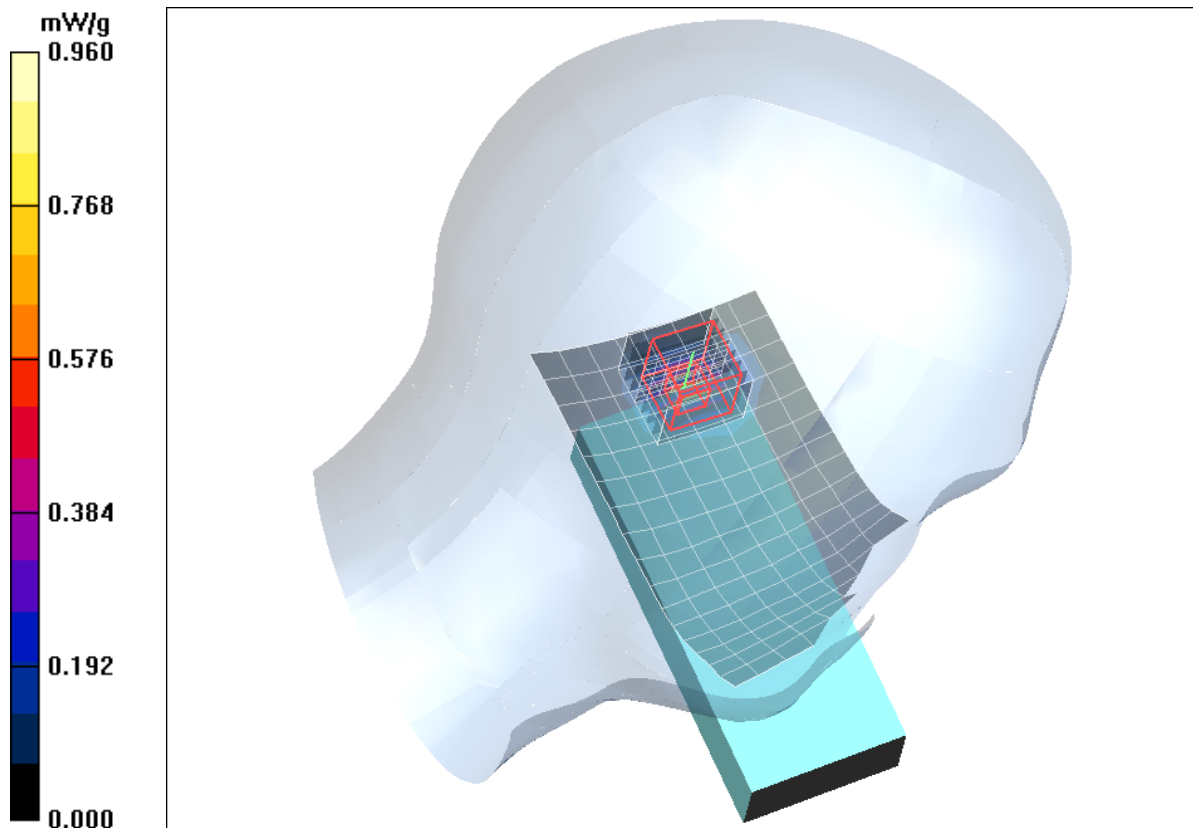


Fig. 32: SAR distribution for IEEE 802.11 n, channel 104, tilted position, left side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 1 CH104 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5520 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.13$ mho/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.861 mW/g

Cheek Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 13.2 V/m; Power Drift = 0.077 dB

Peak SAR (extrapolated) = 2.42 W/kg

SAR(1 g) = 0.740 mW/g; SAR(10 g) = 0.238 mW/g

Maximum value of SAR (measured) = 0.828 mW/g

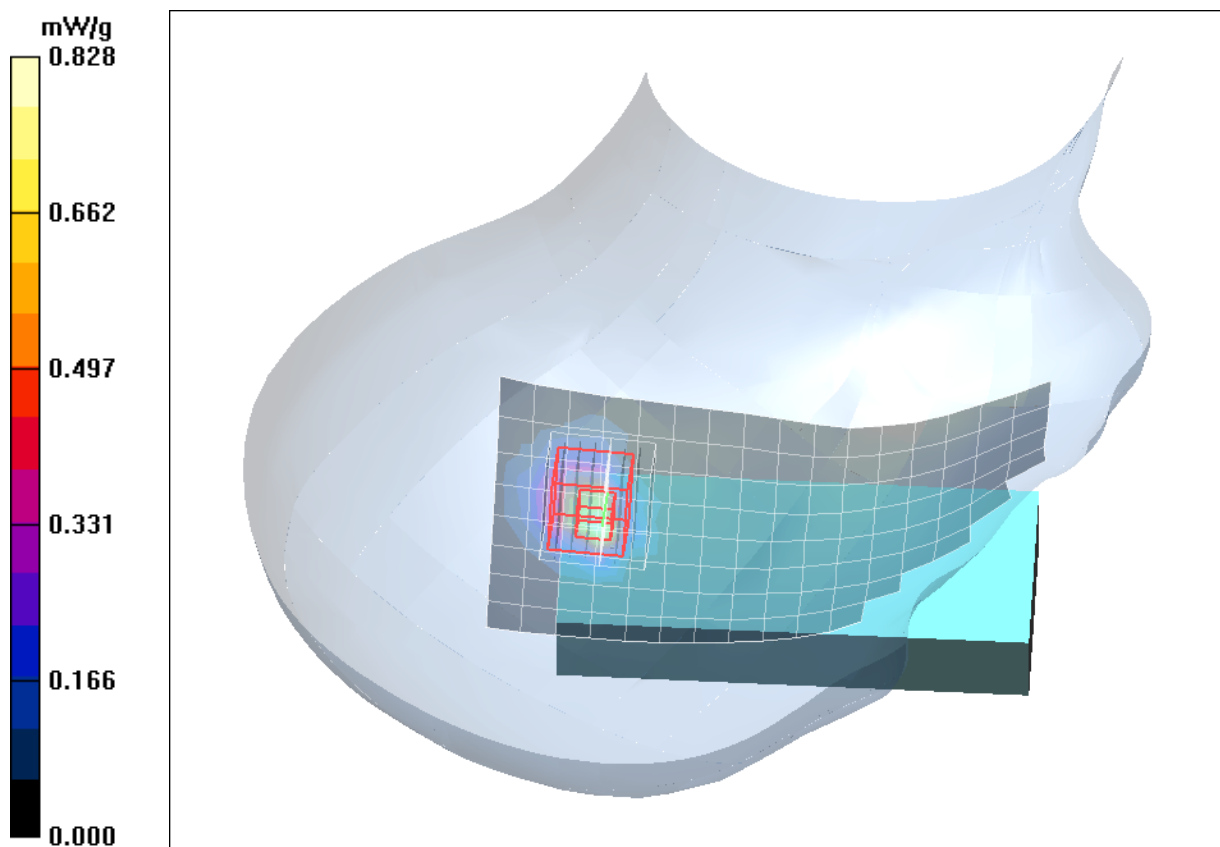


Fig. 33: SAR distribution for IEEE 802.11 n, channel 104, cheek position, right side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH104 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.13$ mho/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.913 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 13.5 V/m; Power Drift = 0.055 dB

Peak SAR (extrapolated) = 4.55 W/kg

SAR(1 g) = 0.884 mW/g; SAR(10 g) = 0.280 mW/g

Maximum value of SAR (measured) = 0.959 mW/g

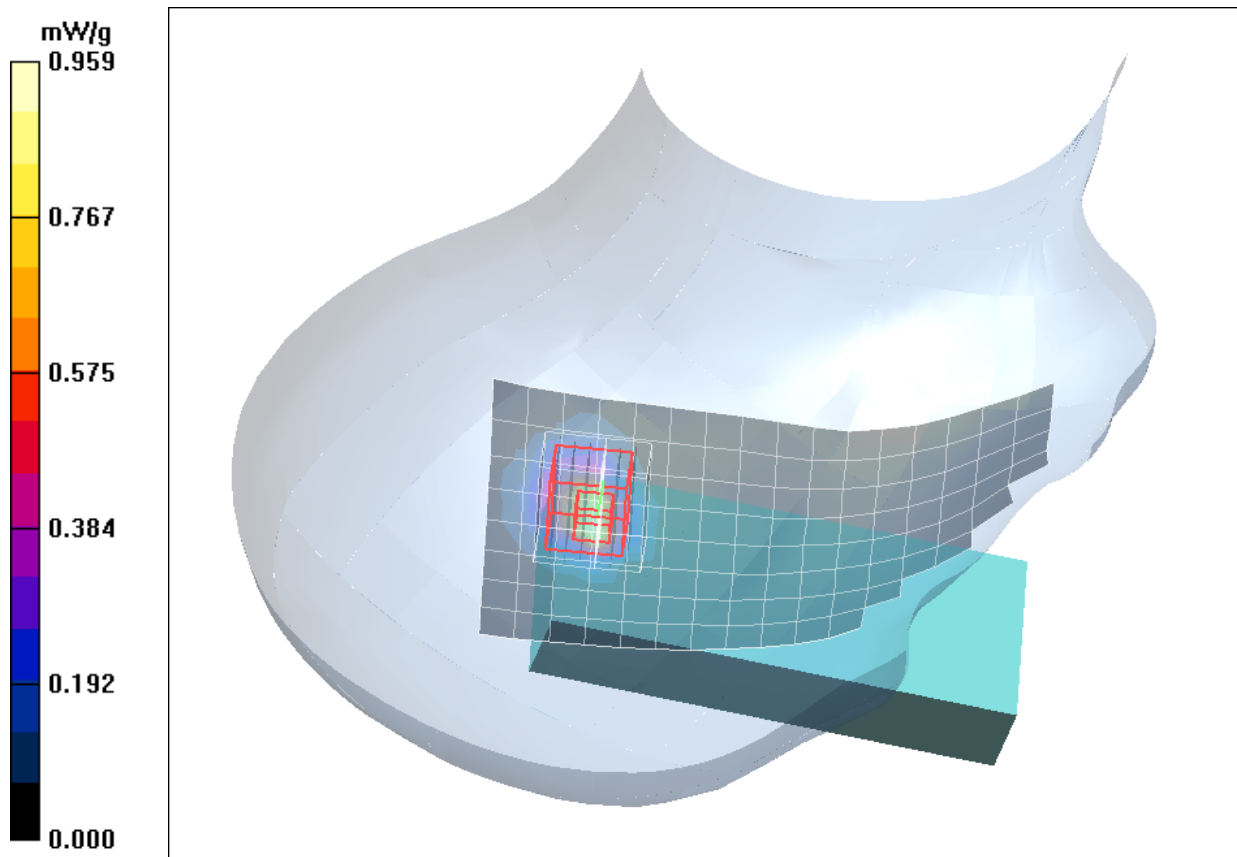


Fig. 34: SAR distribution for IEEE 802.11 n, channel 104, tilted position, right side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH116 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.2$ mho/m; $\epsilon_r = 34.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.07 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 14.4 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 2.93 W/kg

SAR(1 g) = 0.890 mW/g; SAR(10 g) = 0.283 mW/g

Maximum value of SAR (measured) = 1.01 mW/g

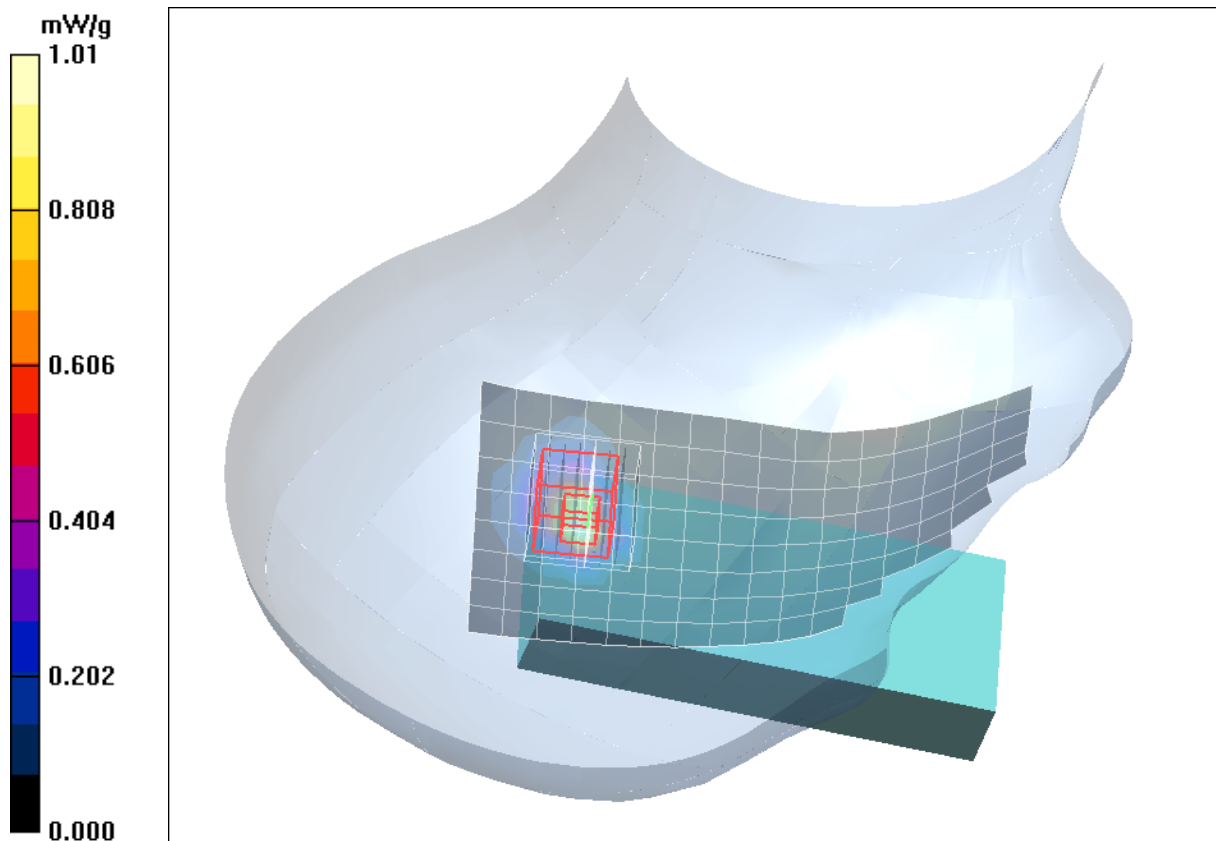


Fig. 35: SAR distribution for IEEE 802.11 n, channel 116, tilted position, right side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH124 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5620 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5620$ MHz; $\sigma = 5.27$ mho/m; $\epsilon_r = 34.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.26 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 15.1 V/m; Power Drift = -0.143 dB

Peak SAR (extrapolated) = 3.77 W/kg

SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.316 mW/g

Maximum value of SAR (measured) = 1.13 mW/g

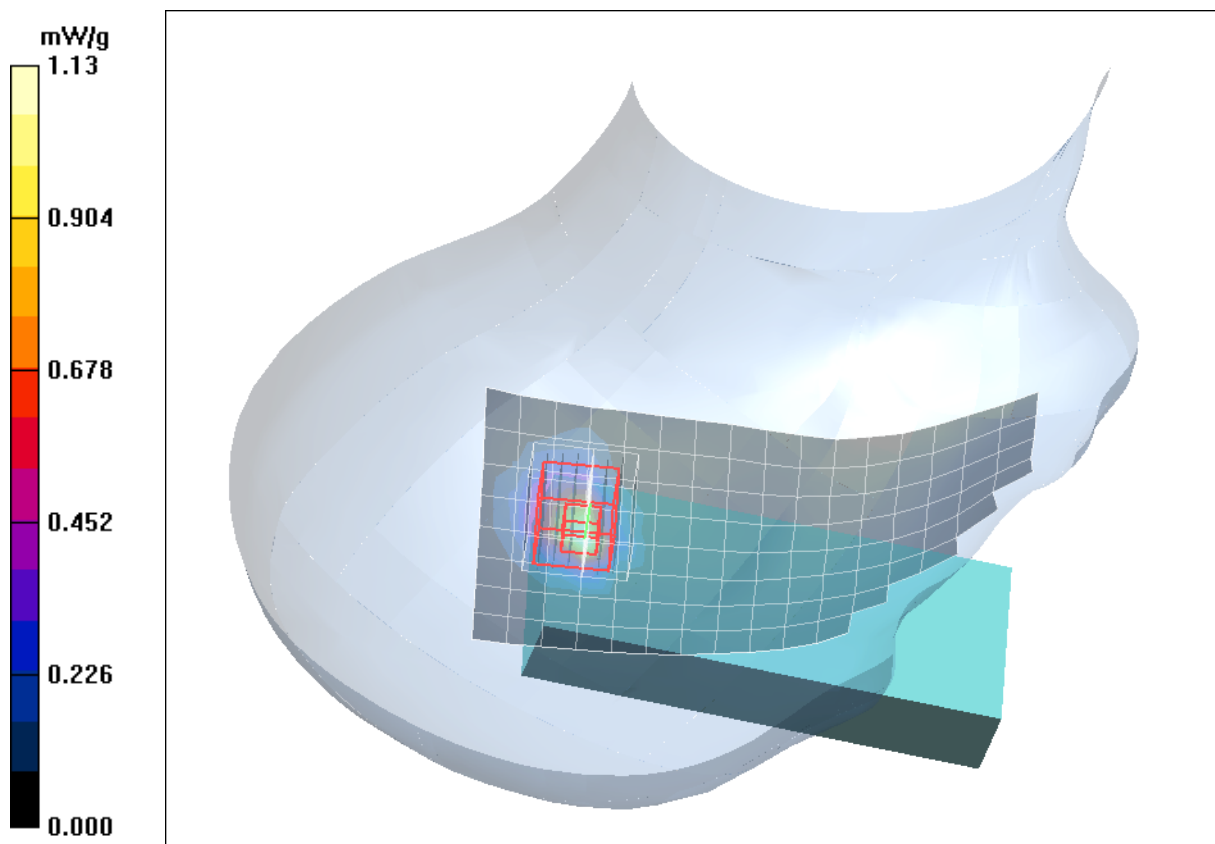


Fig. 36: SAR distribution for IEEE 802.11 n, channel 104, tilted position, right side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH136 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5680 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5680$ MHz; $\sigma = 5.33$ mho/m; $\epsilon_r = 34$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.93, 4.93, 4.93); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.829 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 12.9 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 2.55 W/kg

SAR(1 g) = 0.756 mW/g; SAR(10 g) = 0.235 mW/g

Maximum value of SAR (measured) = 0.880 mW/g

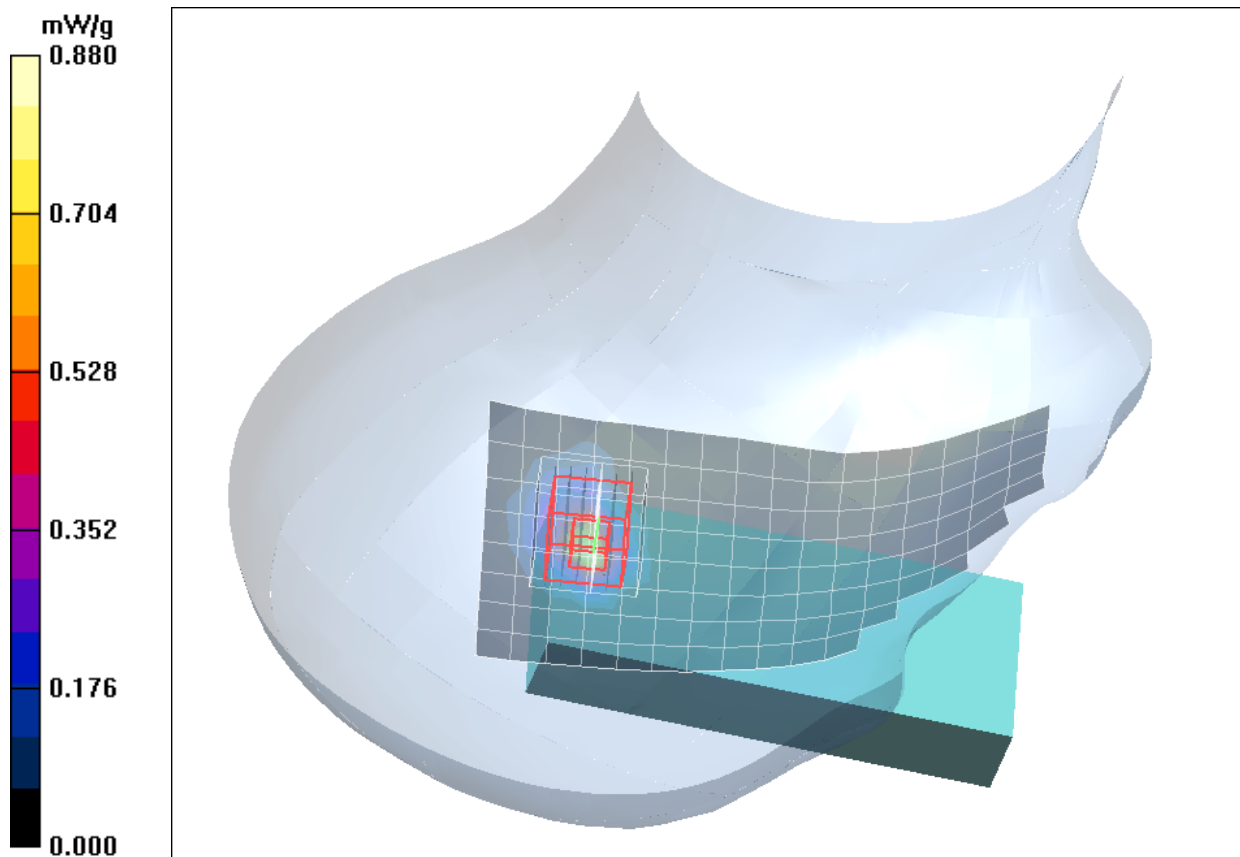


Fig. 37: SAR distribution for IEEE 802.11 n, channel 136, tilted position, right side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

14 SAR Distribution Plots, IEEE 802.11 n Body (5500 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA_bwhm_1_CH104_n_hs_up.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.79$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.22, 4.22, 4.22); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.835 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 11.9 V/m; Power Drift = -0.118 dB

Peak SAR (extrapolated) = 2.36 W/kg

SAR(1 g) = 0.689 mW/g; SAR(10 g) = 0.188 mW/g

Maximum value of SAR (measured) = 0.822 mW/g

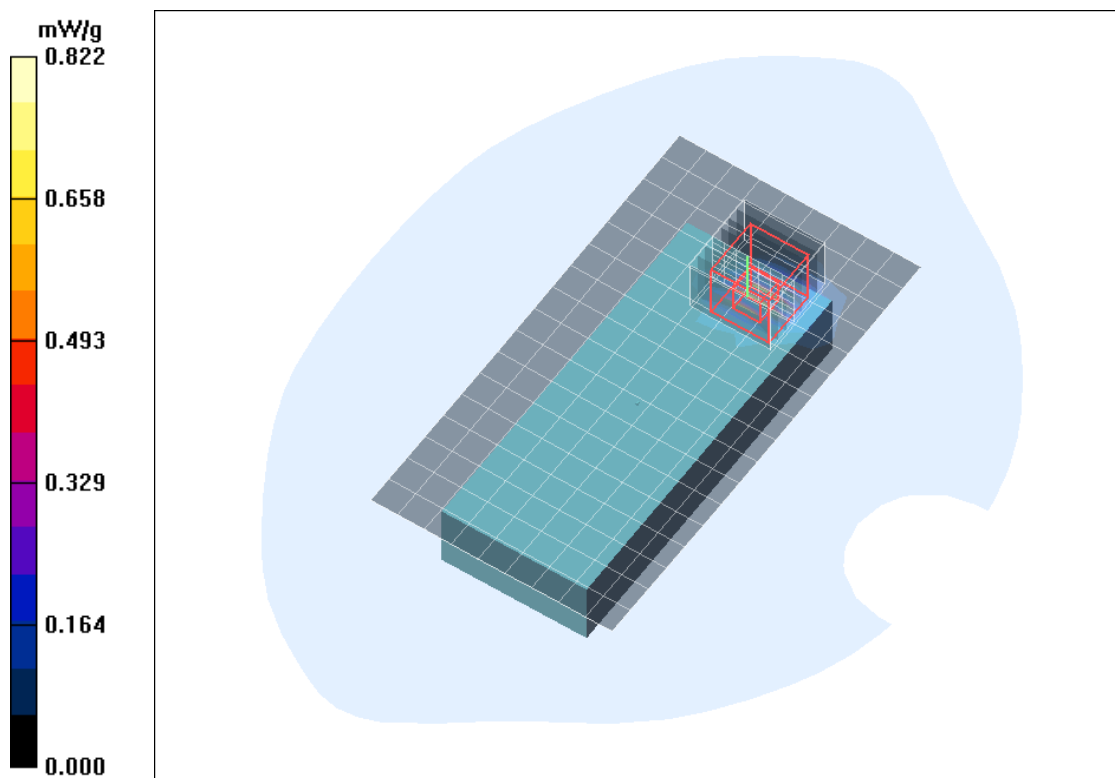


Fig. 38: SAR distribution for IEEE 802.11 n, channel 104, body worn configuration, display towards the phantom, 0 mm distance (September 06, 2010; Ambient Temperature: 21.3° C; Liquid Temperature: 20.8° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwhm 2 CH104 n hs down.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5520 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.79$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.22, 4.22, 4.22); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.018 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 1.64 V/m; Power Drift = 0.154 dB

Peak SAR (extrapolated) = 0.234 W/kg

SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00212 mW/g

Maximum value of SAR (measured) = 0.038 mW/g

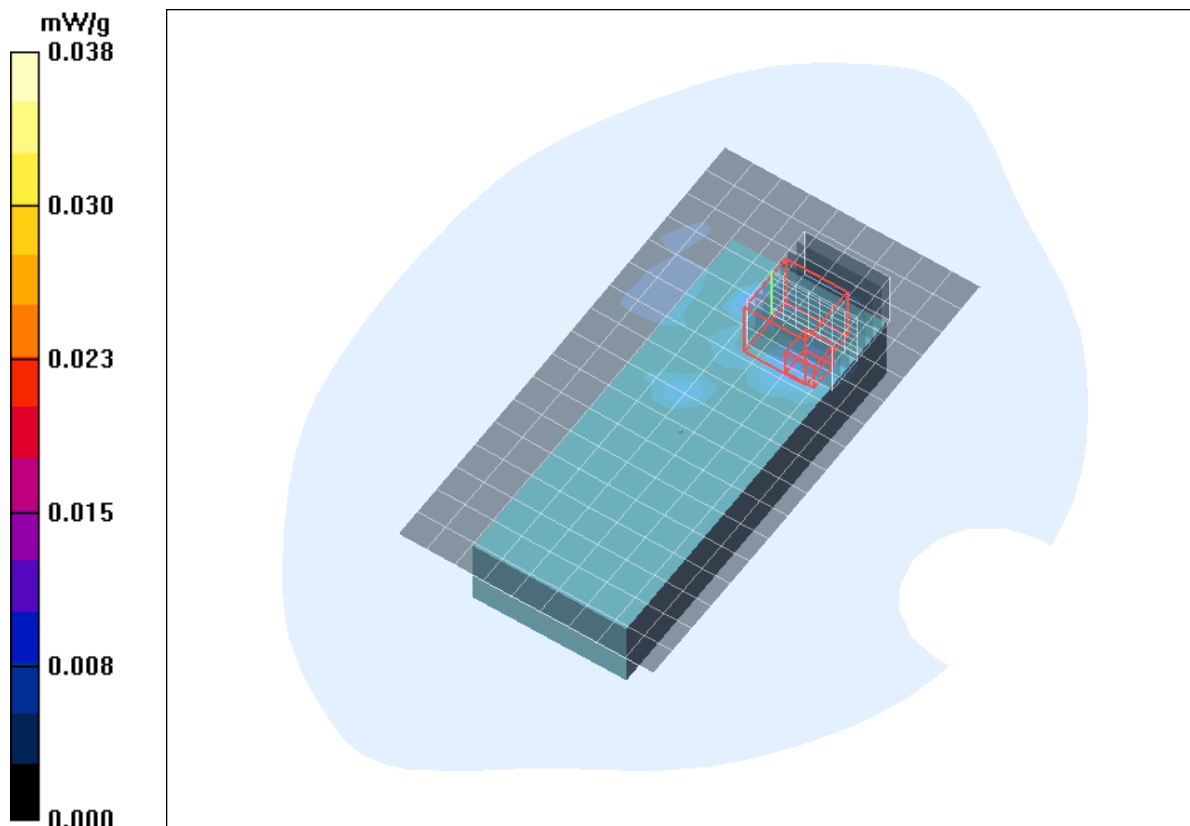


Fig. 39: SAR distribution for IEEE 802.11 n, channel 104, body worn configuration, display towards the ground, 0 mm distance (September 06, 2010; Ambient Temperature: 21.3° C; Liquid Temperature: 20.8° C).

15 SAR Distribution Plots, IEEE 802.11 n Head (5800 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 1 CH153 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 33.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.63, 4.63, 4.63); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.919 mW/g

Cheek Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 12.3 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 2.15 W/kg

SAR(1 g) = 0.644 mW/g; SAR(10 g) = 0.205 mW/g

Maximum value of SAR (measured) = 0.709 mW/g

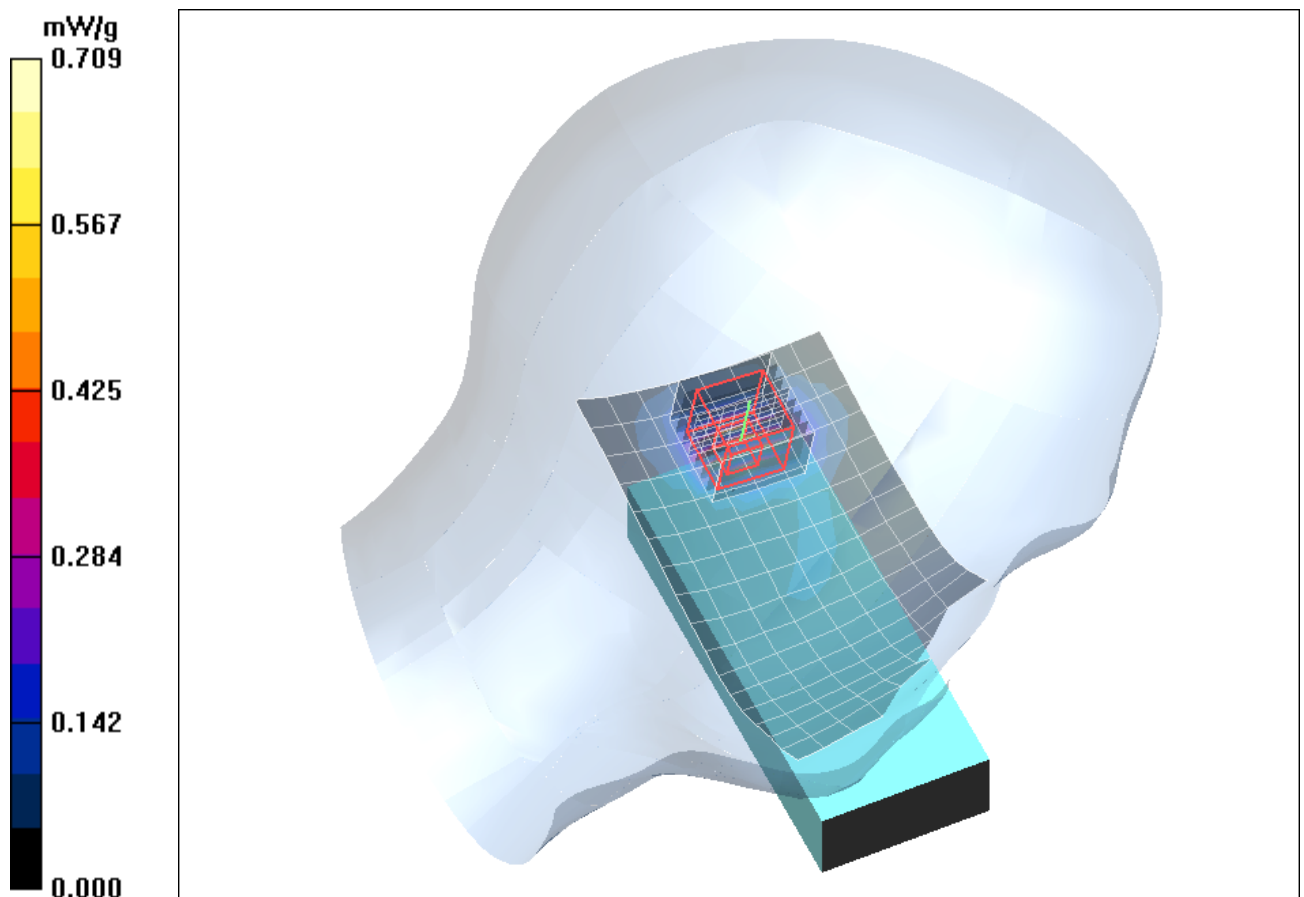


Fig. 40: SAR distribution for IEEE 802.11 n, channel 153, cheek position, left side of head (August 18, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwlm 2 CH153 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 33.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.63, 4.63, 4.63); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Left/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.802 mW/g

Tilted Left/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 12.1 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 2.36 W/kg

SAR(1 g) = 0.707 mW/g; SAR(10 g) = 0.220 mW/g

Maximum value of SAR (measured) = 0.799 mW/g

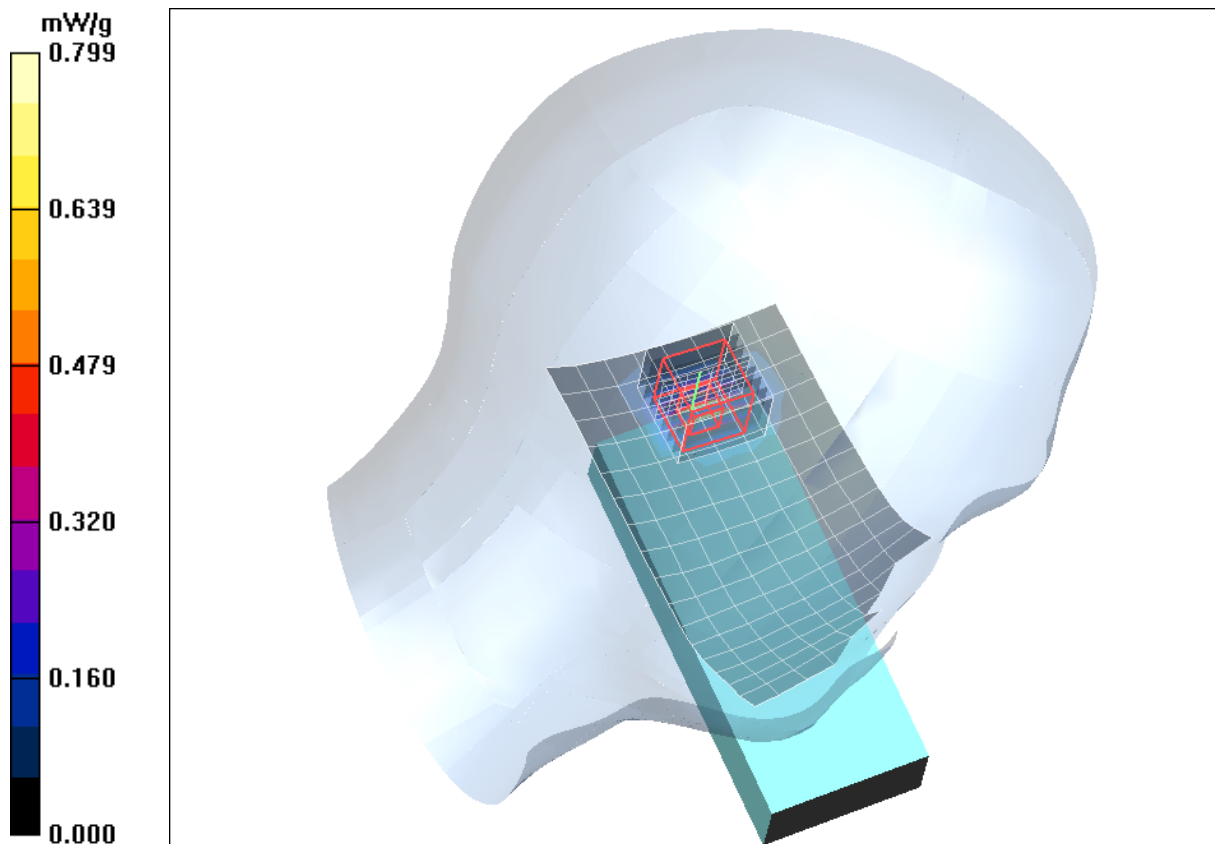


Fig. 41: SAR distribution for IEEE 802.11 n, channel 153 tilted position, left side of head (August 18, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 1 CH153 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 33.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.63, 4.63, 4.63); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.705 mW/g

Cheek Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 12.0 V/m; Power Drift = 0.058 dB

Peak SAR (extrapolated) = 2.14 W/kg

SAR(1 g) = 0.636 mW/g; SAR(10 g) = 0.198 mW/g

Maximum value of SAR (measured) = 0.731 mW/g

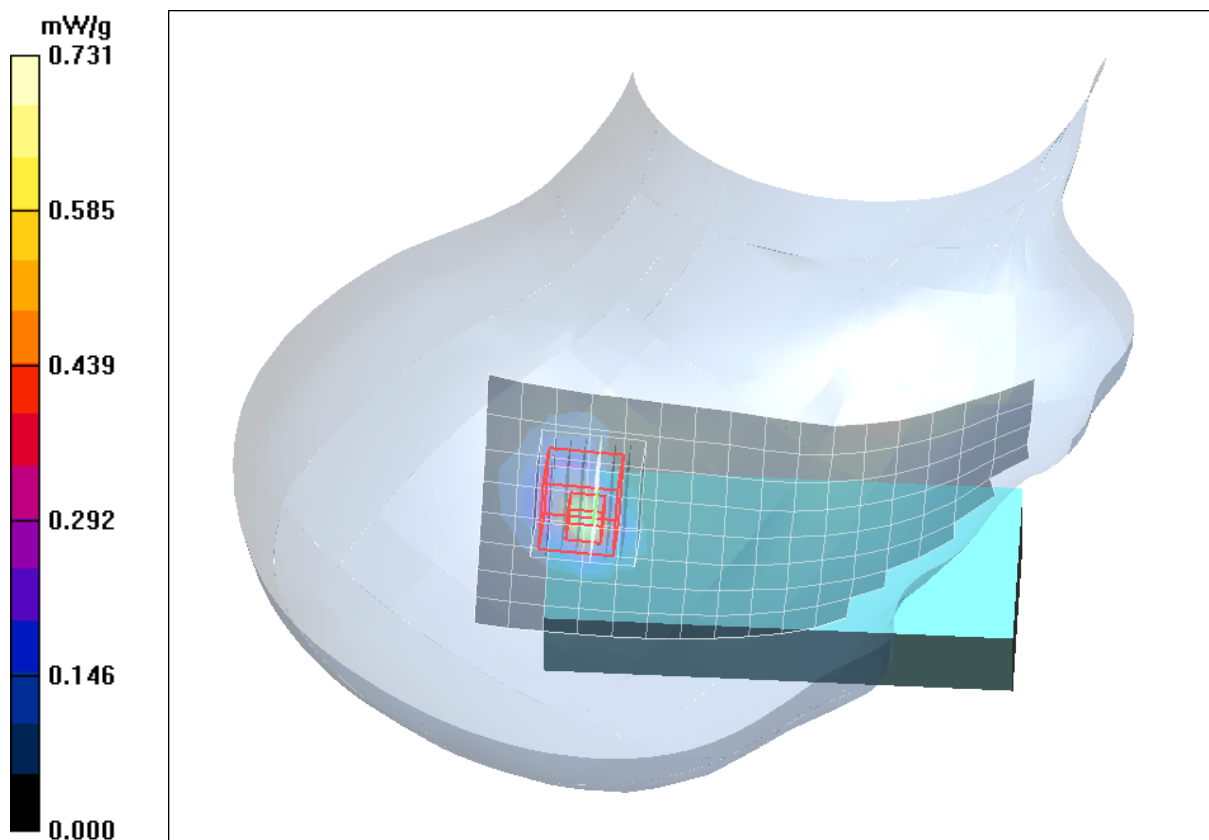


Fig. 42: SAR distribution for IEEE 802.11 n, channel 153, cheek position, right side of head (August 18, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwrn 2 CH153 n cw.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 33.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.63, 4.63, 4.63); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilted Right/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.894 mW/g

Tilted Right/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 13.1 V/m; Power Drift = 0.096 dB

Peak SAR (extrapolated) = 2.54 W/kg

SAR(1 g) = 0.753 mW/g; SAR(10 g) = 0.236 mW/g

Maximum value of SAR (measured) = 0.860 mW/g

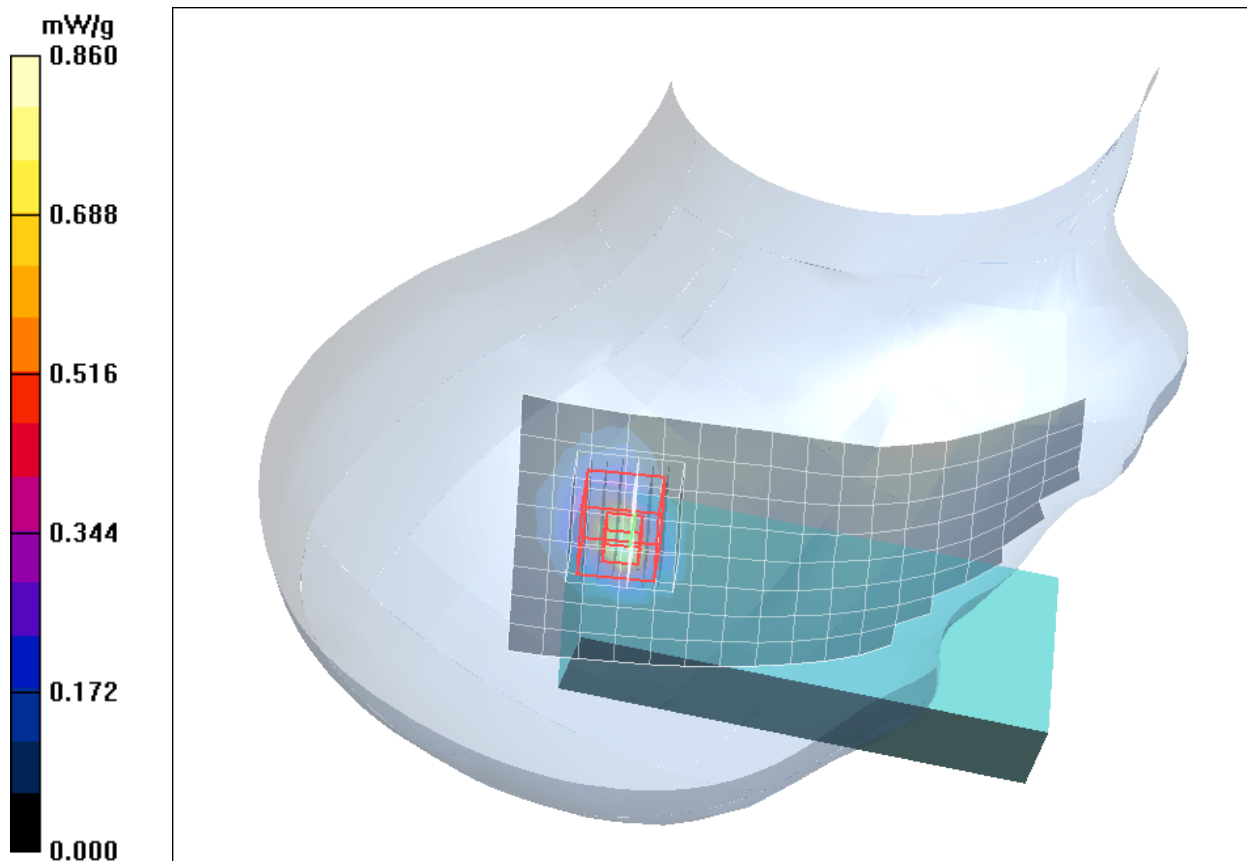


Fig. 43: SAR distribution for IEEE 802.11 n, channel 153, tilted position, right side of head (August 18, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

16 SAR Distribution Plots, IEEE 802.11 n Body (5800 MHz Range)

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwhm 1 CH153 n hs up.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 6.14$ mho/m; $\epsilon_r = 47.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.2, 4.2, 4.2); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.624 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 10.4 V/m; Power Drift = 0.073 dB

Peak SAR (extrapolated) = 2.09 W/kg

SAR(1 g) = 0.601 mW/g; SAR(10 g) = 0.169 mW/g

Maximum value of SAR (measured) = 0.689 mW/g

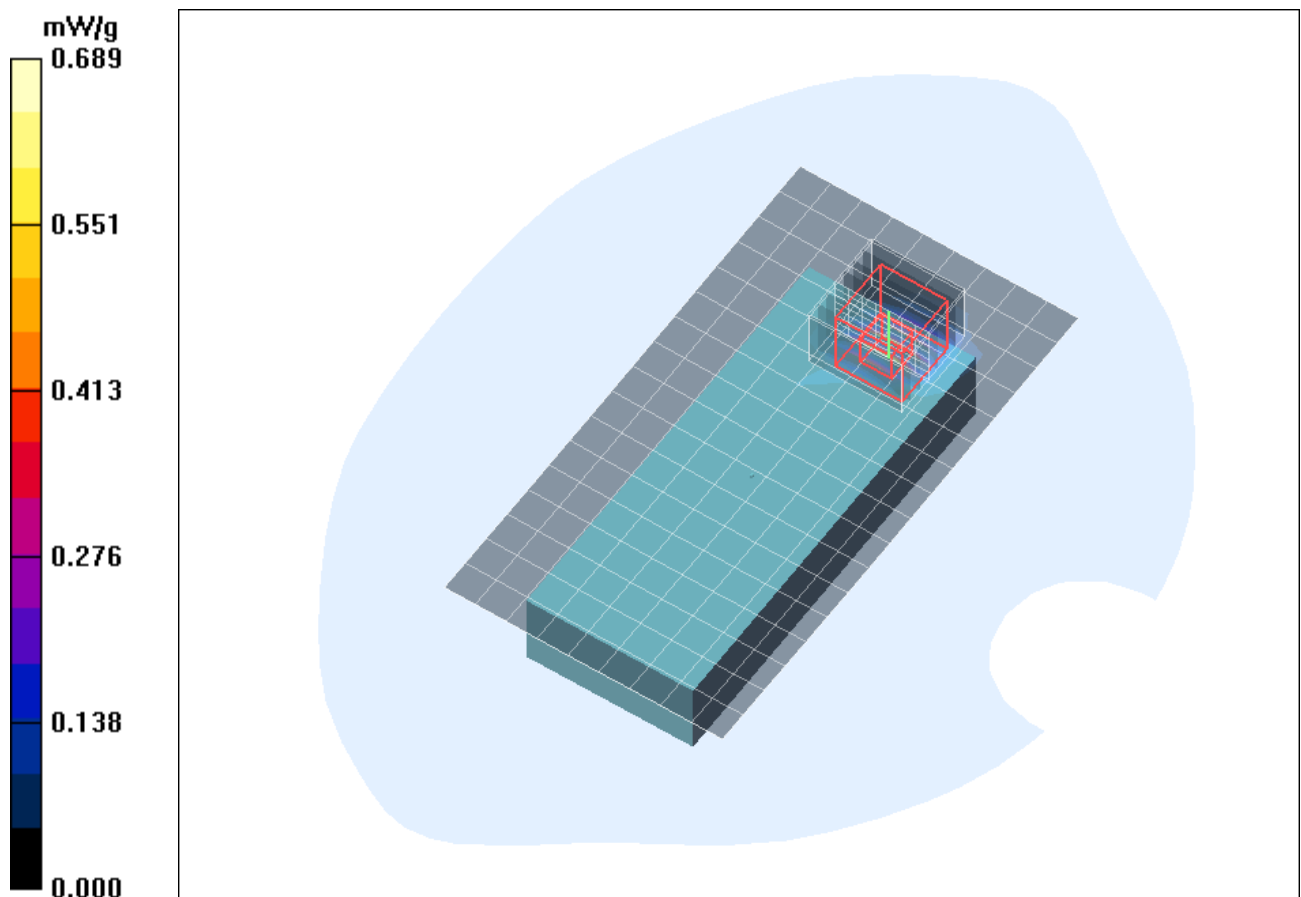


Fig. 44: SAR distribution for IEEE 802.11 n, channel 153, body worn configuration, display towards the phantom, 0 mm distance (September 03, 2010; Ambient Temperature: 20.9° C; Liquid Temperature: 20.6° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [AAAA bwhm 2 CH153 n hs down.da4](#)

DUT: ASCOM; Type: WH1-AAAA;

Program Name: IEEE 802.11 n

Communication System: 5 GHz ; Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765$ MHz; $\sigma = 6.14$ mho/m; $\epsilon_r = 47.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(4.2, 4.2, 4.2); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (10x18x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.017 mW/g

Body Worn/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 1.82 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 0.030 W/kg

SAR(1 g) = 0.00163 mW/g; SAR(10 g) = 0.000164 mW/g

Maximum value of SAR (measured) = 0.014 mW/g

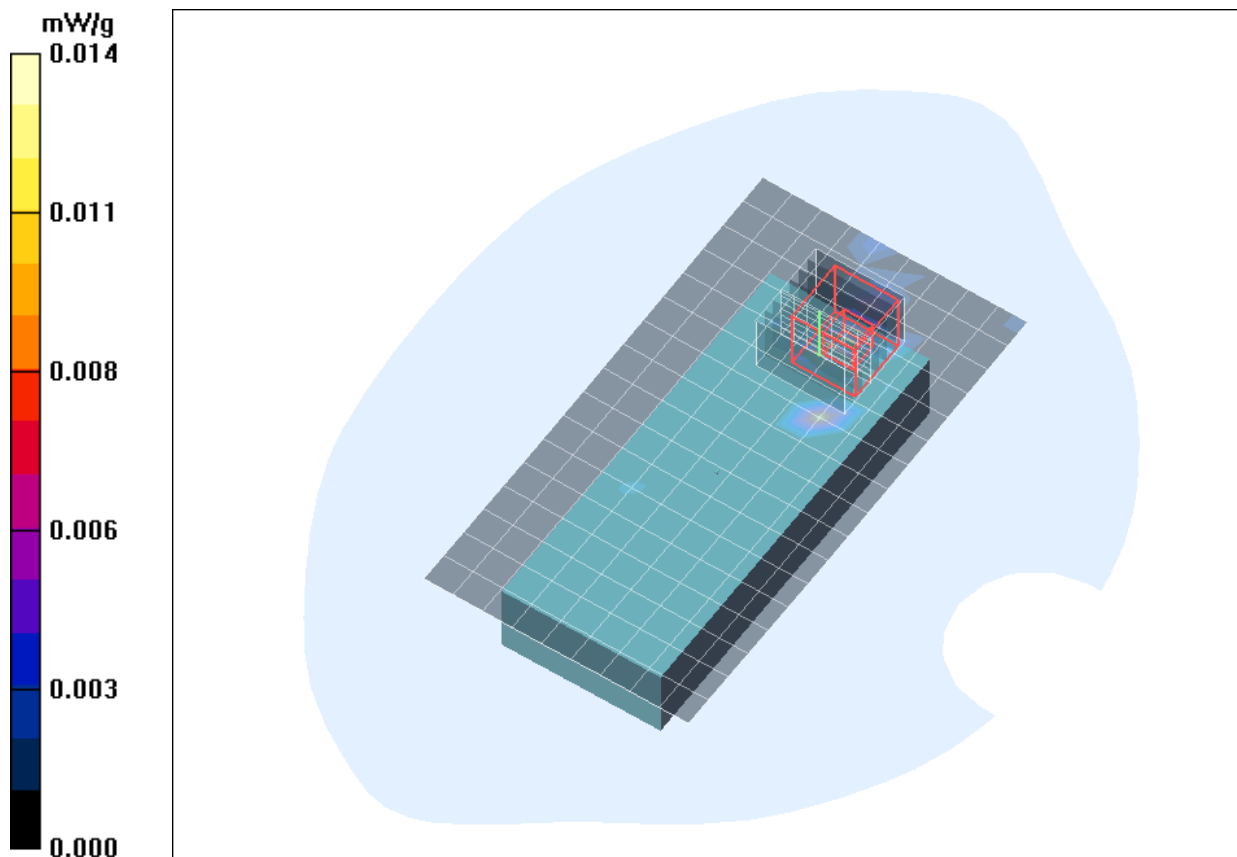


Fig. 45: SAR distribution for IEEE 802.11 n, channel 153, body worn configuration, display towards the ground, 0 mm distance (September 03, 2010; Ambient Temperature: 20.9° C; Liquid Temperature: 20.6° C).

17 SAR Z-axis Scans (Validation)

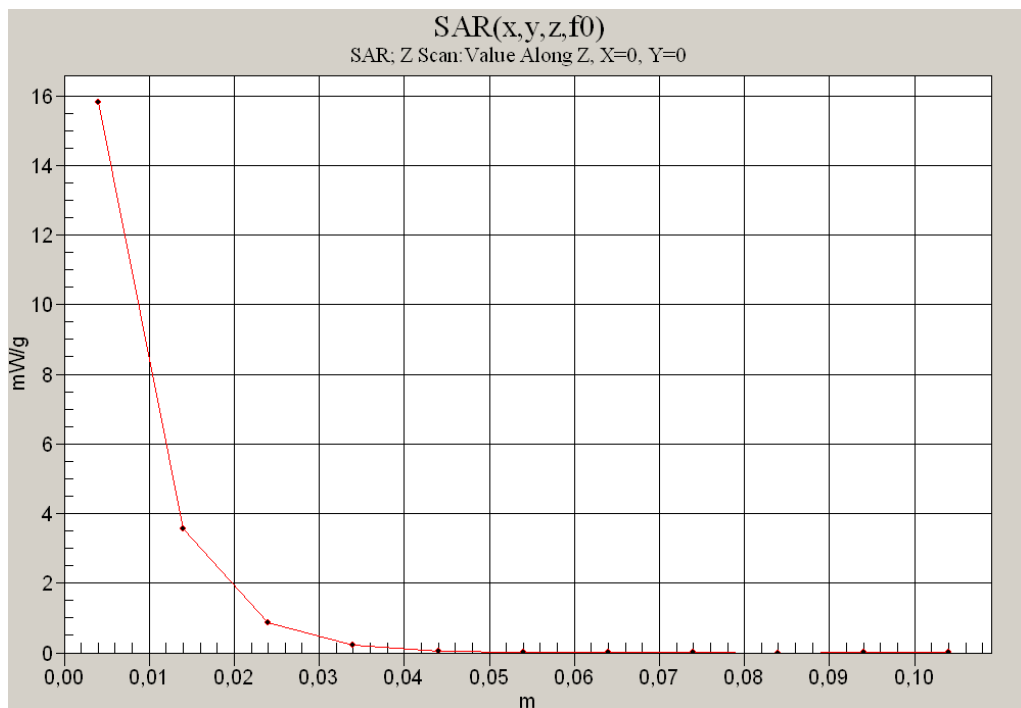


Fig. 46: SAR versus liquid depth, 2450 MHz, head (August 26, 2010; Ambient Temperature: 22.2° C; Liquid Temperature: 21.8° C).

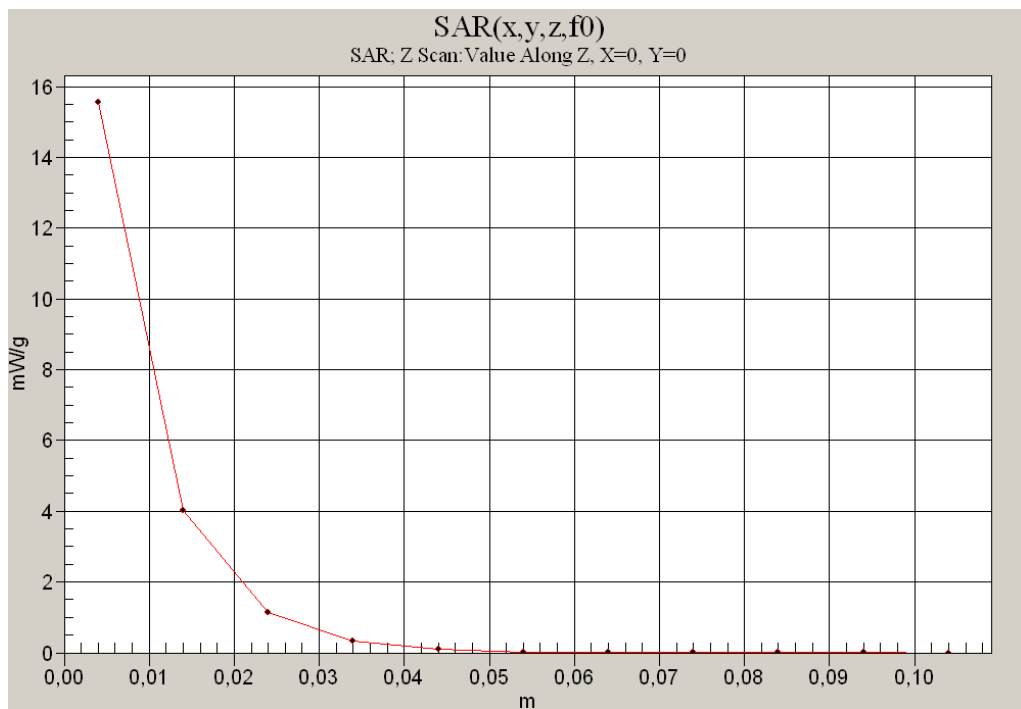


Fig. 47: SAR versus liquid depth, 2450 MHz, body (August 30, 2010; Ambient Temperature: 21.7° C; Liquid Temperature: 21.3° C).

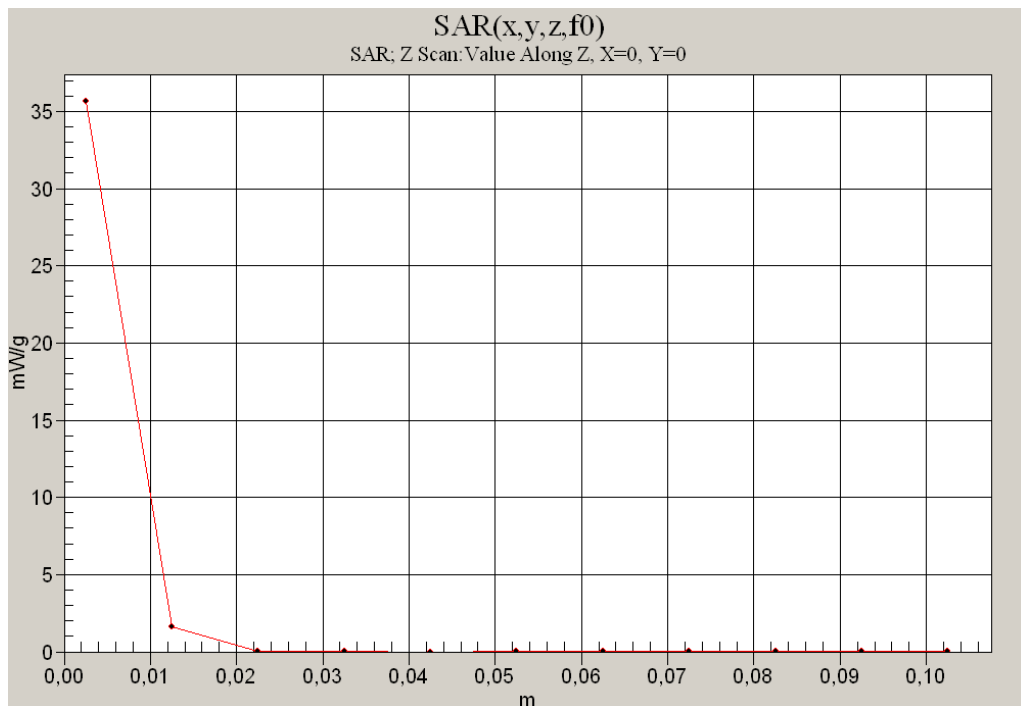


Fig. 48: SAR versus liquid depth, 5200 MHz, head (August 12, 2010; Ambient Temperature: 22.4° C; Liquid Temperature: 21.6° C).

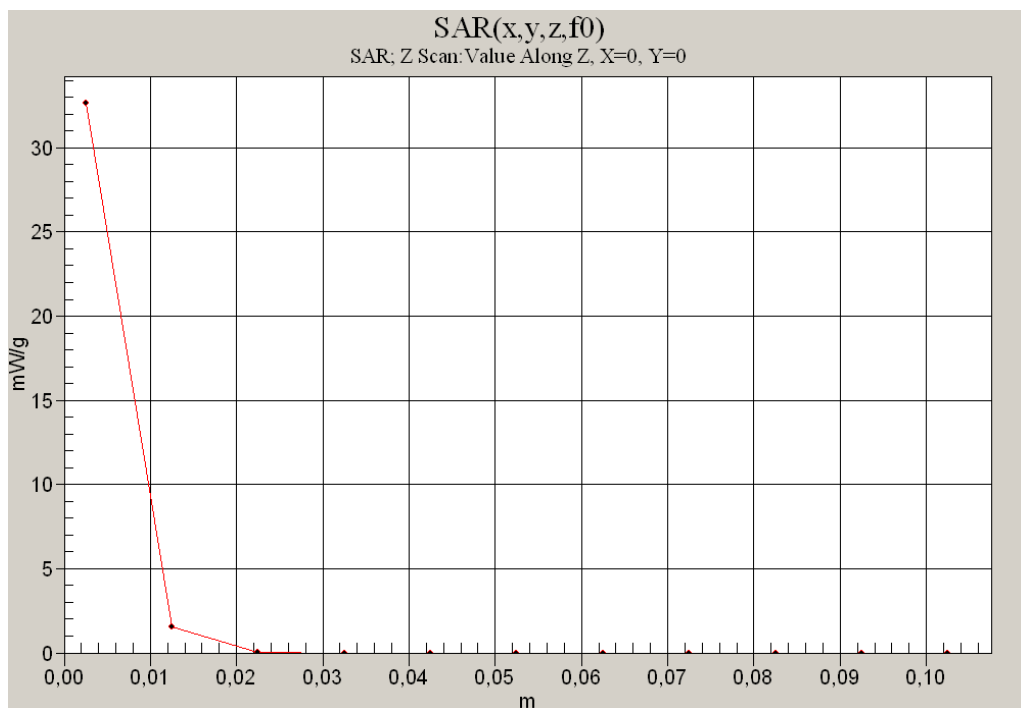


Fig. 49: SAR versus liquid depth, 5200 MHz, body (September 07, 2010; Ambient Temperature: 21.5° C; Liquid Temperature: 20.9° C).

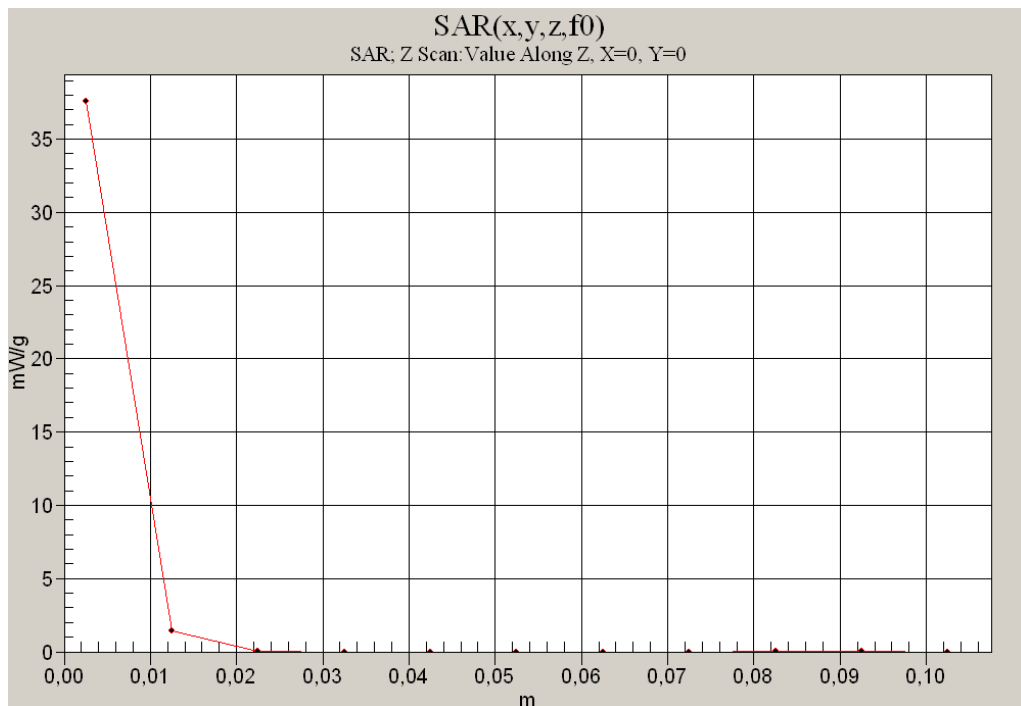


Fig. 50: SAR versus liquid depth, 5500 MHz, head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature: 21.5° C).

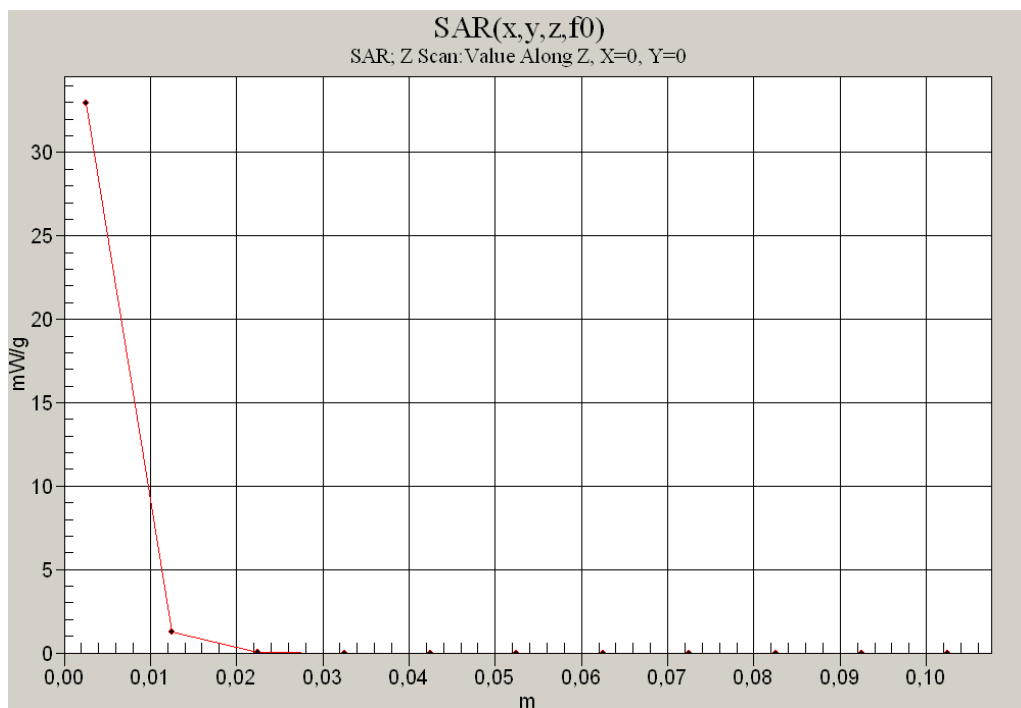


Fig. 51: SAR versus liquid depth, 5500 MHz, body (September 06, 2010; Ambient Temperature: 21.0° C; Liquid Temperature: 20.7° C).

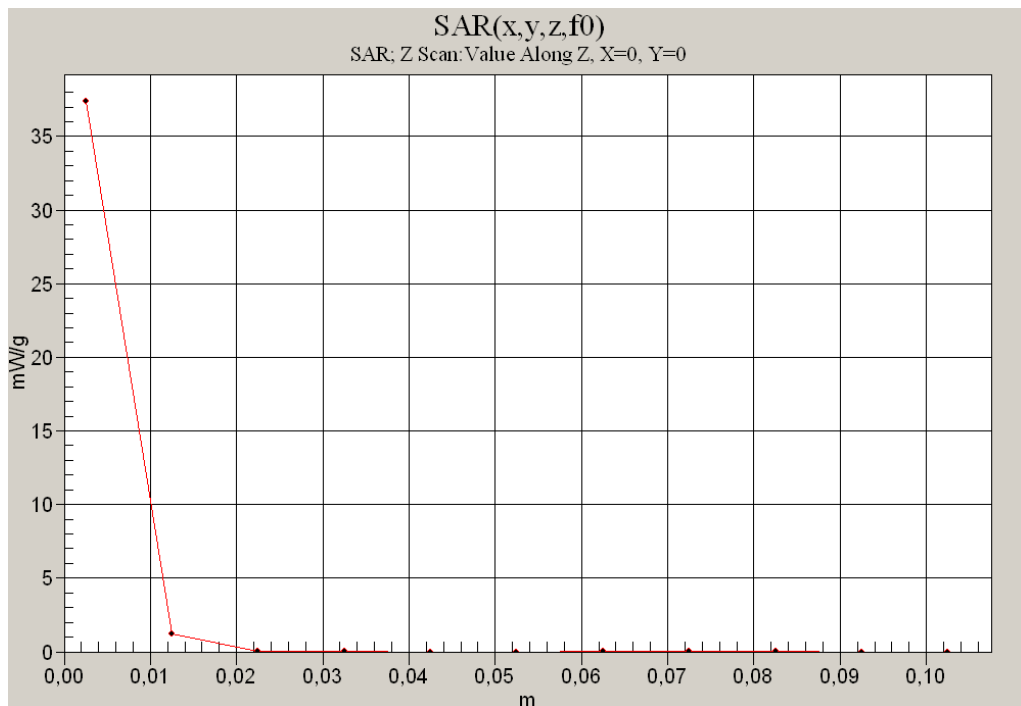


Fig. 52: SAR versus liquid depth, 5800 MHz, head (August 18, 2010; Ambient Temperature: 22.2° C; Liquid Temperature: 21.6° C).

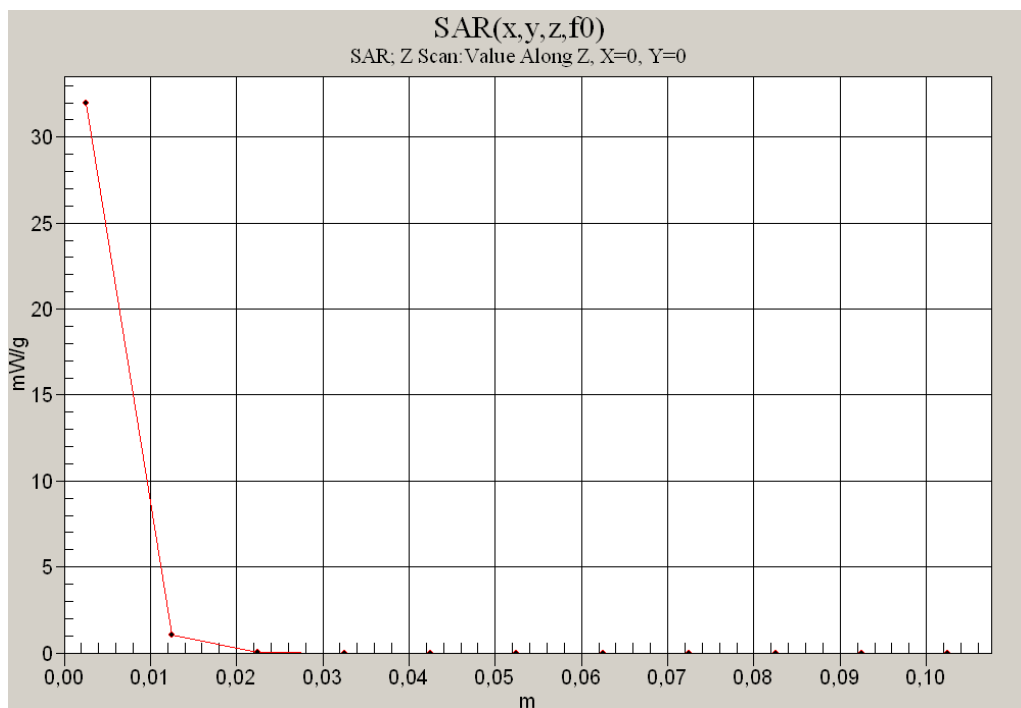


Fig. 53: SAR versus liquid depth, 5800 MHz, body (September 03, 2010; Ambient Temperature: 21.1° C; Liquid Temperature: 20.7° C).

18 SAR Z-axis Scans (Measurements)

The following pictures show the plots of SAR versus liquid depth for the worst case values.

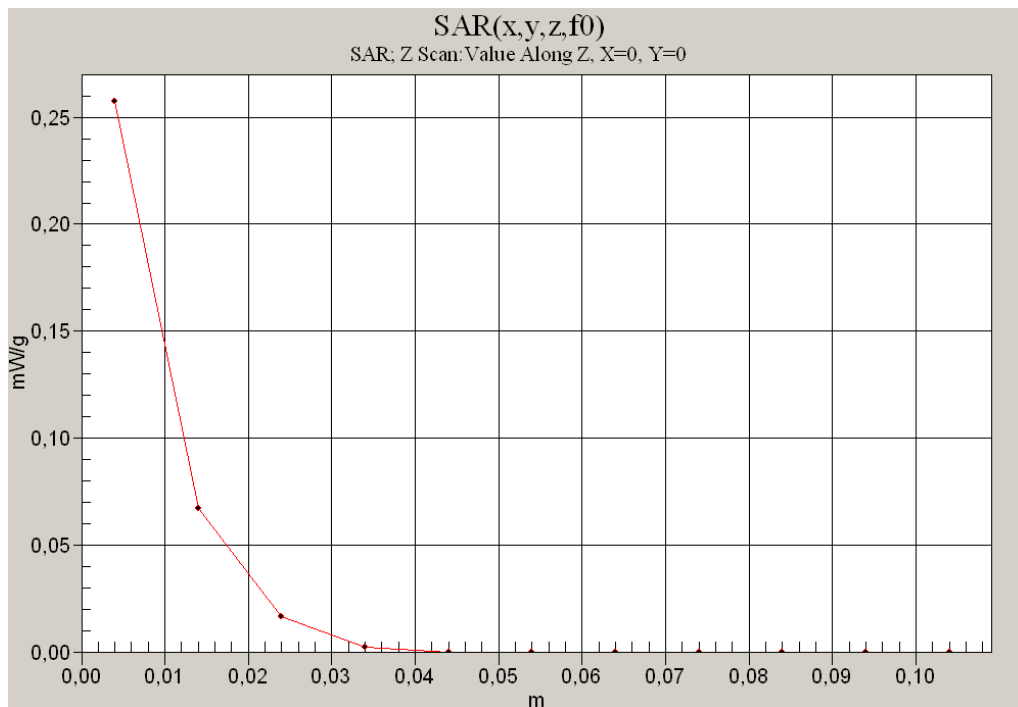


Fig. 54: SAR versus liquid depth, head: IEEE 802.11 b, channel 6, cheek position, left side of head (August 26, 2010; Ambient Temperature: 22.1° C; Liquid Temperature : 21.8° C).

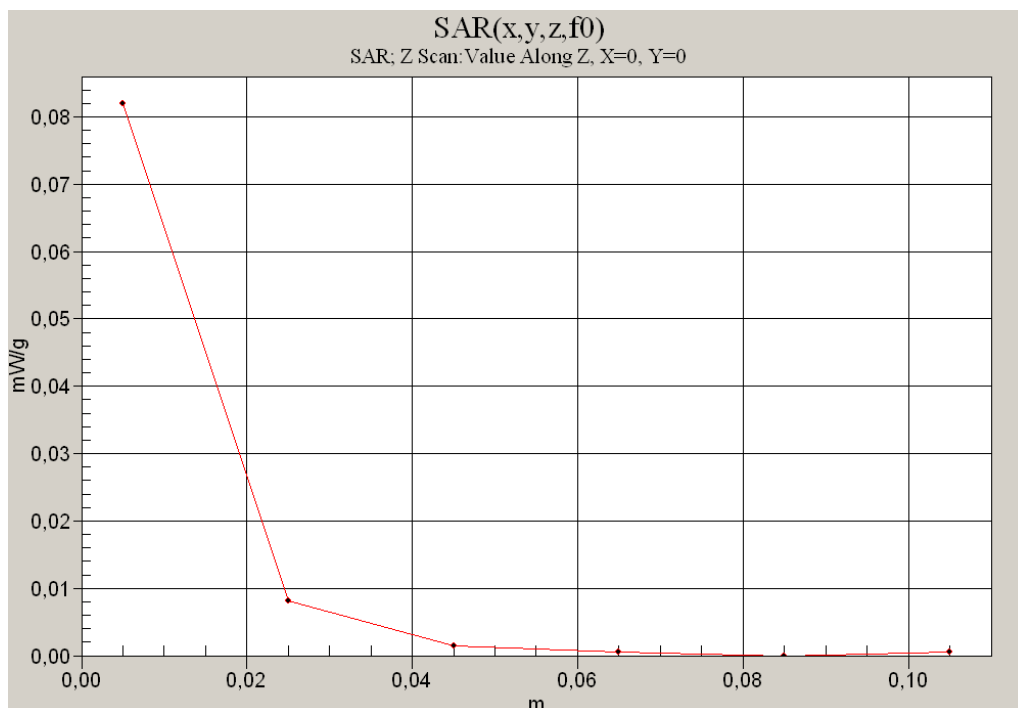


Fig. 55: SAR versus liquid depth, body: IEEE 802.11 b, channel 6, display towards the phantom (August 30, 2010; Ambient Temperature: 21.5° C; Liquid Temperature: 21.2° C).

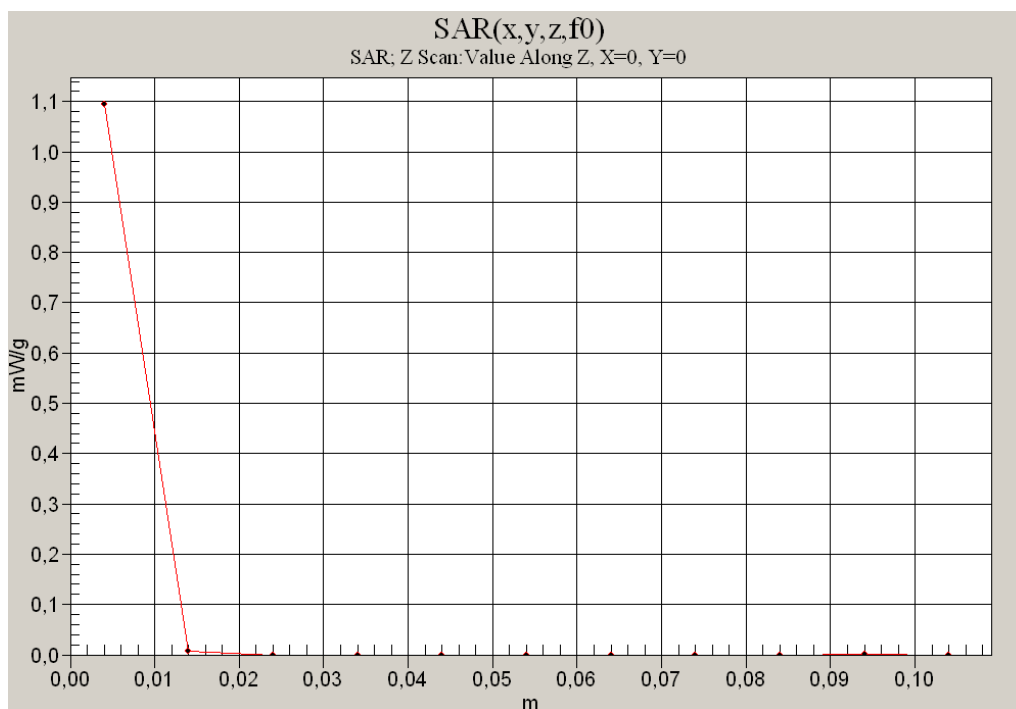


Fig. 56: SAR versus liquid depth, head: IEEE 802.11 n channel 124, tilted position, right side of head (August 16, 2010; Ambient Temperature: 22.1° C; Liquid Temperature : 21.5° C).

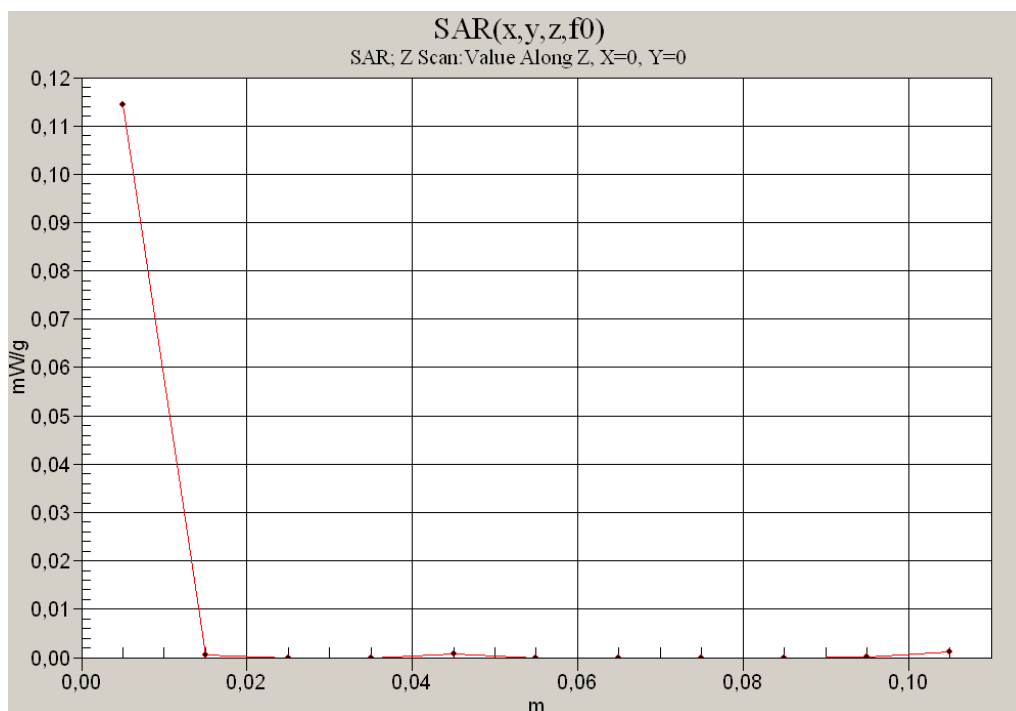


Fig. 57: SAR versus liquid depth, body: IEEE 802.11 a (5500 MHz range), channel 104, display towards the phantom (September 06, 2010; Ambient Temperature: 21.3°C; Liquid Temperature: 20.8°C).