
Appendix for the Report

Dosimetric Assessment of the Alcatel One Touch 556 (FCC ID: RAD007) According to the FCC Requirements

SAR Distribution Plots

July 19, 2004
IMST GmbH
Carl-Friedrich-Gauß-Str. 2
D-47475 Kamp-Lintfort

Customer
Alcatel Business Systems
32, avenue Kléber
F-92707 Colombes Cedex

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, PCS 1900 HEAD	3
2	SAR DISTRIBUTION PLOTS, PCS 1900 BODY WITH HEADSET.....	7
3	SAR DISTRIBUTION PLOTS, PCS 1900 BODY	8
4	SAR Z-AXIS SCANS (VALIDATION)	9
5	SAR Z-AXIS SCANS (MEASUREMENTS)	11

1 SAR Distribution Plots, PCS 1900 Head

Test Laboratory: IMST GmbH; File Name: [629dplm_1.da4](#)

DUT: Alcatel ; Type: OT 556; Serial: 354077000005629

Program Name: Cheek Left

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Cheek Left/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.37 V/m; Power Drift = -0.168 dB

Maximum value of SAR (measured) = 0.185 mW/g

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

Reference Value = 6.37 V/m; Power Drift = -0.168 dB

Maximum value of SAR (measured) = 0.213 mW/g

Peak SAR (extrapolated) = 0.308 W/kg

SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.110 mW/g

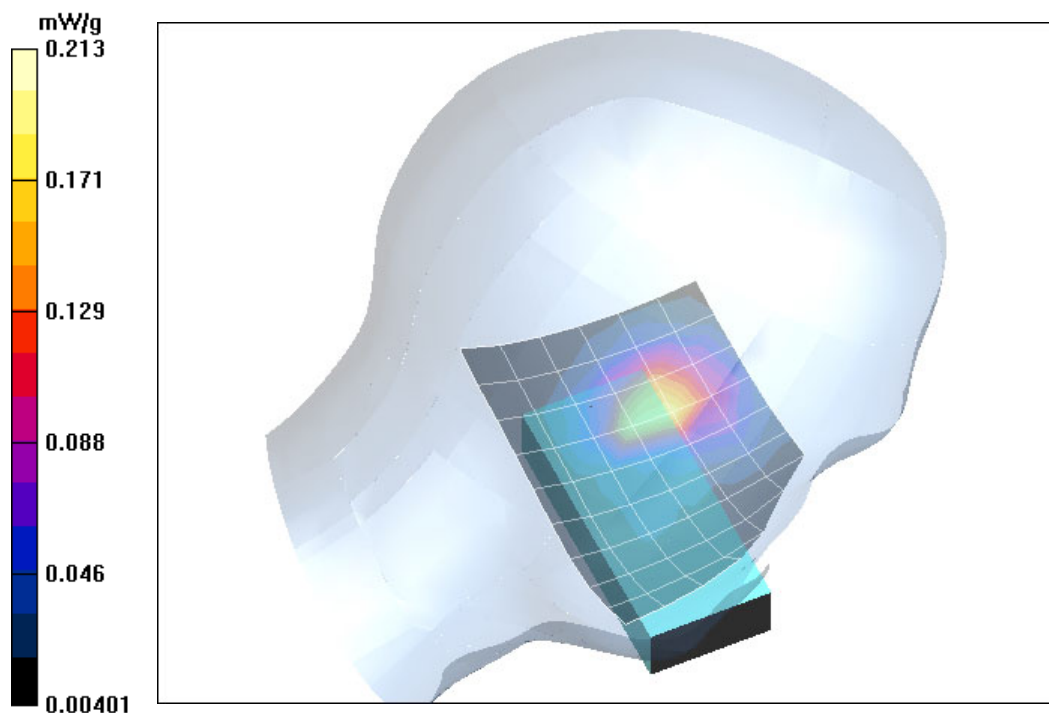


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head. (14.07.2004; Ambient Temperature: 21.4° C; Liquid Temperature : 20.5° C).

Test Laboratory: IMST GmbH; File Name: [629prm_1.da4](#)

DUT: Alcatel ; Type: OT 556; Serial: 354077000005629

Program Name: Tilted Left

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Tilted Left/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 7.22 V/m; Power Drift = 0.056 dB

Maximum value of SAR (measured) = 0.141 mW/g

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

Reference Value = 7.22 V/m; Power Drift = 0.056 dB

Maximum value of SAR (measured) = 0.153 mW/g

Peak SAR (extrapolated) = 0.215 W/kg

SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.084 mW/g

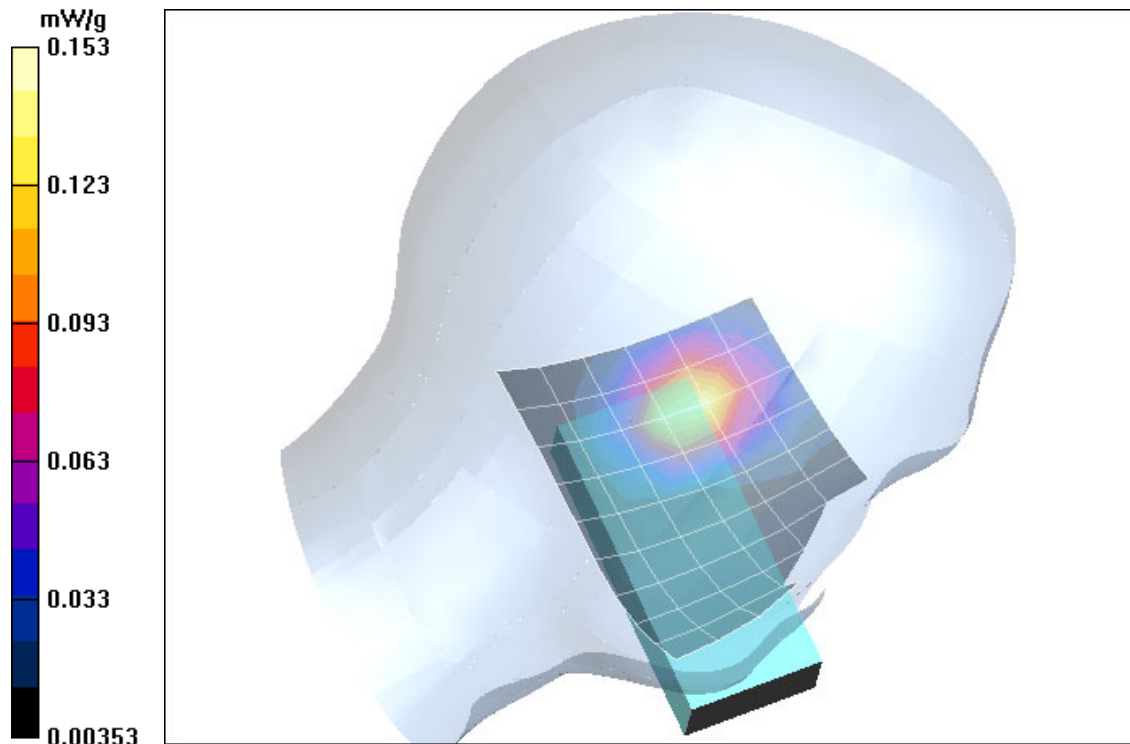


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head. (14.07.2004; Ambient Temperature: 21.4° C; Liquid Temperature : 20.6° C).

Test Laboratory: IMST GmbH; File Name: [629prm_1.da4](#)

DUT: Alcatel ; Type: OT 556; Serial: 354077000005629

Program Name: Cheek Right

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Cheek Right/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.17 V/m; Power Drift = -0.0318 dB

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

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

Reference Value = 6.17 V/m; Power Drift = -0.0318 dB

Maximum value of SAR (measured) = 0.147 mW/g

Peak SAR (extrapolated) = 0.202 W/kg

SAR(1 g) = 0.133 mW/g; SAR(10 g) = 0.077 mW/g

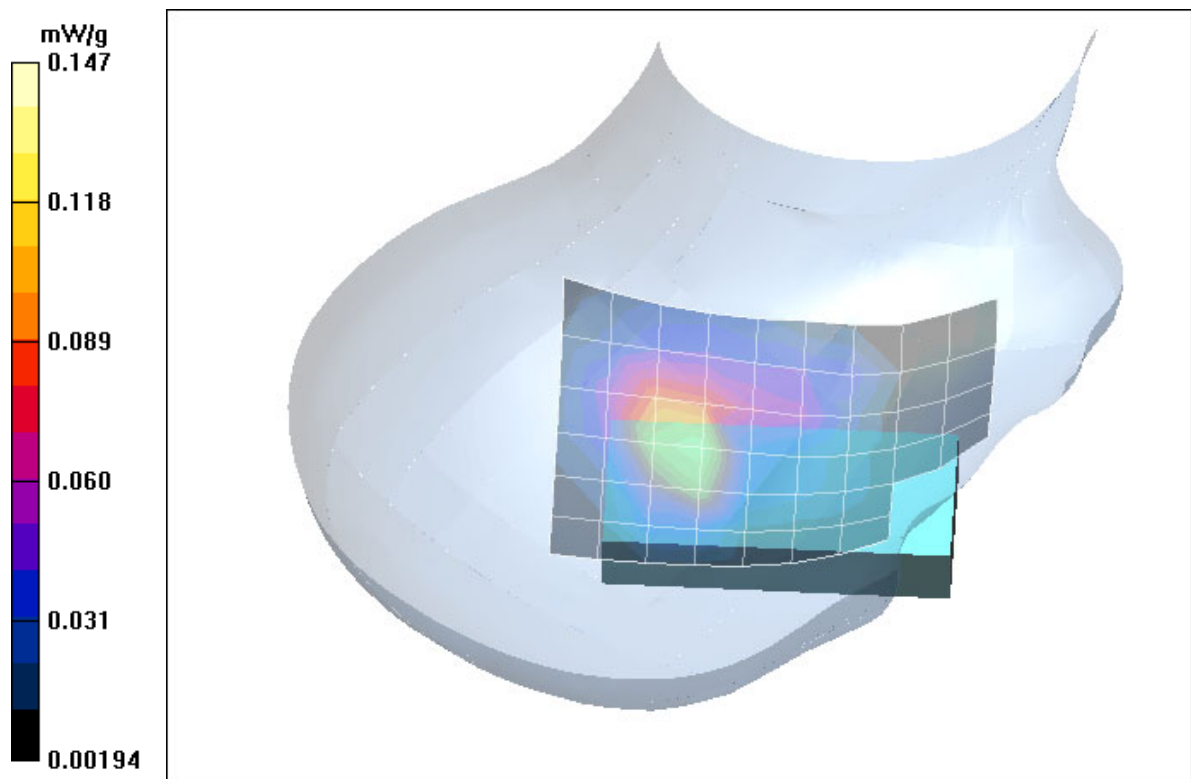


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head. (14.07.2004; Ambient Temperature: 21.5° C; Liquid Temperature : 20.6° C).

Test Laboratory: IMST GmbH; File Name: [629prm_2.da4](#)

DUT: Alcatel ; Type: OT 556; Serial: 354077000005629

Program Name: Tilted Right

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.93, 4.93, 4.93); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Tilted Right/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 7.74 V/m; Power Drift = -0.0625 dB

Maximum value of SAR (measured) = 0.118 mW/g

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

Reference Value = 7.74 V/m; Power Drift = -0.0625 dB

Maximum value of SAR (measured) = 0.117 mW/g

Peak SAR (extrapolated) = 0.159 W/kg

SAR(1 g) = 0.107 mW/g; SAR(10 g) = 0.064 mW/g

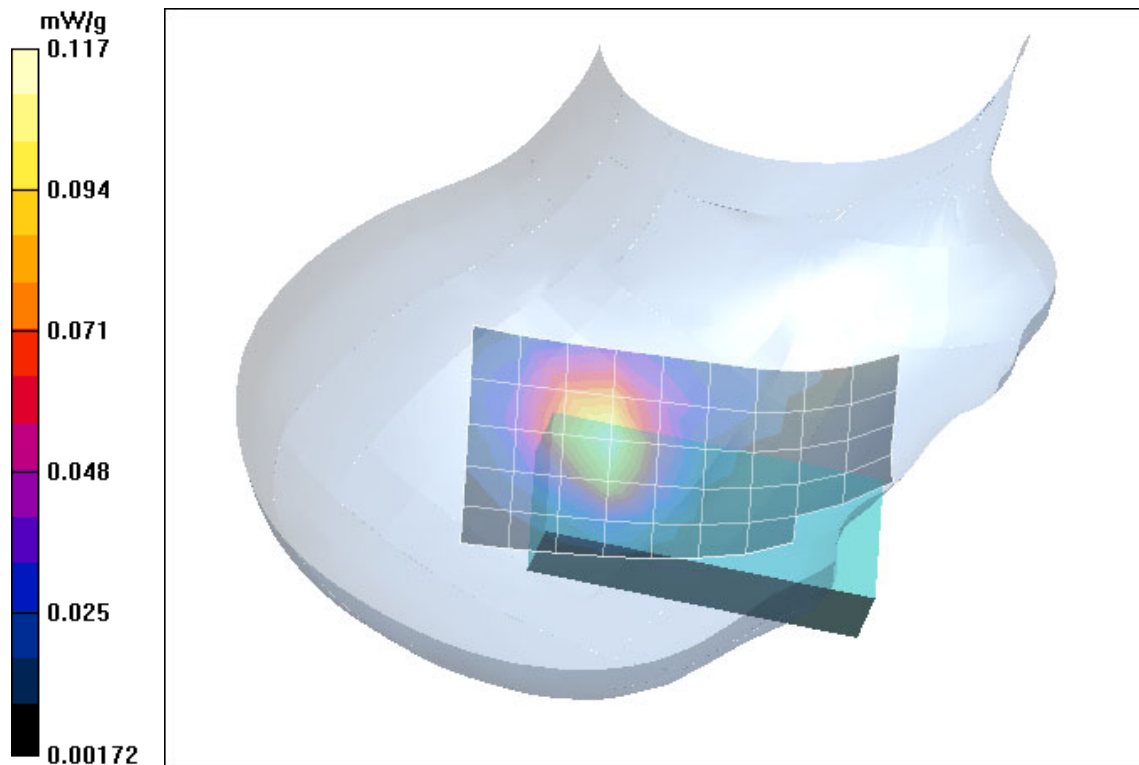


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head. (14.07.2004; Ambient Temperature: 21.5° C; Liquid Temperature : 20.6° C).

2 SAR Distribution Plots, PCS 1900 Body with headset

Test Laboratory: IMST GmbH; File Name: [629phm_2.da4](#)

DUT: Alcatel ; Type: OT 556; Serial: 354077000005629

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.45, 4.45, 4.45); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body Worn/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 7.67 V/m; Power Drift = 0.023 dB

Maximum value of SAR (measured) = 0.138 mW/g

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

Reference Value = 7.67 V/m; Power Drift = 0.023 dB

Maximum value of SAR (measured) = 0.143 mW/g

Peak SAR (extrapolated) = 0.211 W/kg

SAR(1 g) = 0.133 mW/g; SAR(10 g) = 0.084 mW/g

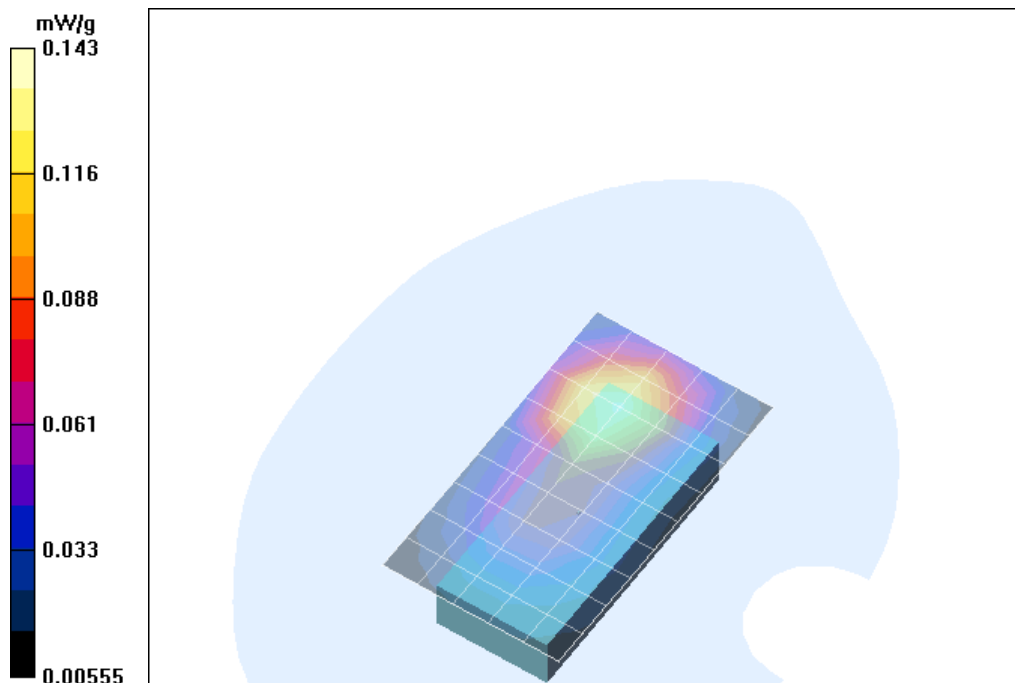


Fig. 5: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset (15.07.2004; Ambient Temperature: 20.9° C; Liquid Temperature : 20.4° C).

3 SAR Distribution Plots, PCS 1900 Body

Test Laboratory: IMST GmbH; File Name: [629phm_1.da4](#)

DUT: Alcatel ; Type: OT 556; Serial: 354077000005629

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $\sigma = 1.55$; mho/m, $\epsilon_r = 51.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.45, 4.45, 4.45); Calibrated: 21.05.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 16.06.2004
- Phantom: SAM Glycol; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Body Worn/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 10.7 V/m; Power Drift = -0.002 dB

Maximum value of SAR (measured) = 0.256 mW/g

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

Reference Value = 10.7 V/m; Power Drift = -0.002 dB

Maximum value of SAR (measured) = 0.262 mW/g

Peak SAR (extrapolated) = 0.384 W/kg

SAR(1 g) = 0.243 mW/g; SAR(10 g) = 0.156 mW/g

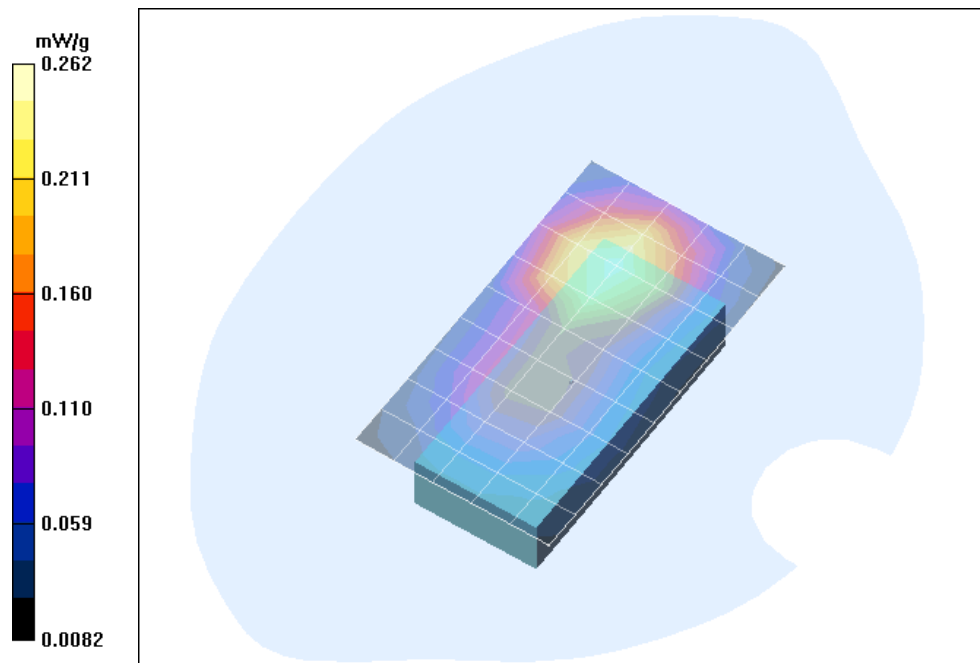


Fig. 6: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX (14.07.2004; Ambient Temperature: 20.9° C; Liquid Temperature : 20.4° C).

4 SAR z-axis scans (Validation)

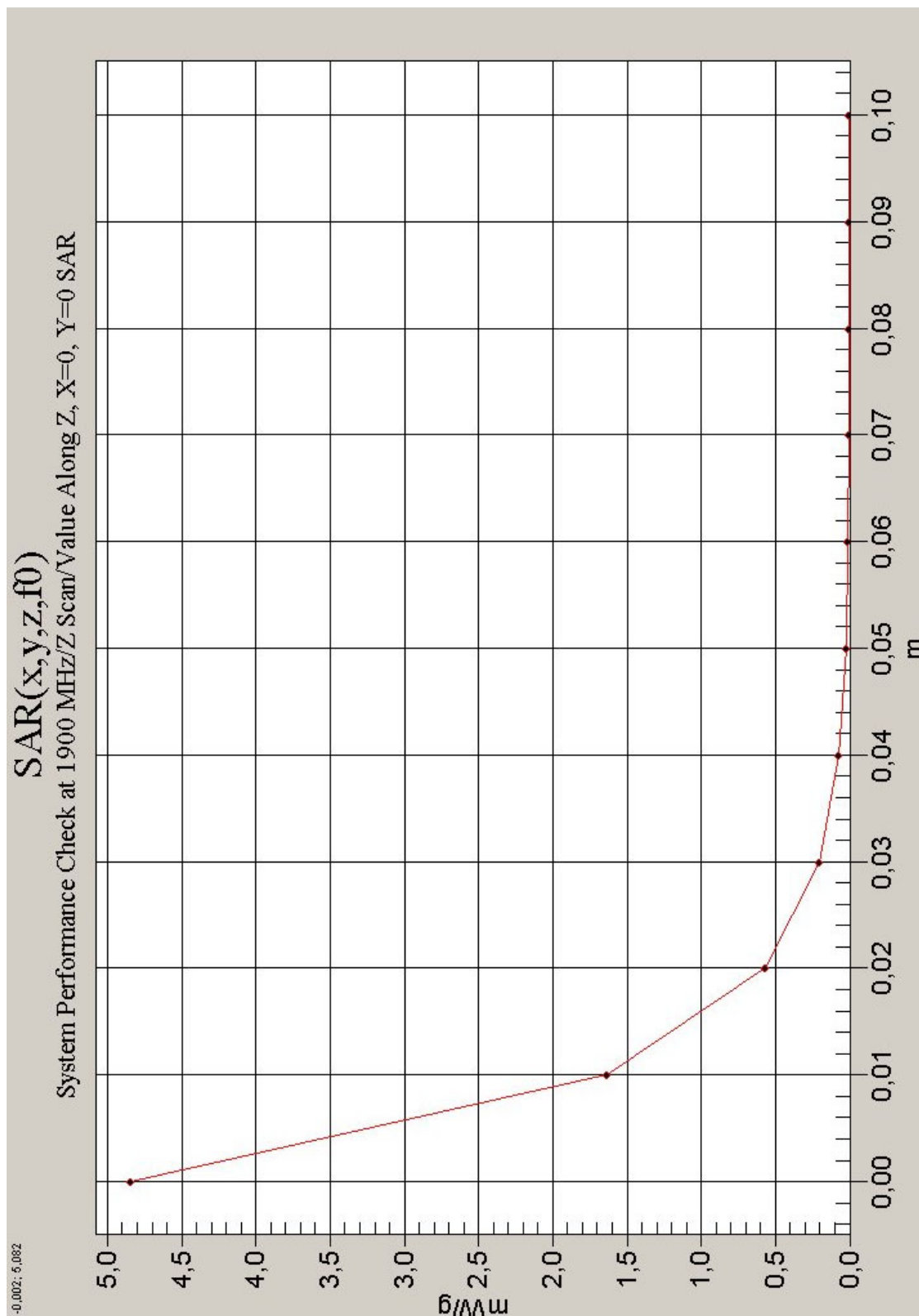


Fig. 7: SAR versus liquid depth, 1900 MHz, head (14.07.2004; Ambient Temperature: 21.0° C; Liquid Temperature : 20.4° C).

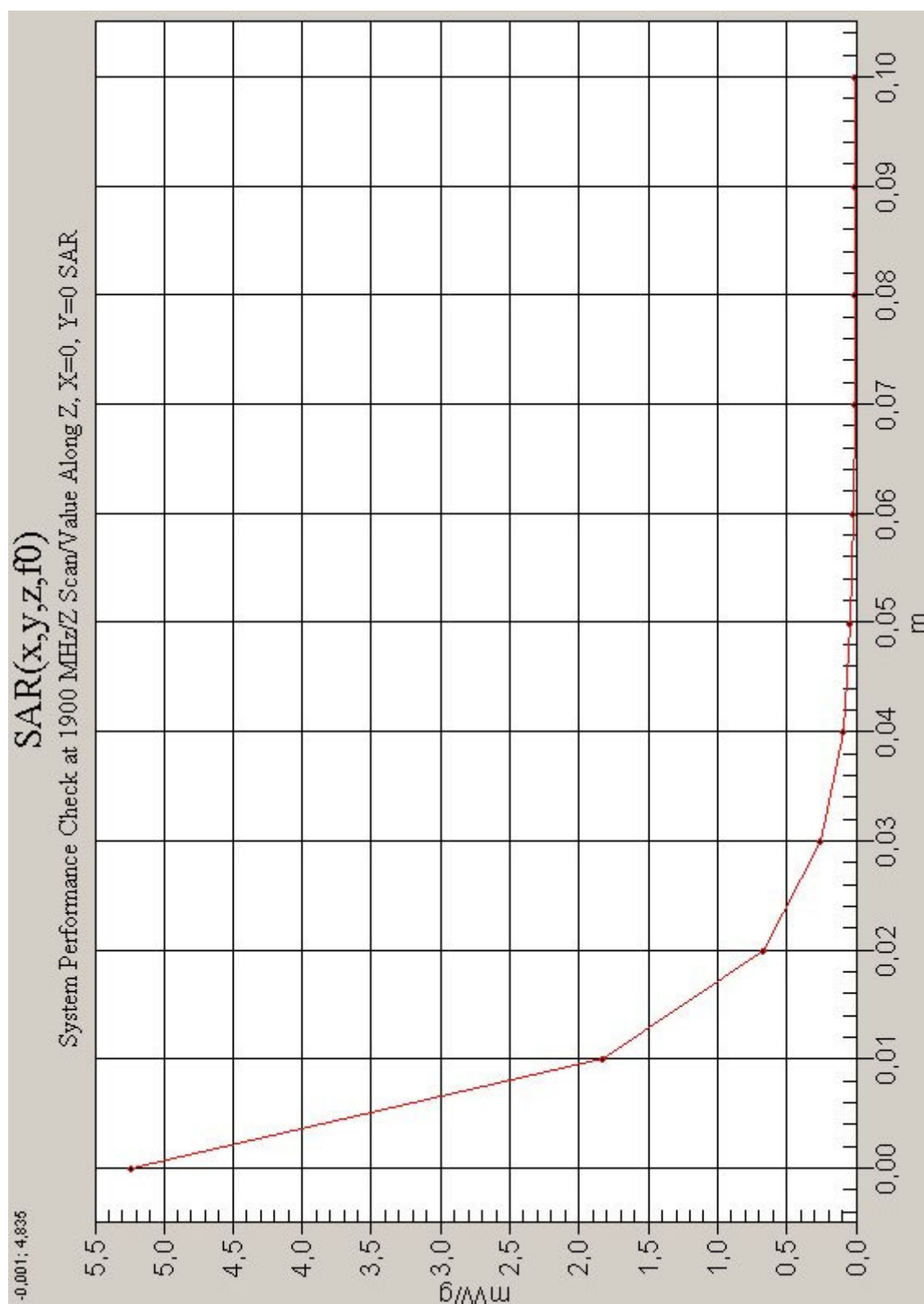


Fig. 8: SAR versus liquid depth, 1900 MHz, body (15.07.2004; Ambient Temperature: 21.1° C; Liquid Temperature : 20.6° C).

5 SAR z-axis scans (Measurements)

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

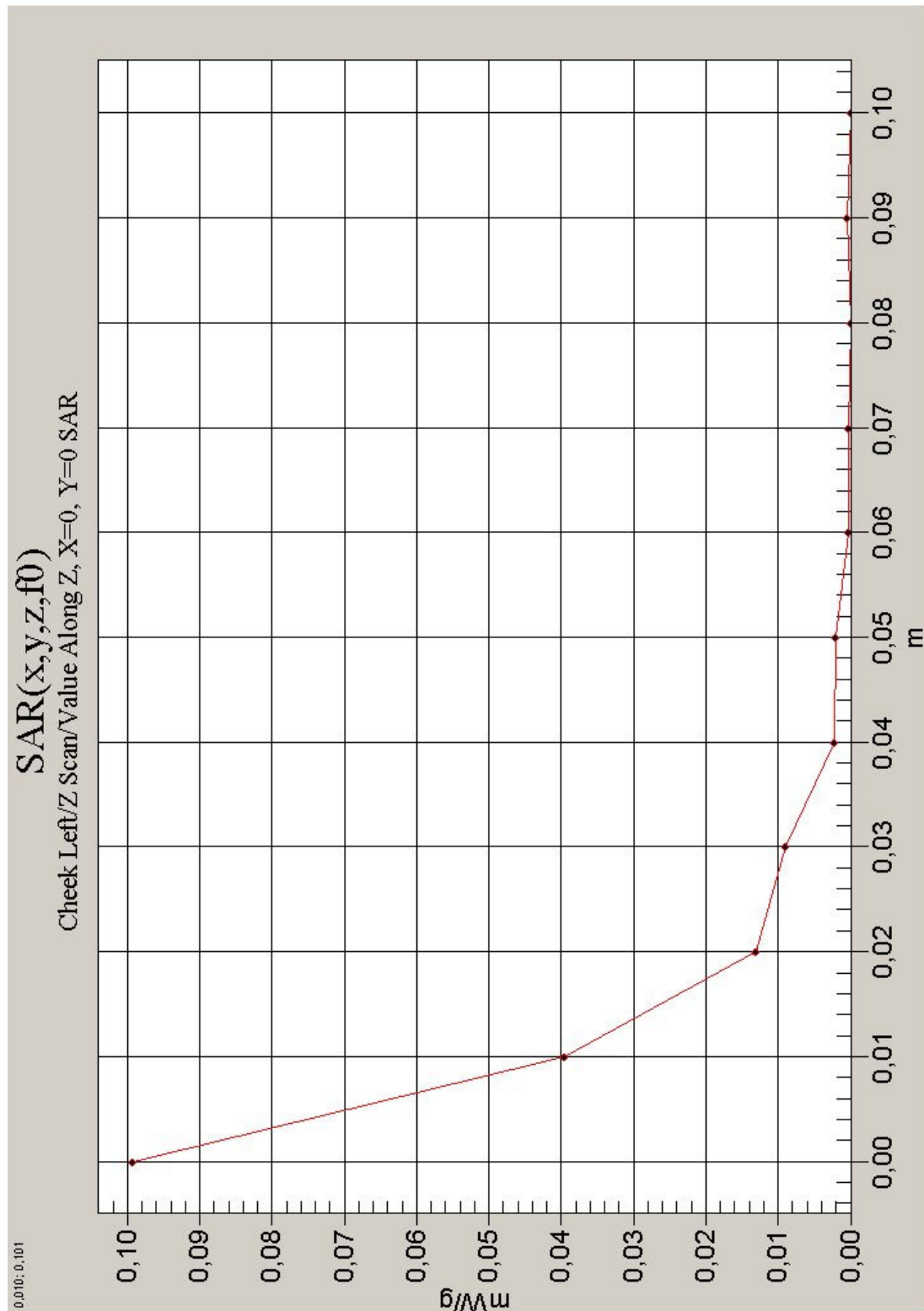


Fig. 9: SAR versus liquid depth, head: PCS 1900, channel 661, cheek position, left side of head. (14.07.2004, Ambient Temperature: 21.4° C; Liquid Temperature : 20.5° C).

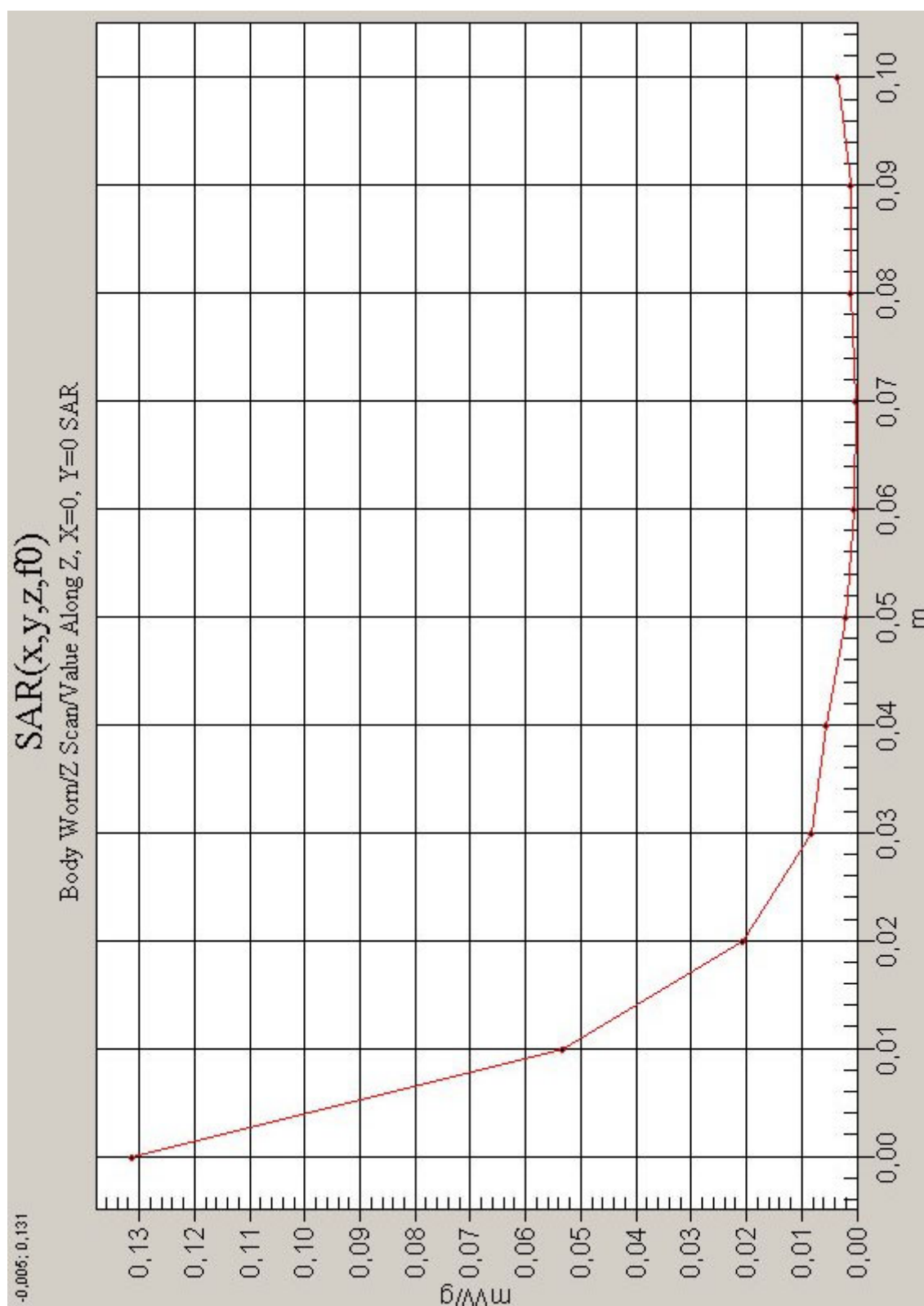


Fig. 10: SAR versus liquid depth: PCS 1900, channel 661, body worn configuration, antenna towards the phantom, 2TX (15.07.2004, Ambient Temperature: 20.9° C; Liquid Temperature : 20.4° C).