

**APPENDIX A: VALIDATION SCANS**

## Dipole 835 MHz, Head Validation

SAM 1 (Cellular - Brain Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Brain Tissue:  $\sigma = 0.90$  mho/m  $\epsilon_r = 40.9$   $\rho = 1.00$  g/cm<sup>3</sup>

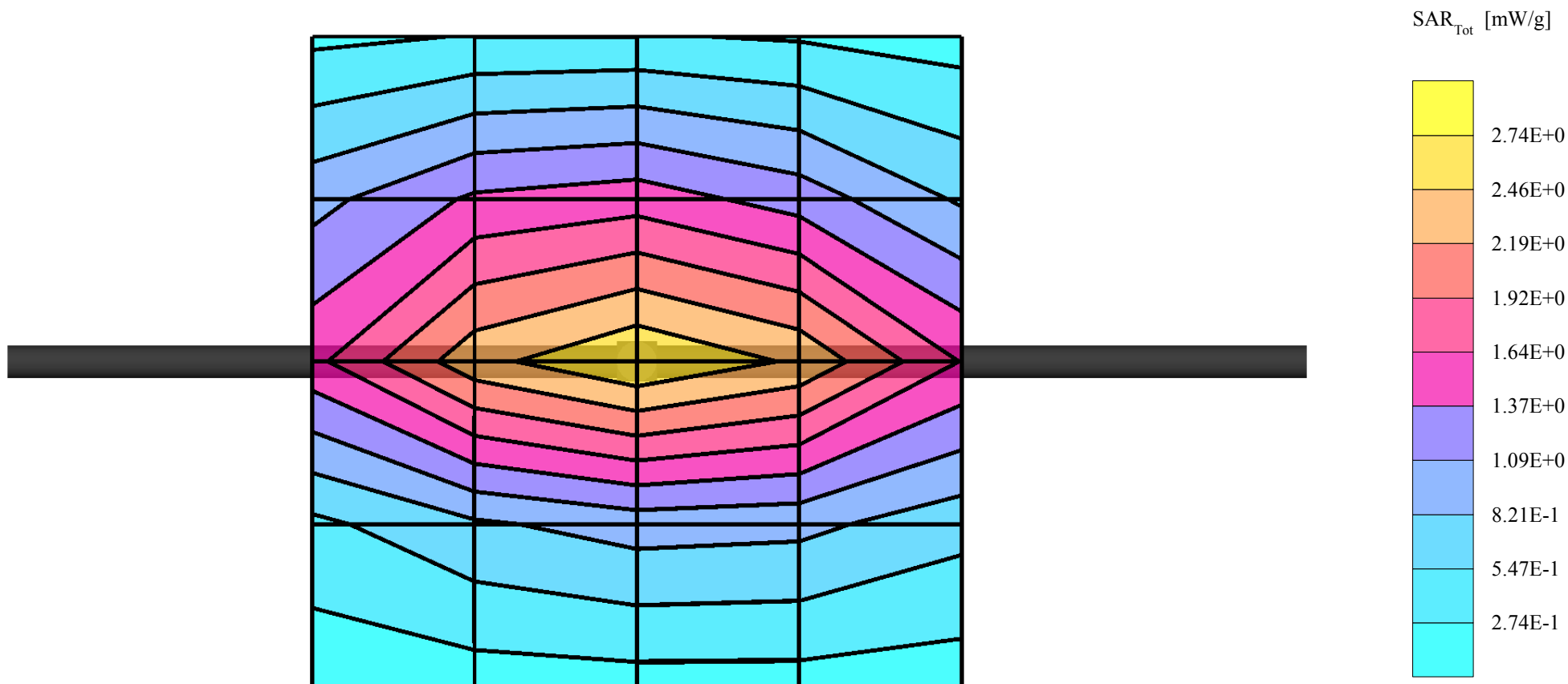
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cubes (2): Peak: 3.60 mW/g  $\pm 0.04$  dB, SAR (1g): 2.40 mW/g  $\pm 0.04$  dB, SAR (10g): 1.58 mW/g  $\pm 0.05$  dB, (Advanced extrapolation)

Penetration depth: 13.0 (12.4, 13.7) [mm]

Powerdrift: -0.06 dB

Liquid Temperature (°C): 21.3



## Dipole 835 MHz, Head Validation

SAM 1 (Cellular - Brain Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Brain Tissue:  $\sigma = 0.90$  mho/m  $\epsilon_r = 40.9$   $\rho = 1.00$  g/cm<sup>3</sup>

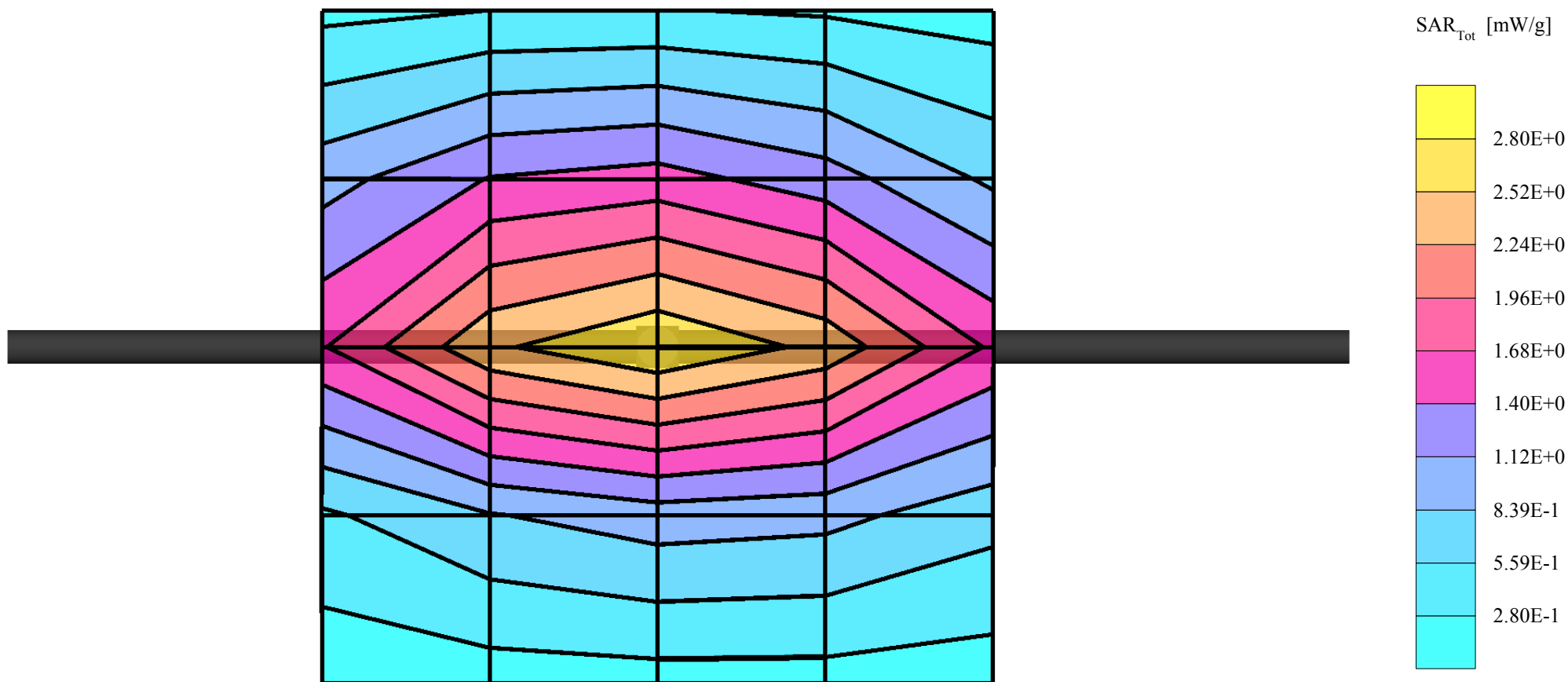
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cubes (2): Peak: 3.68 mW/g  $\pm 0.05$  dB, SAR (1g): 2.45 mW/g  $\pm 0.05$  dB, SAR (10g): 1.61 mW/g  $\pm 0.05$  dB, (Advanced extrapolation)

Penetration depth: 12.9 (12.3, 13.7) [mm]

Powerdrift: -0.04 dB

Liquid Temperature (°C): 21.2



## Dipole 835 MHz, Head Validation

SAM 1 (Cellular - Brain Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Brain Tissue:  $\sigma = 0.91$  mho/m  $\epsilon_r = 40.9$   $\rho = 1.00$  g/cm<sup>3</sup>

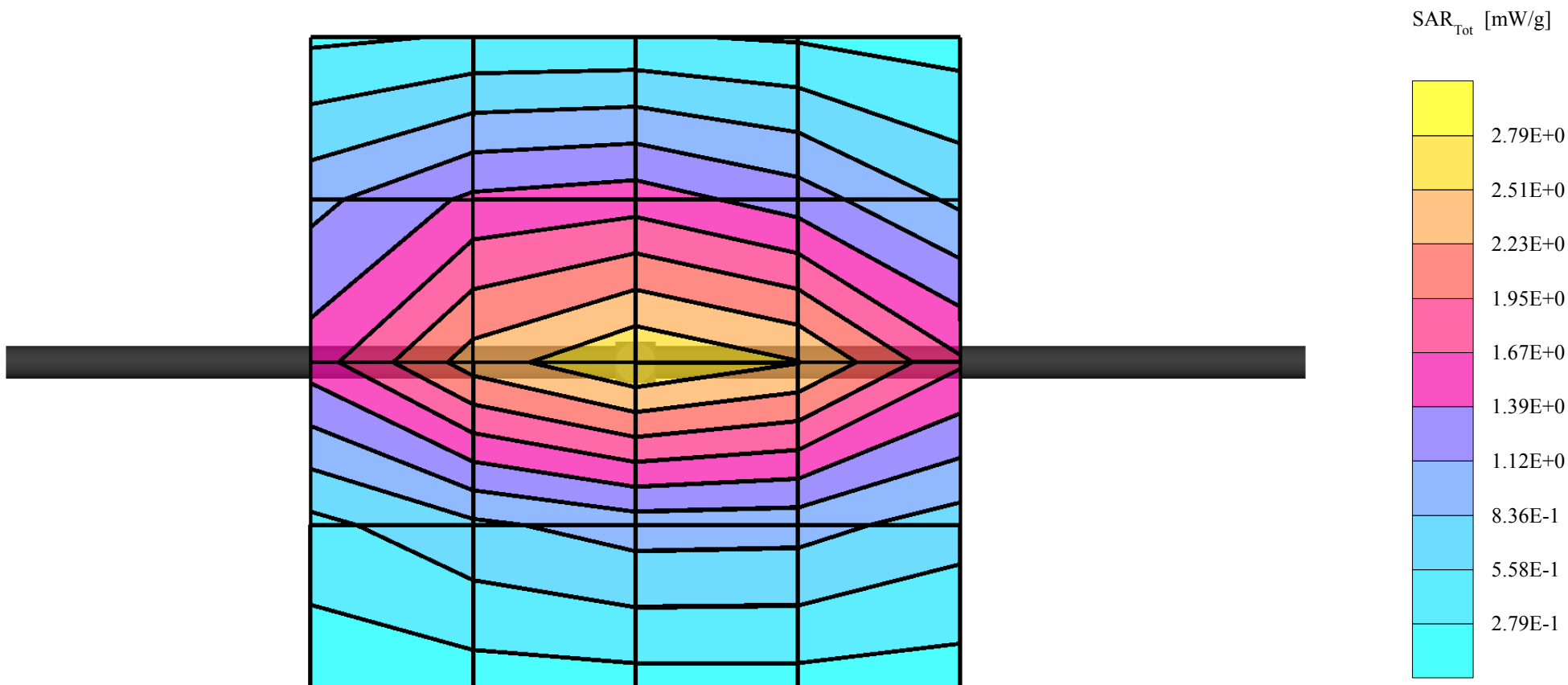
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cubes (2): Peak: 3.65 mW/g  $\pm 0.05$  dB, SAR (1g): 2.44 mW/g  $\pm 0.06$  dB, SAR (10g): 1.60 mW/g  $\pm 0.06$  dB, (Advanced extrapolation)

Penetration depth: 13.0 (12.4, 13.7) [mm]

Powerdrift: -0.09 dB

Liquid Temperature (°C): 21.2



## Dipole 835 MHz, Head Validation

SAM 1 (Cellular - Brain Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Brain Tissue:  $\sigma = 0.92$  mho/m  $\epsilon_r = 41.3$   $\rho = 1.00$  g/cm<sup>3</sup>

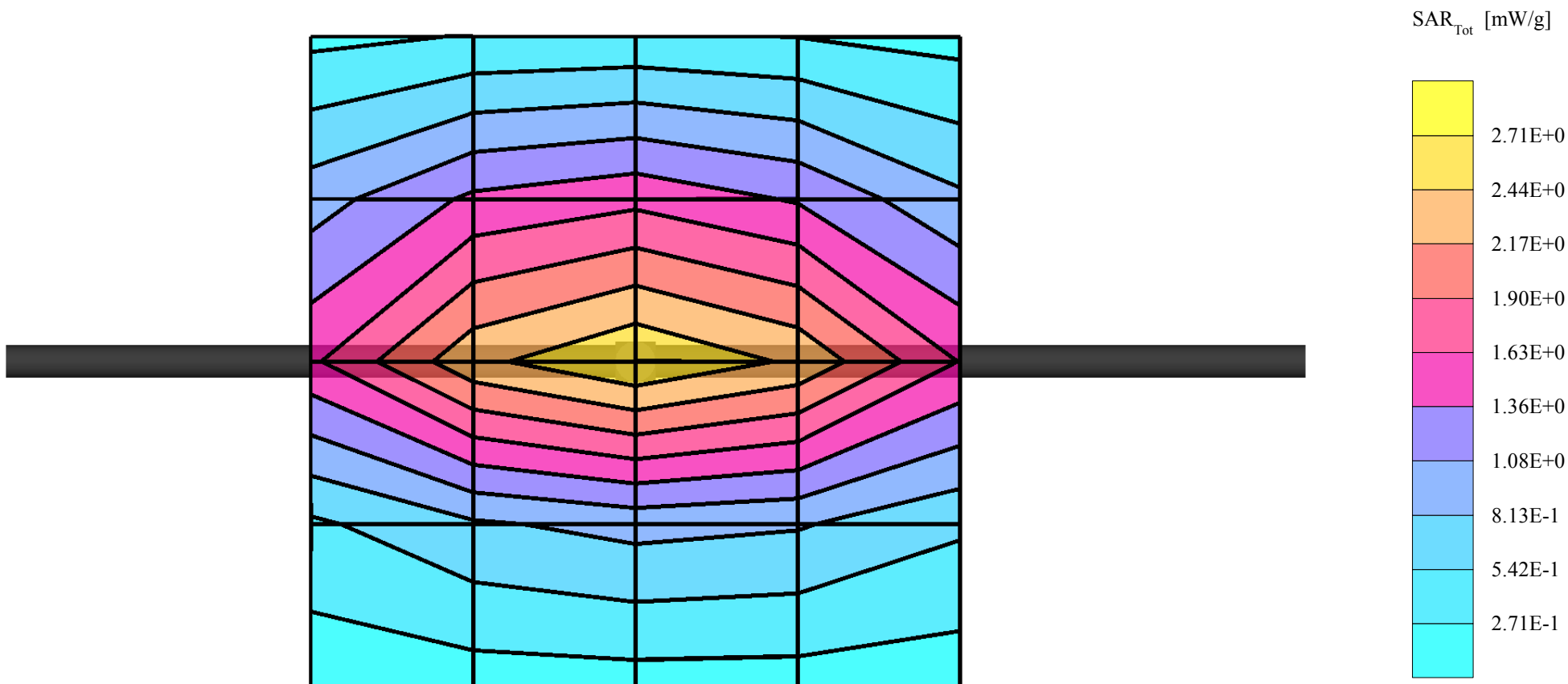
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cubes (2): Peak: 3.63 mW/g  $\pm 0.02$  dB, SAR (1g): 2.43 mW/g  $\pm 0.03$  dB, SAR (10g): 1.60 mW/g  $\pm 0.03$  dB, (Advanced extrapolation)

Penetration depth: 13.0 (12.5, 13.7) [mm]

Powerdrift: 0.07 dB

Liquid Temperature (°C): 21.5



## Dipole 835 MHz, Head Validation

SAM 1 (Cellular - Brain Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Brain Tissue:  $\sigma = 0.92$  mho/m  $\epsilon_r = 41.5$   $\rho = 1.00$  g/cm<sup>3</sup>

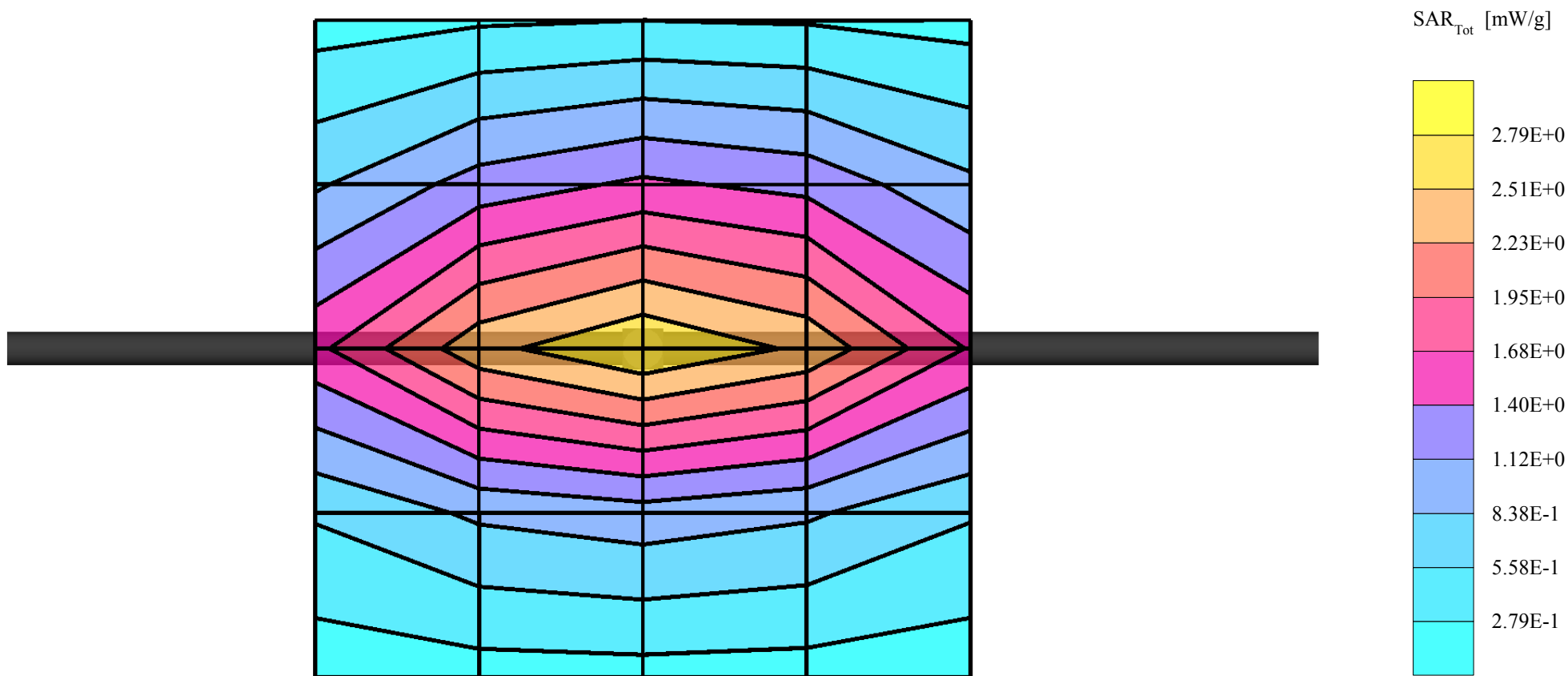
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cubes (2): Peak: 3.66 mW/g  $\pm 0.06$  dB, SAR (1g): 2.44 mW/g  $\pm 0.06$  dB, SAR (10g): 1.59 mW/g  $\pm 0.06$  dB, (Advanced extrapolation)

Penetration depth: 12.9 (12.3, 13.7) [mm]

Powerdrift: 0.00 dB

Liquid Temperature (°C): 21.4



## Dipole 835 MHz, Head Validation

SAM 1 (Cellular - Brain Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Brain Tissue:  $\sigma = 0.91$  mho/m  $\epsilon_r = 40.9$   $\rho = 1.00$  g/cm<sup>3</sup>

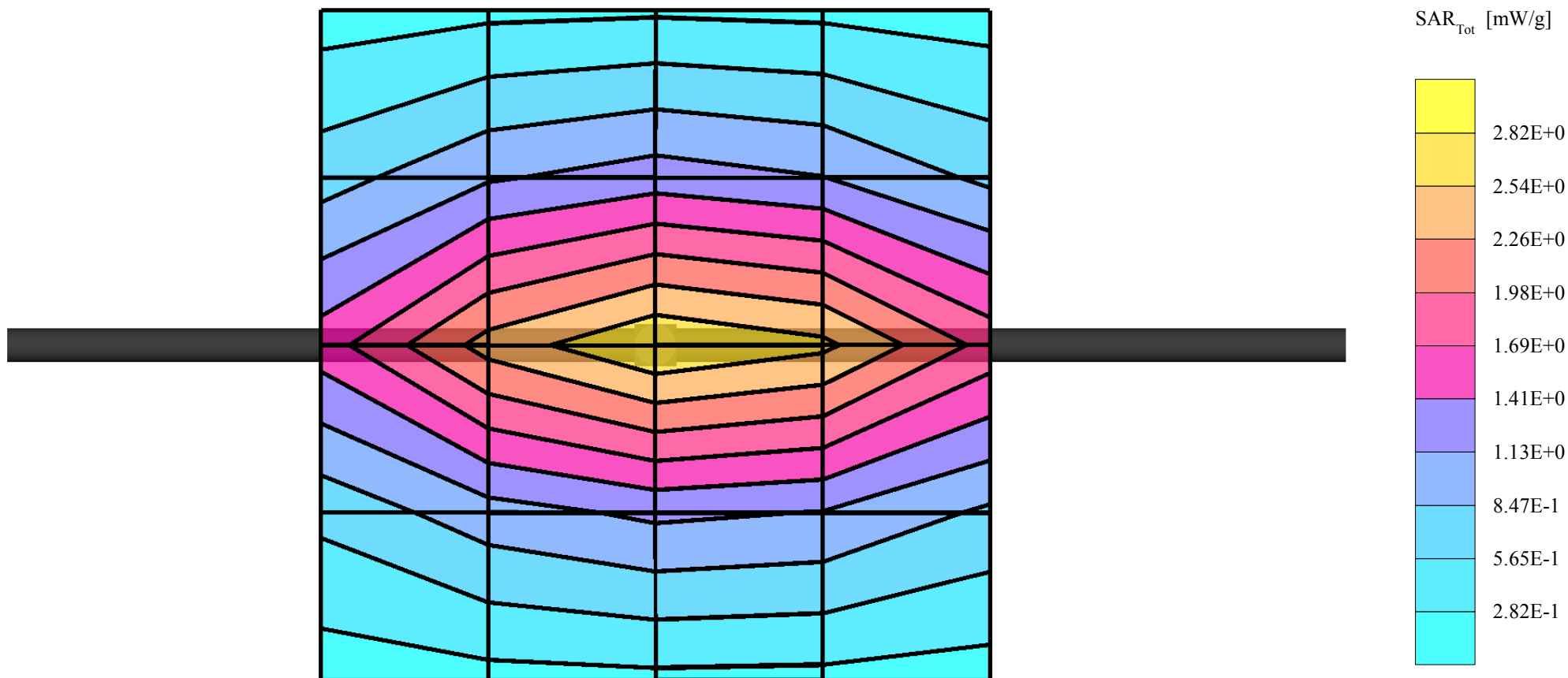
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cubes (2): Peak: 3.67 mW/g  $\pm 0.02$  dB, SAR (1g): 2.44 mW/g  $\pm 0.03$  dB, SAR (10g): 1.60 mW/g  $\pm 0.04$  dB, (Advanced extrapolation)

Penetration depth: 12.9 (12.3, 13.7) [mm]

Powerdrift: -0.04 dB

Liquid Temperature (°C): 21.2



## Dipole 835 MHz, Head Validation

SAM 1 (Cellular - Brain Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Brain Tissue:  $\sigma = 0.91$  mho/m  $\epsilon_r = 40.8$   $\rho = 1.00$  g/cm<sup>3</sup>

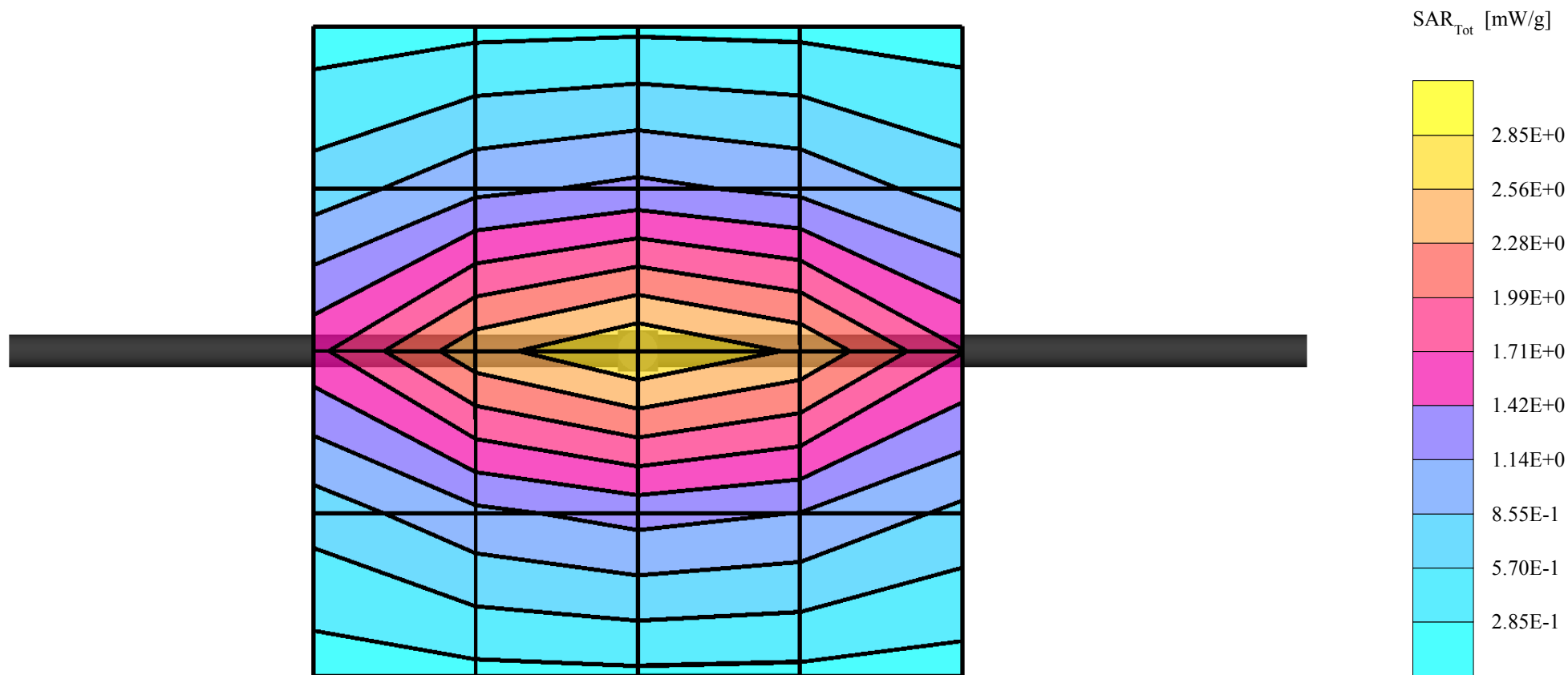
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cubes (2): Peak: 3.67 mW/g  $\pm 0.03$  dB, SAR (1g): 2.45 mW/g  $\pm 0.04$  dB, SAR (10g): 1.60 mW/g  $\pm 0.05$  dB, (Advanced extrapolation)

Penetration depth: 13.0 (12.4, 13.7) [mm]

Powerdrift: -0.03 dB

Liquid Temperature (°C): 20.8



## Dipole 1900 MHz, Head Validation

SAM 3 (PCS - Brain / Muscle Tissue)

Frequency: 1900 MHz; Crest factor: 1.0

Validation 1900MHz - Brain Tissue:  $\sigma = 1.48$  mho/m  $\epsilon_r = 39.3$   $\rho = 1.00$  g/cm<sup>3</sup>

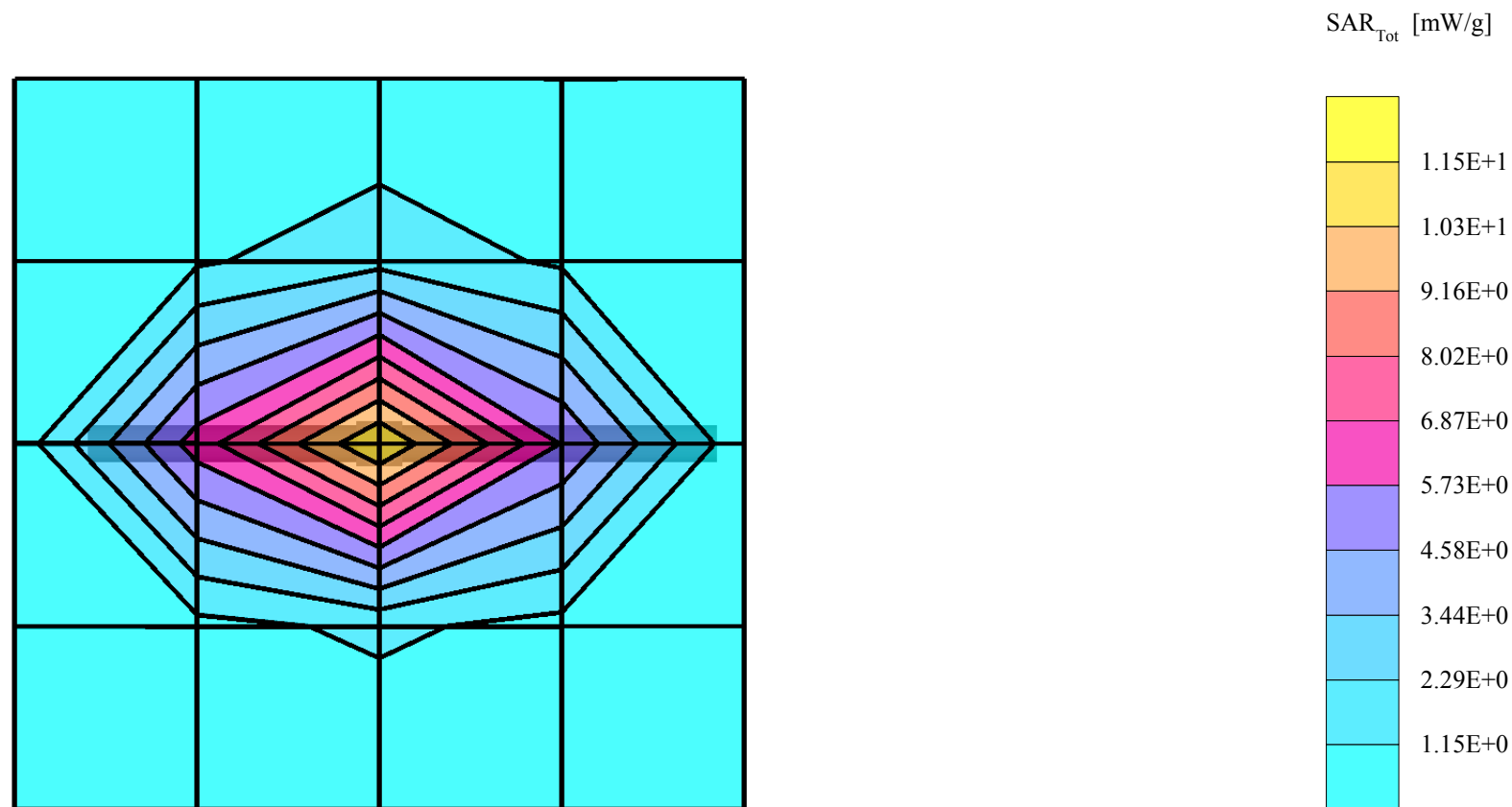
Probe: ET3DV6 - SN1505; ConvF(5.60,5.60,5.60)

Cubes (2): Peak: 19.2 mW/g  $\pm 0.05$  dB, SAR (1g): 10.2 mW/g  $\pm 0.05$  dB, SAR (10g): 5.20 mW/g  $\pm 0.05$  dB, (Worst-case extrapolation)

Penetration depth: 8.0 (7.6, 8.9) [mm]

Powerdrift: 0.03 dB

Liquid Temperature (°C): 21.5



## Dipole 1900 MHz, Head Validation

SAM 3 (PCS - Brain / Muscle Tissue)

Frequency: 1900 MHz; Crest factor: 1.0

Validation 1900MHz - Brain Tissue:  $\sigma = 1.48$  mho/m  $\epsilon_r = 39.4$   $\rho = 1.00$  g/cm<sup>3</sup>

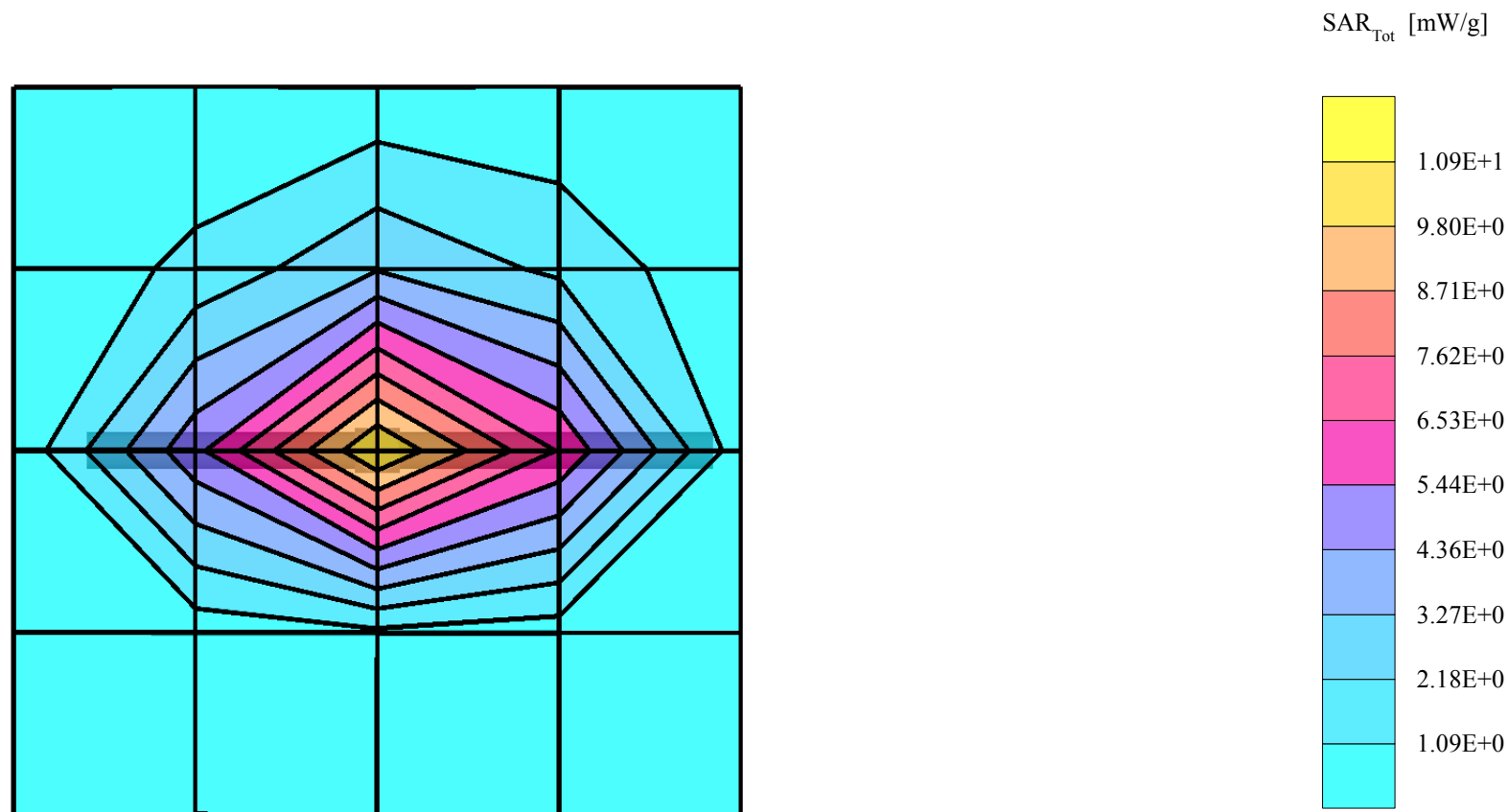
Probe: ET3DV6 - SN1505; ConvF(5.60,5.60,5.60)

Cubes (2): Peak: 19.8 mW/g  $\pm 0.06$  dB, SAR (1g): 10.5 mW/g  $\pm 0.06$  dB, SAR (10g): 5.40 mW/g  $\pm 0.07$  dB, (Worst-case extrapolation)

Penetration depth: 8.0 (7.6, 8.9) [mm]

Powerdrift: -0.10 dB

Liquid Temperature (°C):



## Dipole 1900 MHz, Head Validation

SAM 3 (PCS - Brain / Muscle Tissue)

Frequency: 1900 MHz; Crest factor: 1.0

Validation 1900MHz - Brain Tissue:  $\sigma = 1.46$  mho/m  $\epsilon_r = 38.2$   $\rho = 1.00$  g/cm<sup>3</sup>

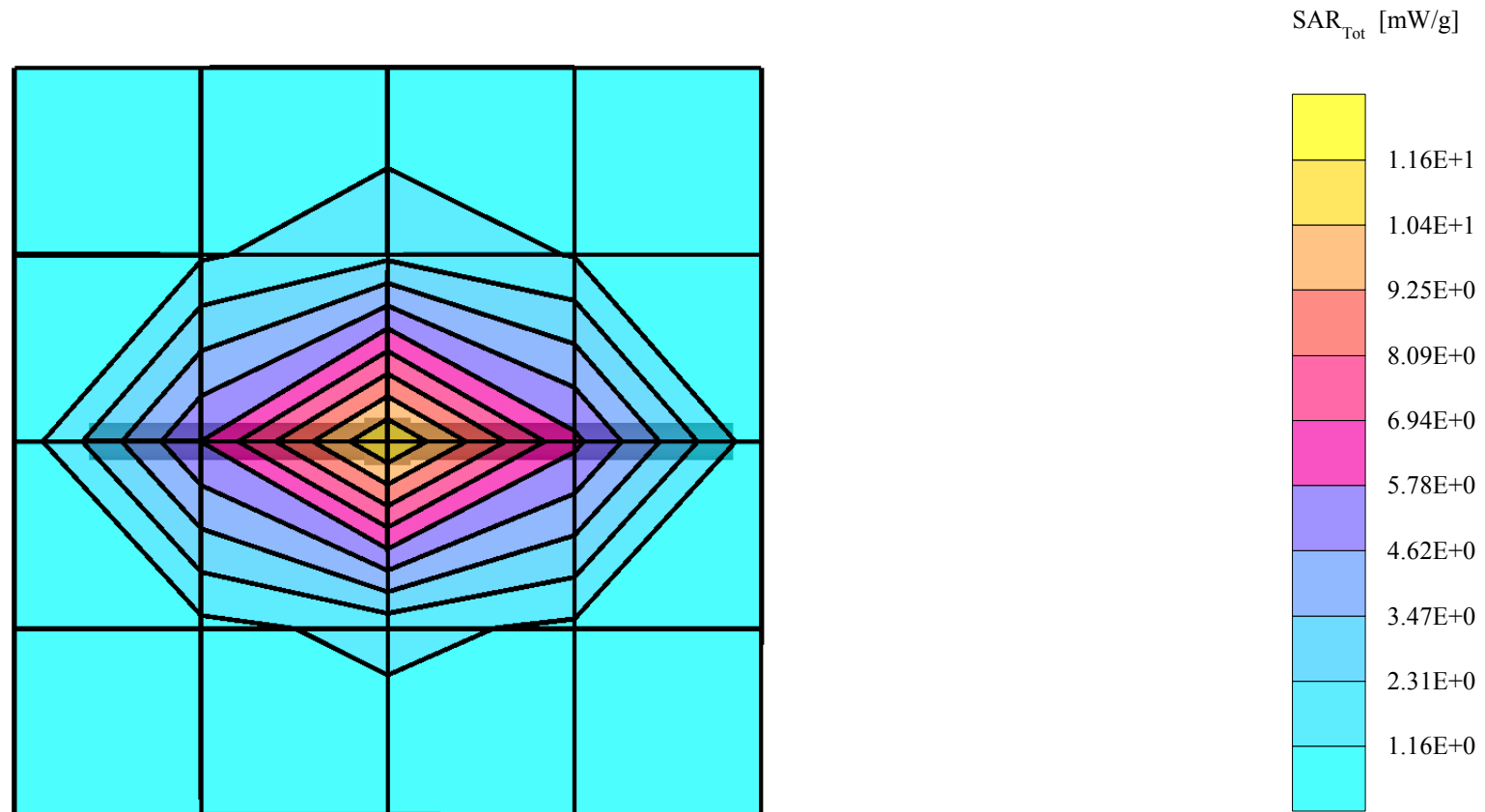
Probe: ET3DV6 - SN1505; ConvF(5.60,5.60,5.60)

Cubes (2): Peak: 16.8 mW/g  $\pm 0.04$  dB, SAR (1g): 9.32 mW/g  $\pm 0.04$  dB, SAR (10g): 4.83 mW/g  $\pm 0.05$  dB, (Advanced extrapolation)

Penetration depth: 8.3 (8.2, 8.6) [mm]

Powerdrift: -0.13 dB

Liquid Temperature (°C): 20.0



## Dipole 835 MHz, Body Validation

SAM 2 (Cellular - Muscle Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Muscle Tissue:  $\sigma = 0.96$  mho/m  $\epsilon_r = 54.4$   $\rho = 1.00$  g/cm<sup>3</sup>

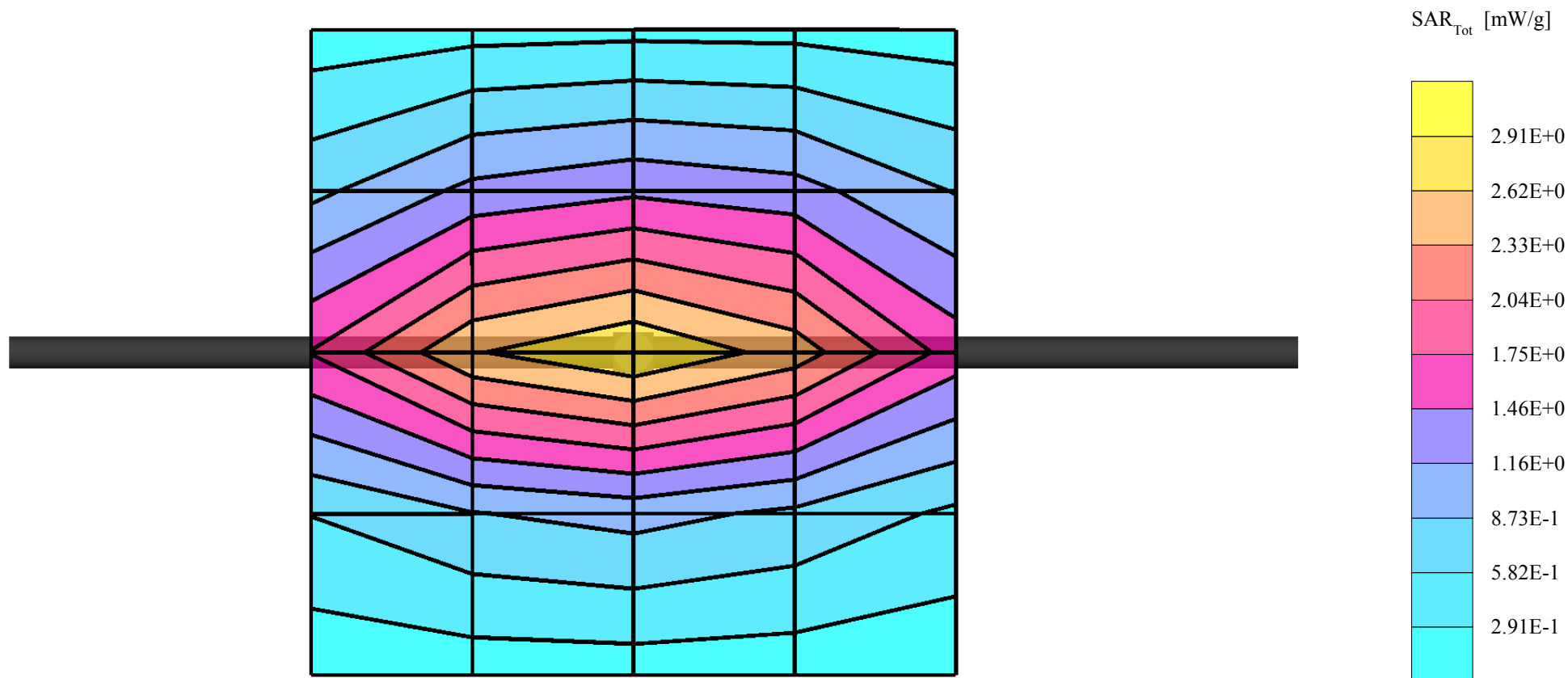
Probe: ET3DV6 - SN1505; ConvF(6.70,6.70,6.70)

Cubes (2): Peak: 3.71 mW/g  $\pm 0.04$  dB, SAR (1g): 2.54 mW/g  $\pm 0.03$  dB, SAR (10g): 1.69 mW/g  $\pm 0.03$  dB, (Advanced extrapolation)

Penetration depth: 13.8 (13.3, 14.4) [mm]

Powerdrift: -0.01 dB

Liquid Temperature (°C): 21.6



## Dipole 835 MHz, Body Validation

SAM 2 (Cellular - Muscle Tissue)

Frequency: 835 MHz; Crest factor: 1.0

Validation 835MHz - Muscle Tissue:  $\sigma = 0.96$  mho/m  $\epsilon_r = 53.7$   $\rho = 1.00$  g/cm<sup>3</sup>

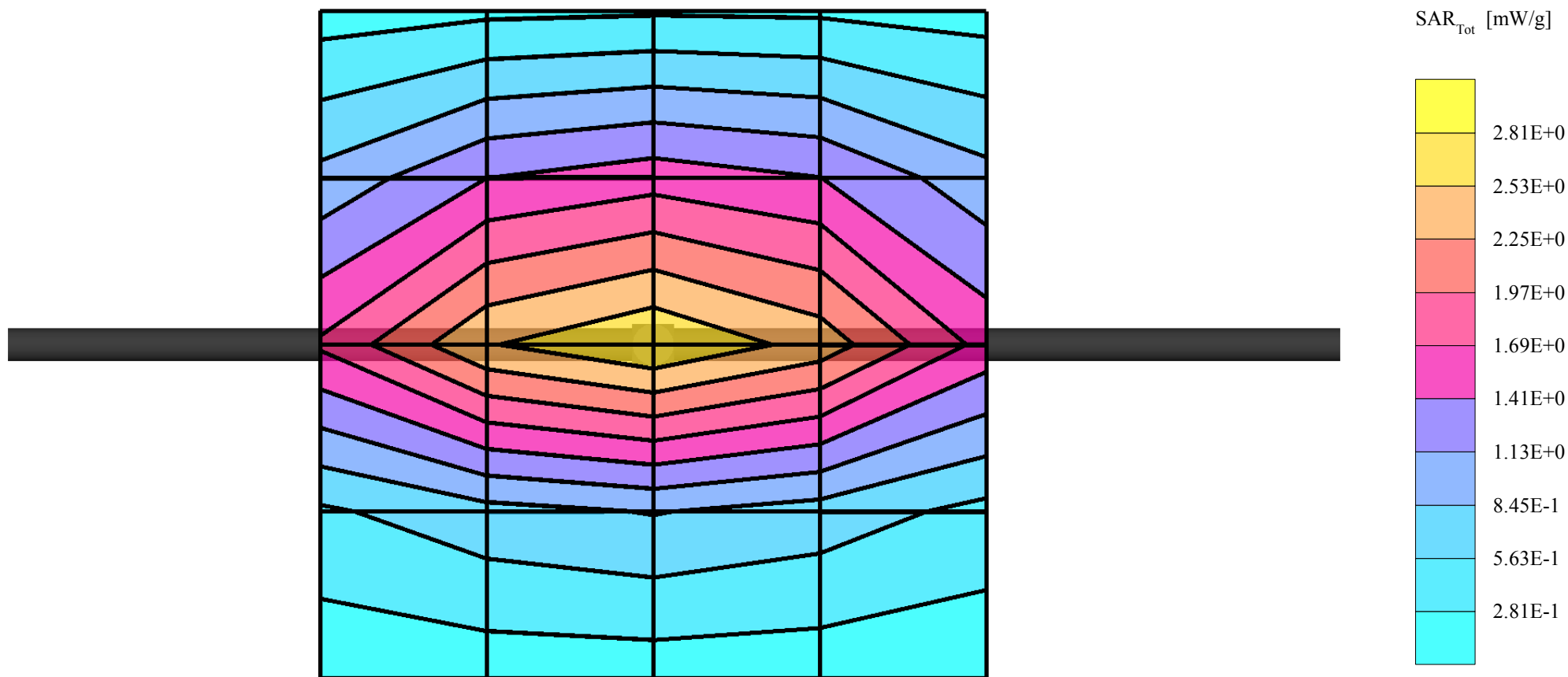
Probe: ET3DV6 - SN1505; ConvF(6.70,6.70,6.70)

Cubes (2): Peak: 3.66 mW/g  $\pm 0.05$  dB, SAR (1g): 2.52 mW/g  $\pm 0.05$  dB, SAR (10g): 1.68 mW/g  $\pm 0.04$  dB, (Advanced extrapolation)

Penetration depth: 13.8 (13.4, 14.4) [mm]

Powerdrift: 0.04 dB

Liquid Temperature (°C): 21.8



## Dipole 1900 MHz, Body Validation

SAM 3 (PCS - Brain / Muscle Tissue)

Frequency: 1900 MHz; Crest factor: 1.0

Validation 1900MHz - Muscle Tissue:  $\sigma = 1.50$  mho/m  $\epsilon_r = 53.8$   $\rho = 1.00$  g/cm<sup>3</sup>

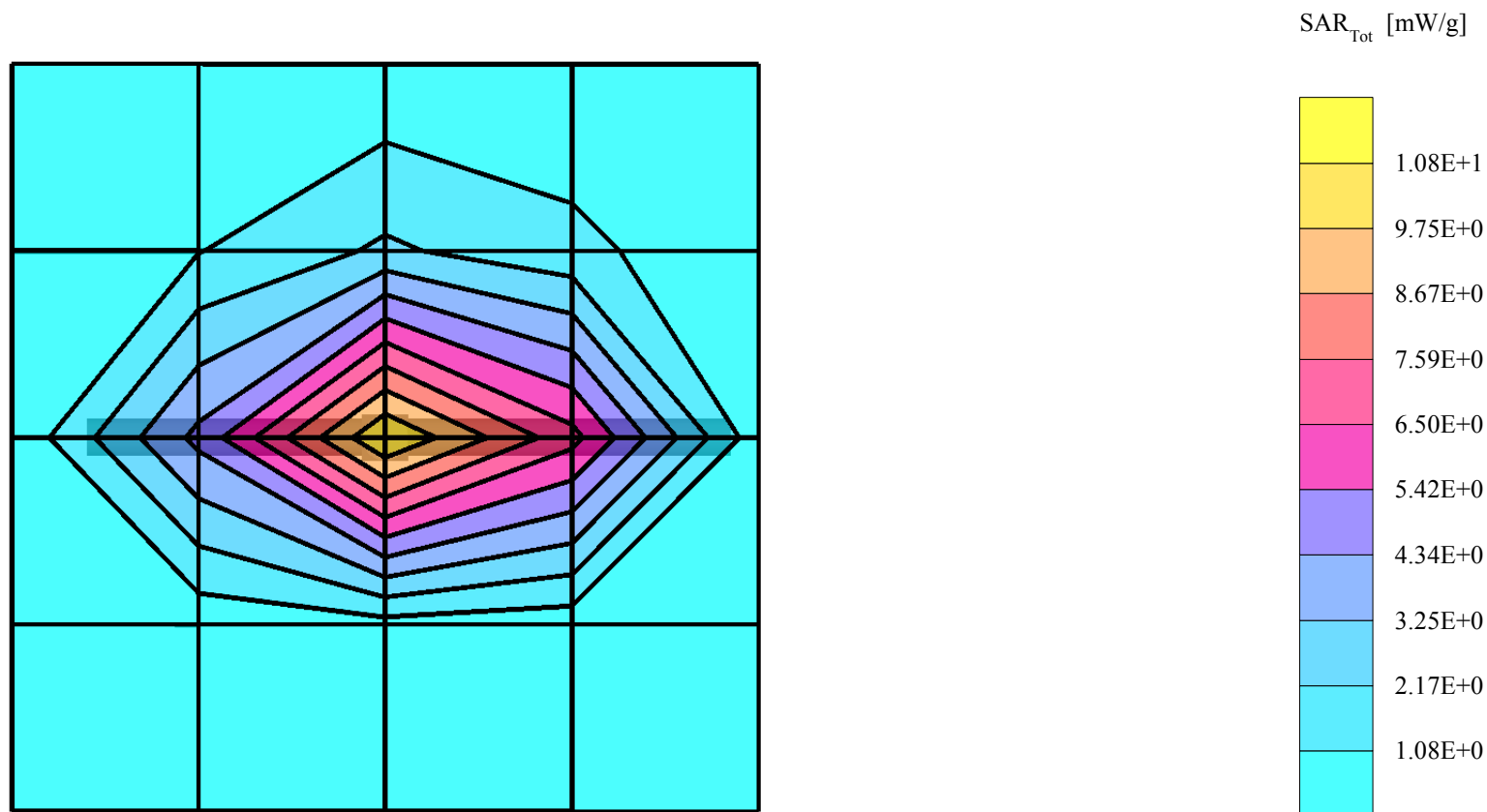
Probe: ET3DV6 - SN1505; ConvF(5.00,5.00,5.00)

Cubes (2): Peak: 19.2 mW/g  $\pm 0.01$  dB, SAR (1g): 10.5 mW/g  $\pm 0.04$  dB, SAR (10g): 5.51 mW/g  $\pm 0.06$  dB, (Worst-case extrapolation)

Penetration depth: 9.1 (8.3, 10.3) [mm]

Powerdrift: 0.08 dB

Liquid Temperature (°C): 21.5



## Dipole 1900 MHz, Body Validation

SAM 3 (PCS - Brain / Muscle Tissue)

Frequency: 1900 MHz; Crest factor: 1.0

Validation 1900MHz - Muscle Tissue:  $\sigma = 1.52$  mho/m  $\epsilon_r = 51.8$   $\rho = 1.00$  g/cm<sup>3</sup>

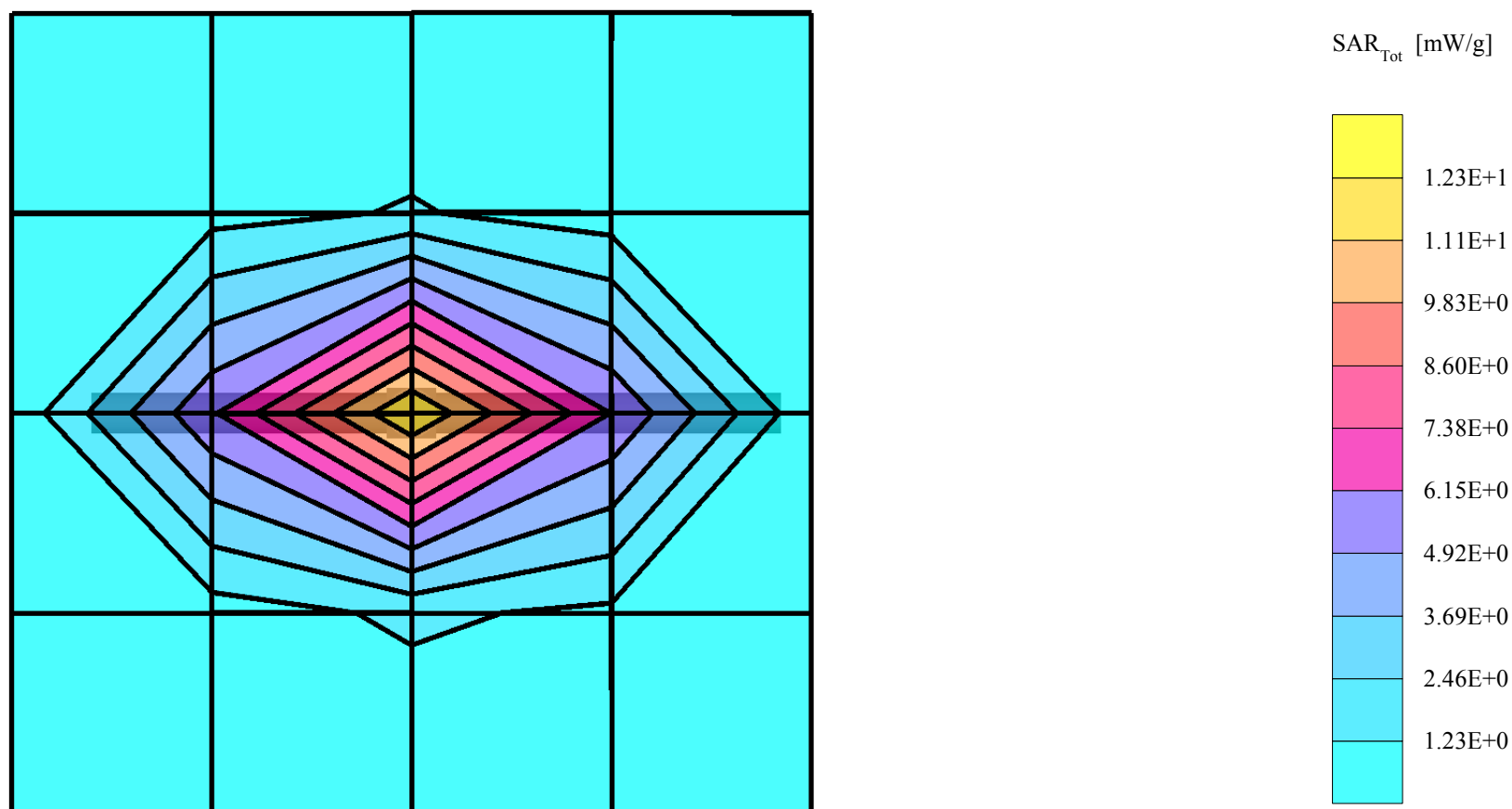
Probe: ET3DV6 - SN1505; ConvF(5.00,5.00,5.00)

Cubes (2): Peak: 16.9 mW/g  $\pm 0.08$  dB, SAR (1g): 9.71 mW/g  $\pm 0.06$  dB, SAR (10g): 5.17 mW/g  $\pm 0.04$  dB, (Advanced extrapolation)

Penetration depth: 9.4 (9.2, 9.8) [mm]

Powerdrift: -0.10 dB

Liquid Temperature (°C): 21.1



**APPENDIX B: MEASUREMENT SCANS**

## NPM-10, GSM 850, Channel 251, Left Touch Position with Spider Accessory Cover

SAM 1 (Cellular - Brain Tissue) Phantom

Frequency: 849 MHz; Crest factor: 8.0

Cellular Band - Brain Tissue:  $\sigma = 0.90$  mho/m  $\epsilon_r = 40.9$   $\rho = 1.00$  g/cm<sup>3</sup>

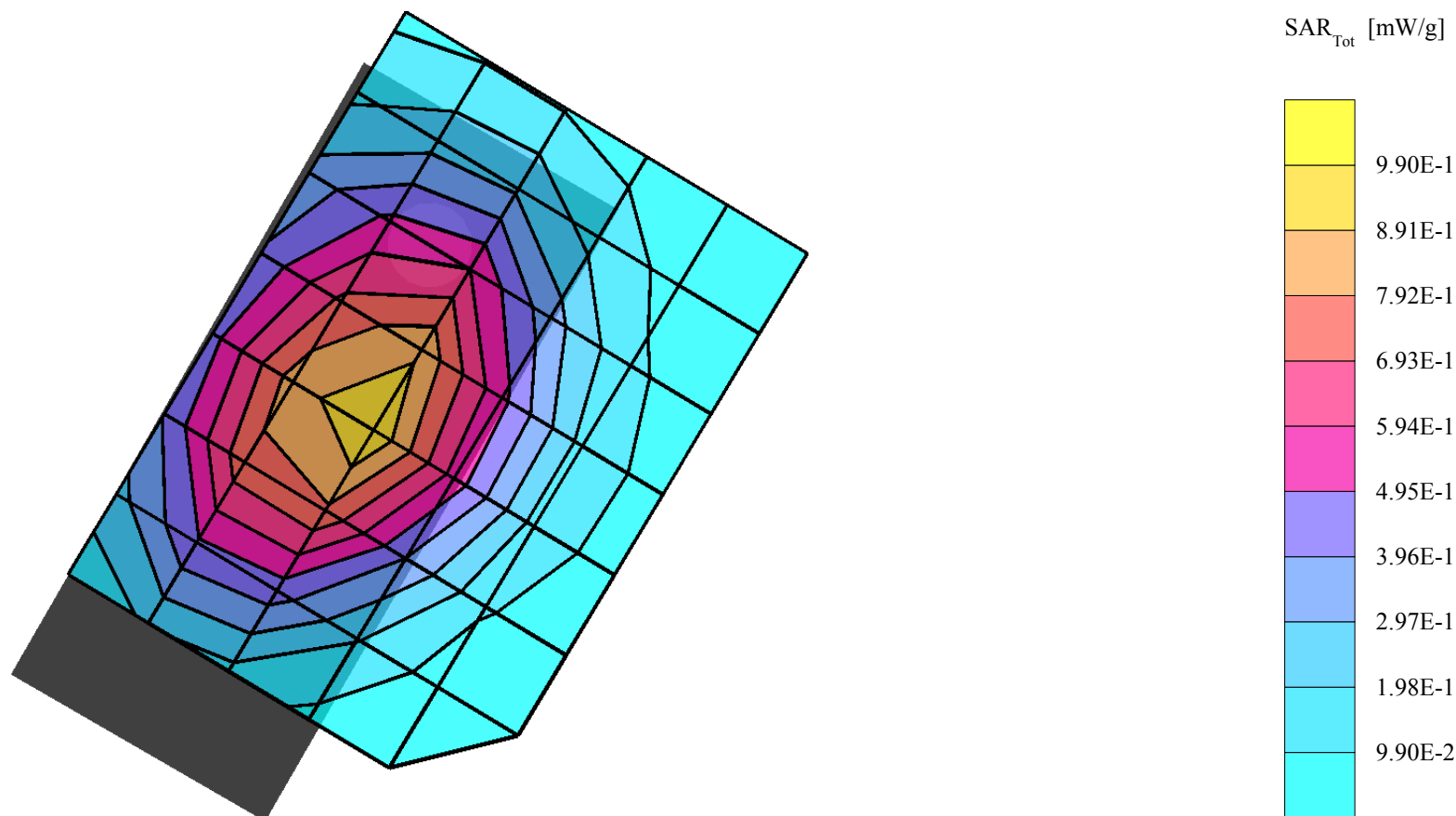
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cube 5x5x7: SAR (1g): 0.953 mW/g, SAR (10g): 0.659 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Powerdrift: -0.10 dB

Liquid Temperature (°C): 21.2



## NPM-10, GSM 850, Channel 251, Left Tilt Position with Spider Accessory Cover

SAM 1 (Cellular - Brain Tissue) Phantom

Frequency: 849 MHz; Crest factor: 8.0

Cellular Band - Brain Tissue:  $\sigma = 0.90$  mho/m  $\epsilon_r = 40.9$   $\rho = 1.00$  g/cm<sup>3</sup>

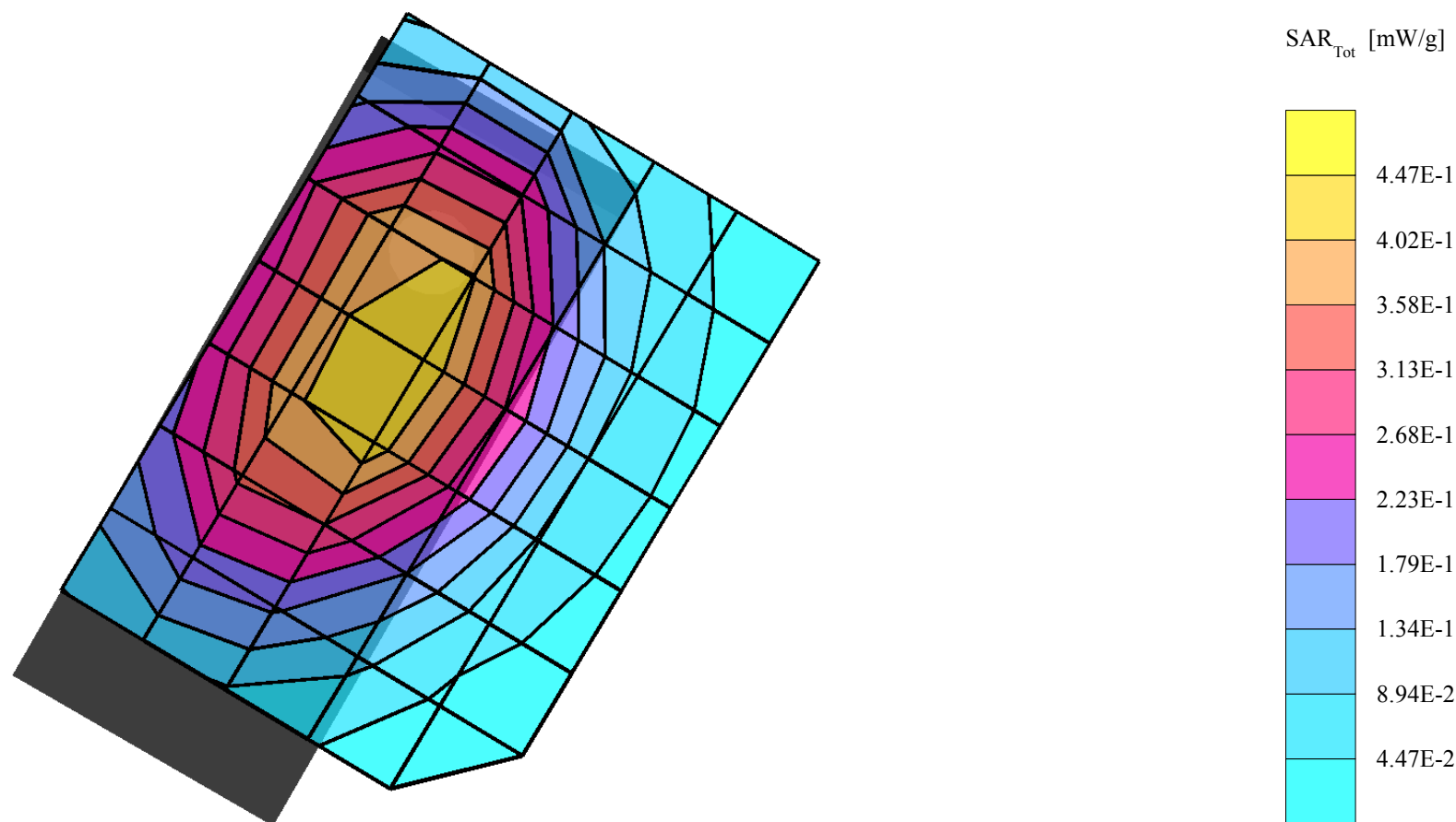
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cube 5x5x7: SAR (1g): 0.448 mW/g, SAR (10g): 0.314 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Powerdrift: -0.05 dB

Liquid Temperature (°C): 21.2



## NPM-10, GSM 850, Channel 251, Right Touch Position with Spider Accessory Cover

SAM 1 (Cellular - Brain Tissue) Phantom

Frequency: 849 MHz; Crest factor: 8.0

Cellular Band - Brain Tissue:  $\sigma = 0.90$  mho/m  $\epsilon_r = 40.9$   $\rho = 1.00$  g/cm<sup>3</sup>

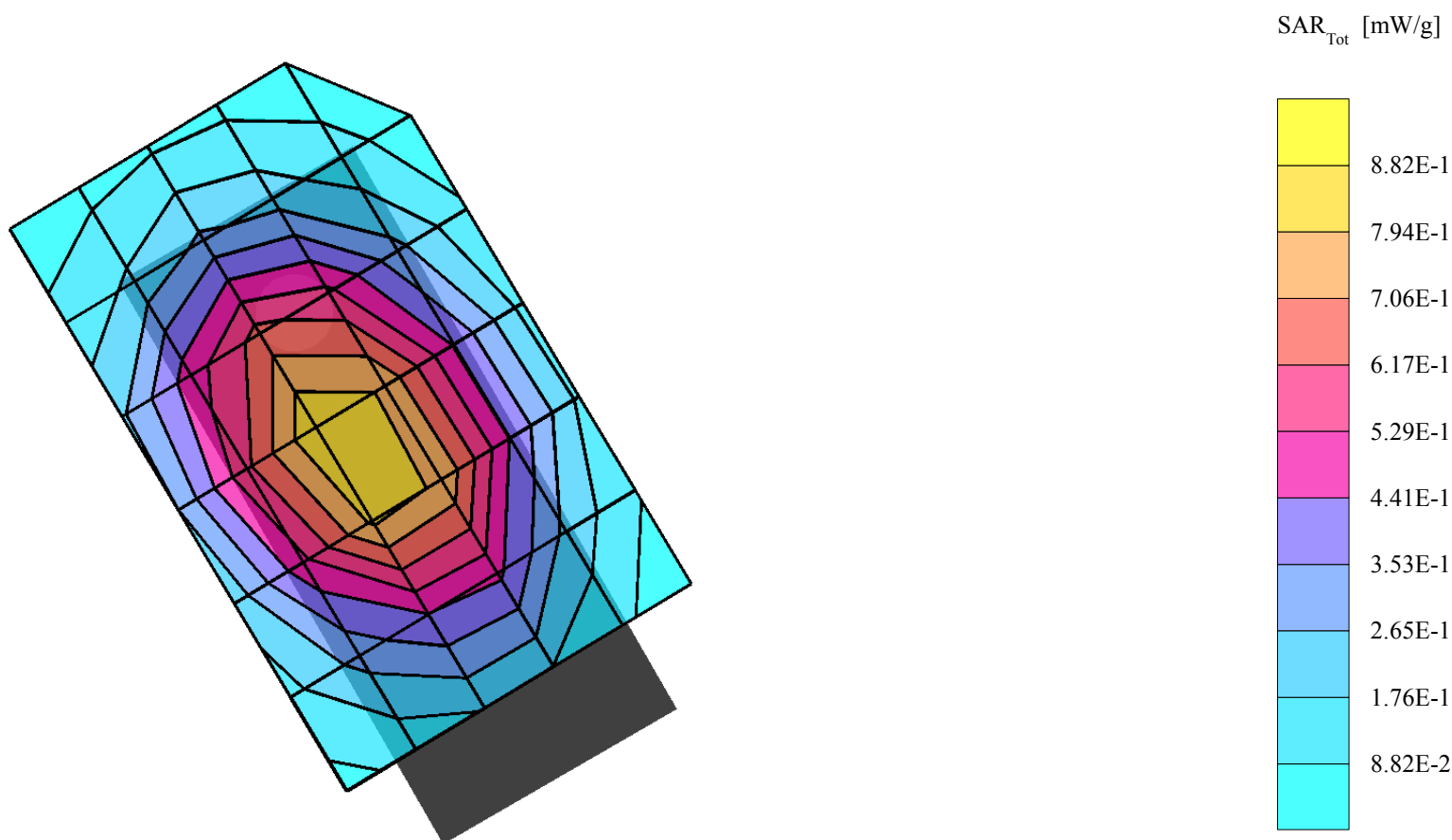
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cube 5x5x7: SAR (1g): 0.884 mW/g, SAR (10g): 0.614 mW/g, (Worst-case extrapolation)

Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0

Powerdrift: -0.01 dB

Liquid Temperature (°C): 21.3



## NPM-10, GSM 850, Channel 190, Right Tilt Position with Spider Accessory Cover

SAM 1 (Cellular - Brain Tissue) Phantom

Frequency: 837 MHz; Crest factor: 8.0

Cellular Band - Brain Tissue:  $\sigma = 0.92$  mho/m  $\epsilon_r = 41.3$   $\rho = 1.00$  g/cm<sup>3</sup>

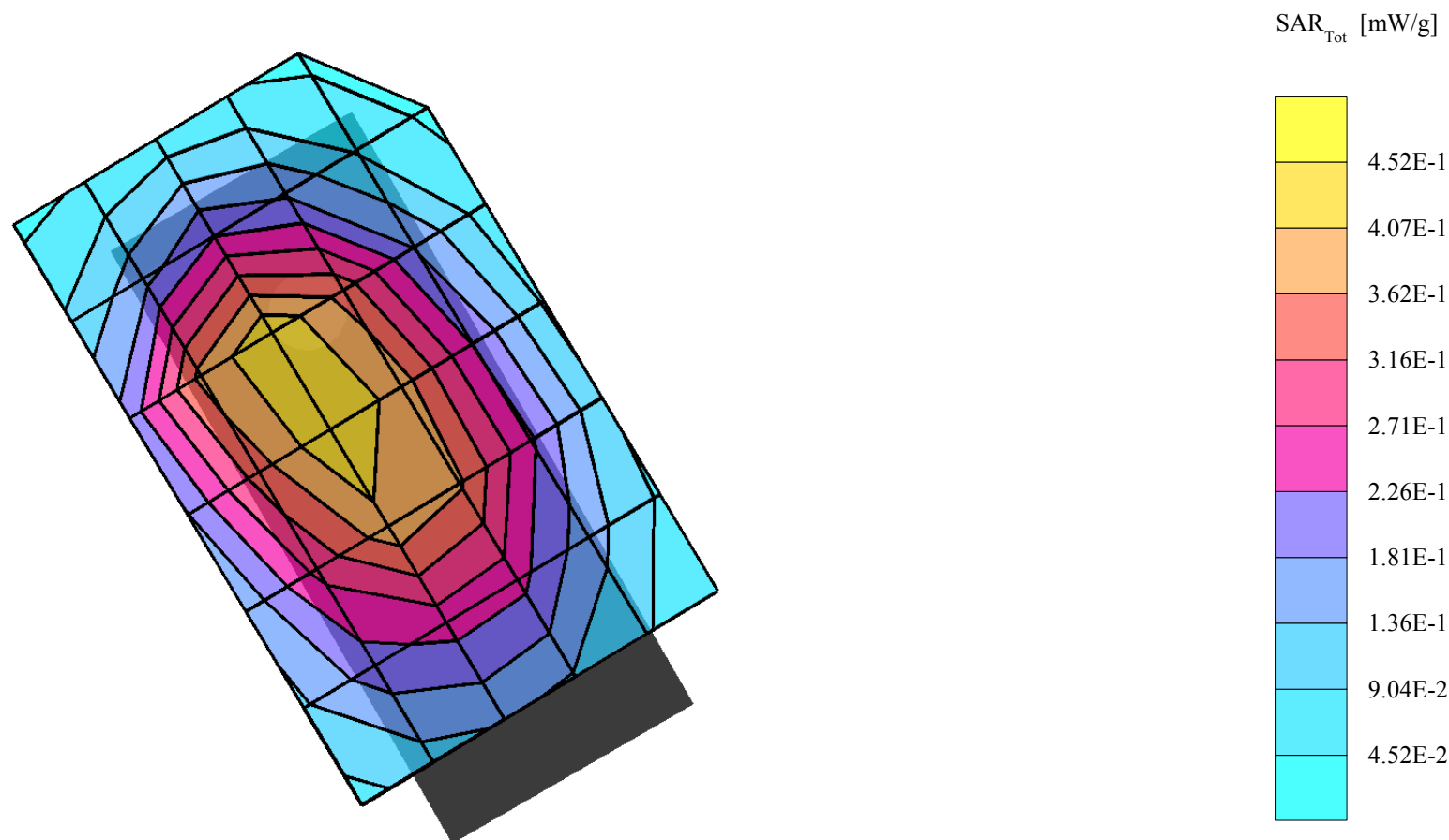
Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cubes (2): SAR (1g): 0.442 mW/g  $\pm 0.10$  dB, SAR (10g): 0.308 mW/g  $\pm 0.12$  dB, (Worst-case extrapolation)

Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0

Powerdrift: -0.12 dB

Liquid Temperature (°C): 21.5



## NPM-10, GSM 850, Channel 190, Flat Position - Back of Phone with 1.5cm Spacer, Spider Accessory Cover and HDE-2 Headset

SAM 2 (Cellular - Muscle Tissue) Phantom

Frequency: 837 MHz; Crest factor: 8.0

Cellular Band - Muscle Tissue:  $\sigma = 0.96$  mho/m  $\epsilon_r = 54.4$   $\rho = 1.00$  g/cm<sup>3</sup>

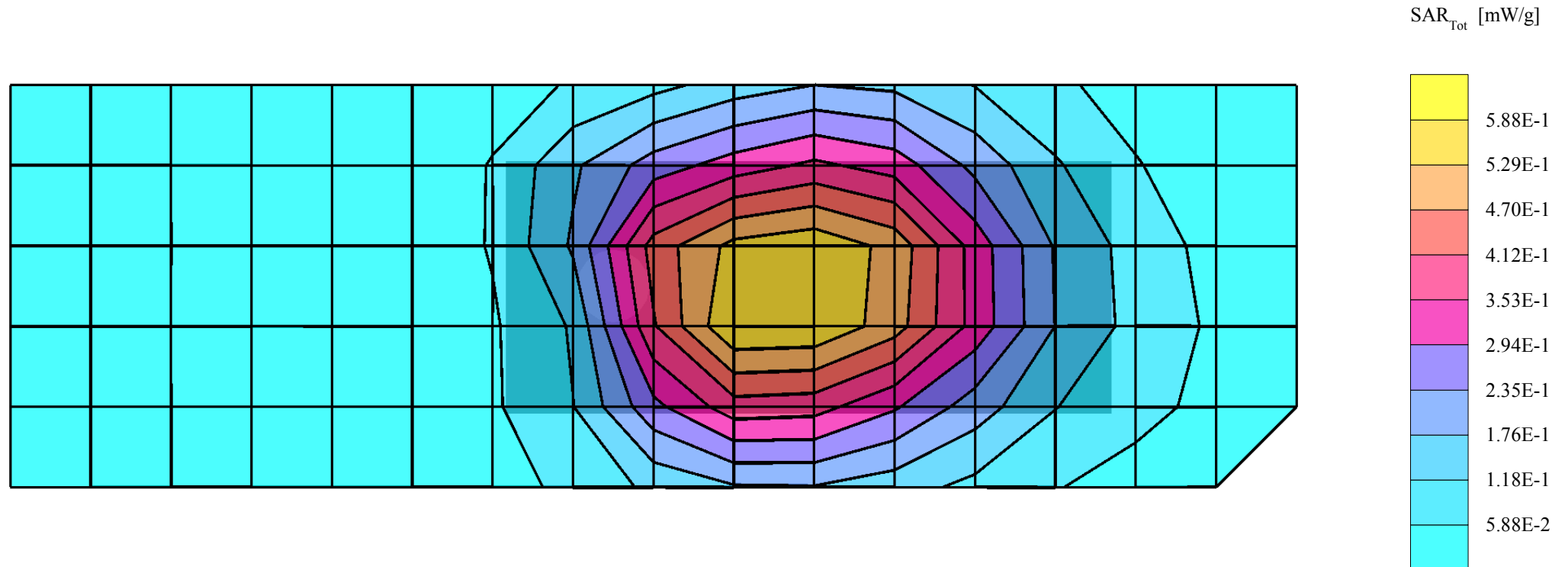
Probe: ET3DV6 - SN1505; ConvF(6.70,6.70,6.70)

Cube 5x5x7: SAR (1g): 0.592 mW/g, SAR (10g): 0.420 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 12.0

Powerdrift: -0.00 dB

Liquid Temperature (°C): 21.6



# GMLNPM-10, GSM 1900, Channel 661, Left Touch Position with Original Cover and BLC-2 Battery

SAM 3 (PCS - Brain / Muscle Tissue) Phantom

Frequency: 1880 MHz; Crest factor: 8.0

PCS Band - Brain Tissue:  $\sigma = 1.44$  mho/m  $\epsilon_r = 38.3$   $\rho = 1.00$  g/cm<sup>3</sup>

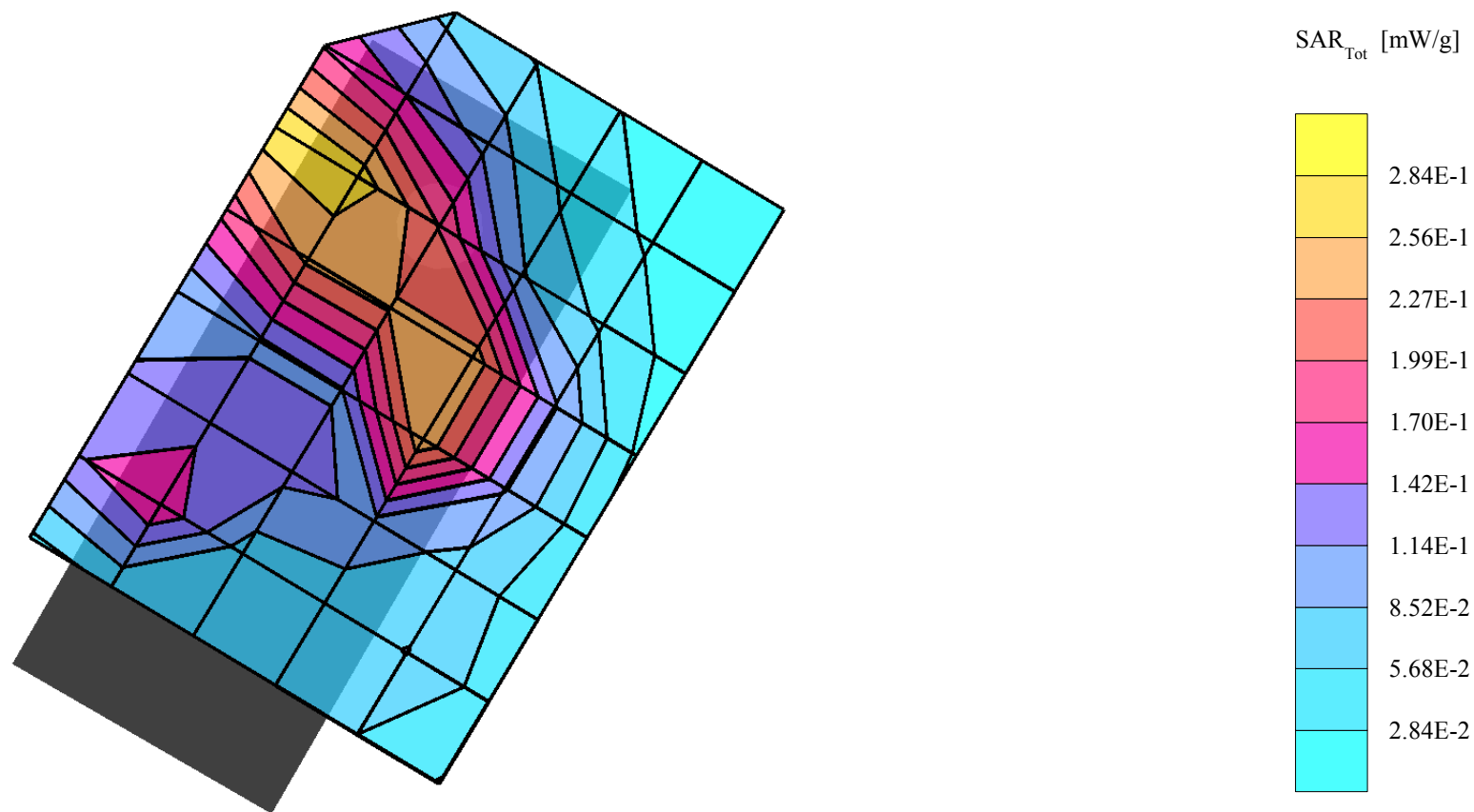
Probe: ET3DV6 - SN1505; ConvF(5.60,5.60,5.60)

Cubes (2): SAR (1g): 0.284 mW/g  $\pm 0.11$  dB, SAR (10g): 0.157 mW/g  $\pm 0.11$  dB, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Powerdrift: -0.04 dB

Liquid Temperature (°C): 20.0



# GMLNPM-10, GSM 1900, Channel 661, Left Tilt Position with Spider Active Cover and BLC-2 Battery

SAM 3 (PCS - Brain / Muscle Tissue) Phantom

Frequency: 1880 MHz; Crest factor: 8.0

PCS Band - Brain Tissue:  $\sigma = 1.44$  mho/m  $\epsilon_r = 38.3$   $\rho = 1.00$  g/cm<sup>3</sup>

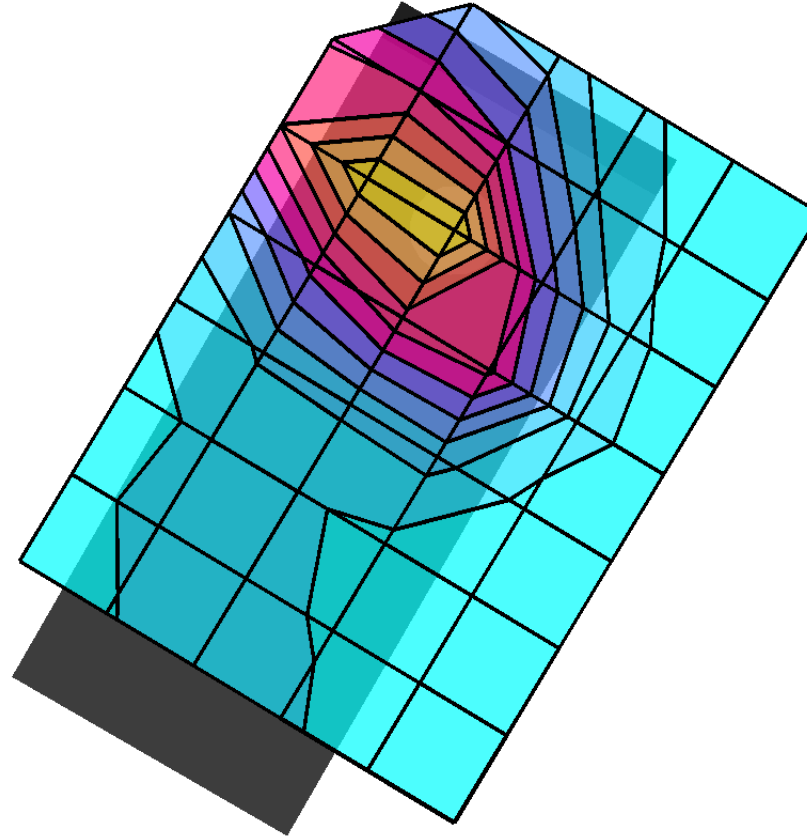
Probe: ET3DV6 - SN1505; ConvF(5.60,5.60,5.60)

Cube 5x5x7: SAR (1g): 0.400 mW/g, SAR (10g): 0.226 mW/g, (Worst-case extrapolation)

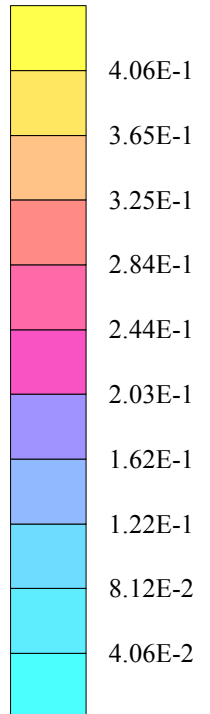
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Powerdrift: -0.01 dB

Liquid Temperature (°C): 20.0



SAR<sub>Tot</sub> [mW/g]



# GMLNPM-10, GSM 1900, Channel 661, Right Touch Position with Original Cover and BLC-2 Battery

SAM 3 (PCS - Brain / Muscle Tissue) Phantom

Frequency: 1880 MHz; Crest factor: 8.0

PCS Band - Brain Tissue:  $\sigma = 1.44$  mho/m  $\epsilon_r = 38.3$   $\rho = 1.00$  g/cm<sup>3</sup>

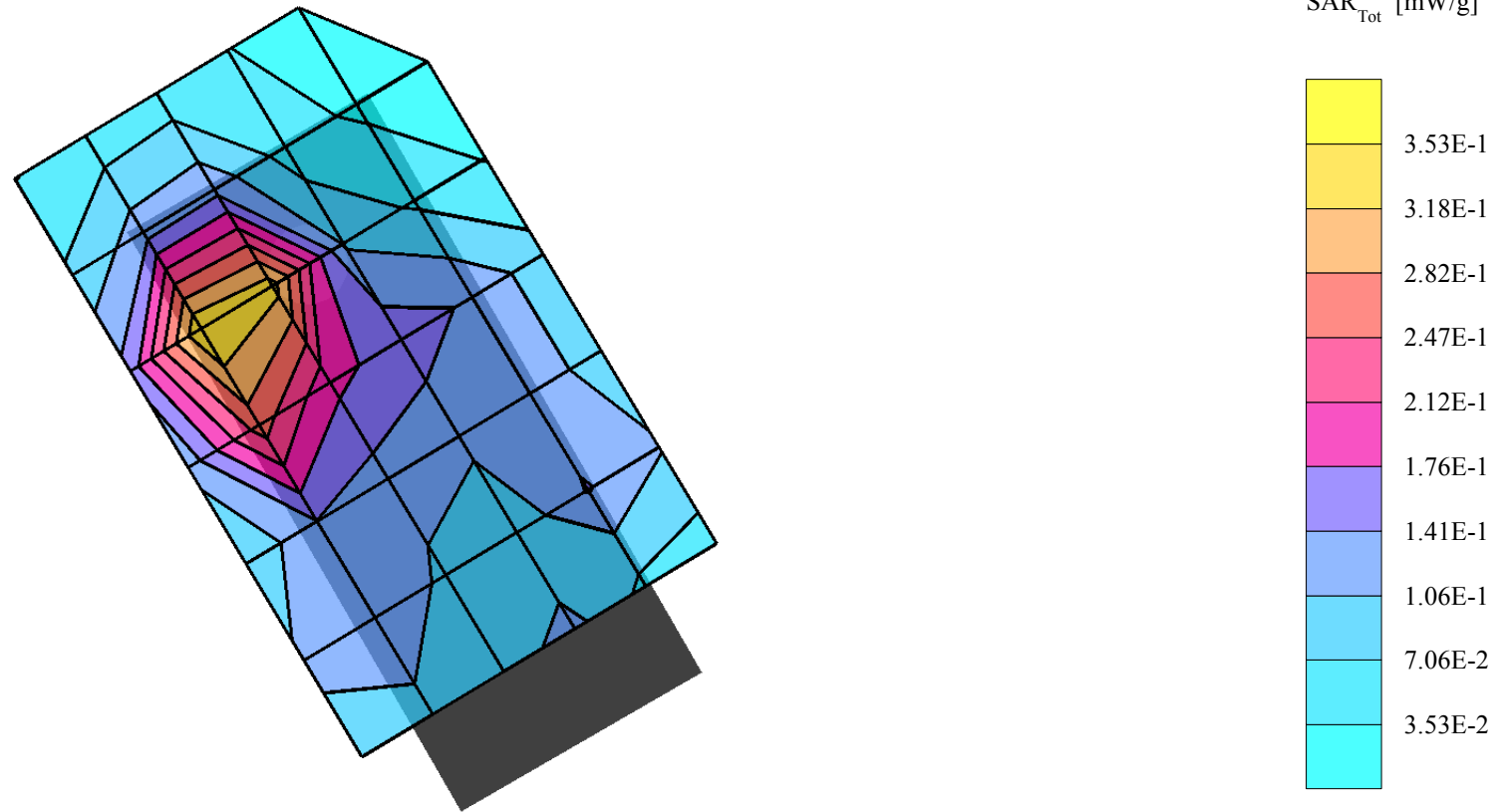
Probe: ET3DV6 - SN1505; ConvF(5.60,5.60,5.60)

Cube 5x5x7: SAR (1g): 0.378 mW/g, SAR (10g): 0.199 mW/g, (Worst-case extrapolation)

Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0

Powerdrift: -0.02 dB

Liquid Temperature (°C): 20.0



# GMLNPM-10, GSM 1900, Channel 661, Right Tilt Position with Spider Active Cover and BLC-2 Battery

SAM 3 (PCS - Brain / Muscle Tissue) Phantom

Frequency: 1880 MHz; Crest factor: 8.0

PCS Band - Brain Tissue:  $\sigma = 1.44$  mho/m  $\epsilon_r = 38.3$   $\rho = 1.00$  g/cm<sup>3</sup>

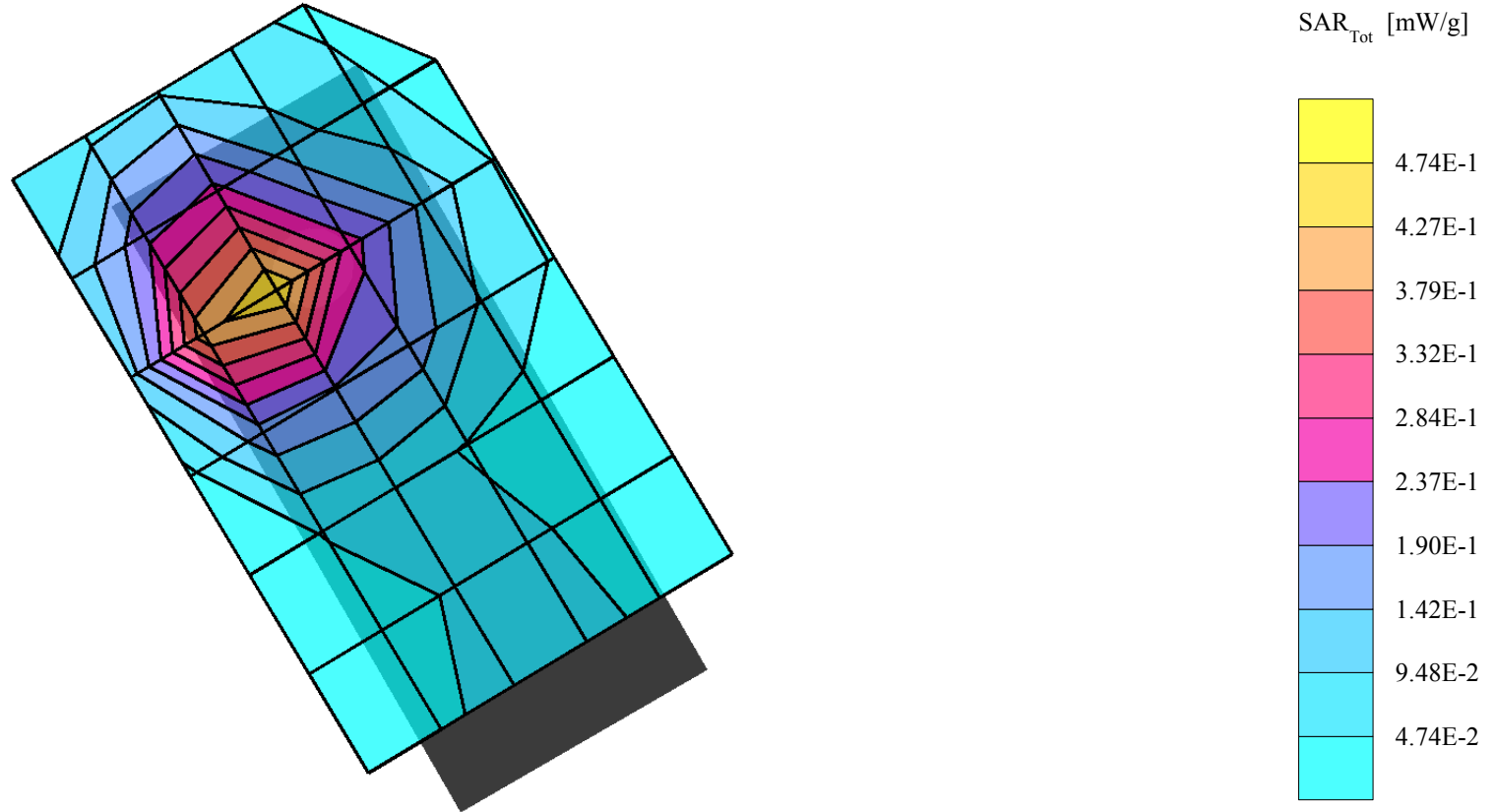
Probe: ET3DV6 - SN1505; ConvF(5.60,5.60,5.60)

Cube 5x5x7: SAR (1g): 0.455 mW/g, SAR (10g): 0.246 mW/g, (Worst-case extrapolation)

Coarse: Dx = 19.0, Dy = 14.0, Dz = 10.0

Powerdrift: -0.10 dB

Liquid Temperature (°C): 20.0



# GMLNPM-10, GSM 1900, Channel 661, Flat Position - Back of Phone with 15mm Spacer, RITA B4.0T Active Cover, BLC-2 Battery and HDE-2 Headset

SAM 3 (PCS - Brain / Muscle Tissue) Phantom

Frequency: 1880 MHz; Crest factor: 8.0

PCS Band - Muscle Tissue:  $\sigma = 1.49$  mho/m  $\epsilon_r = 51.8$   $\rho = 1.00$  g/cm<sup>3</sup>

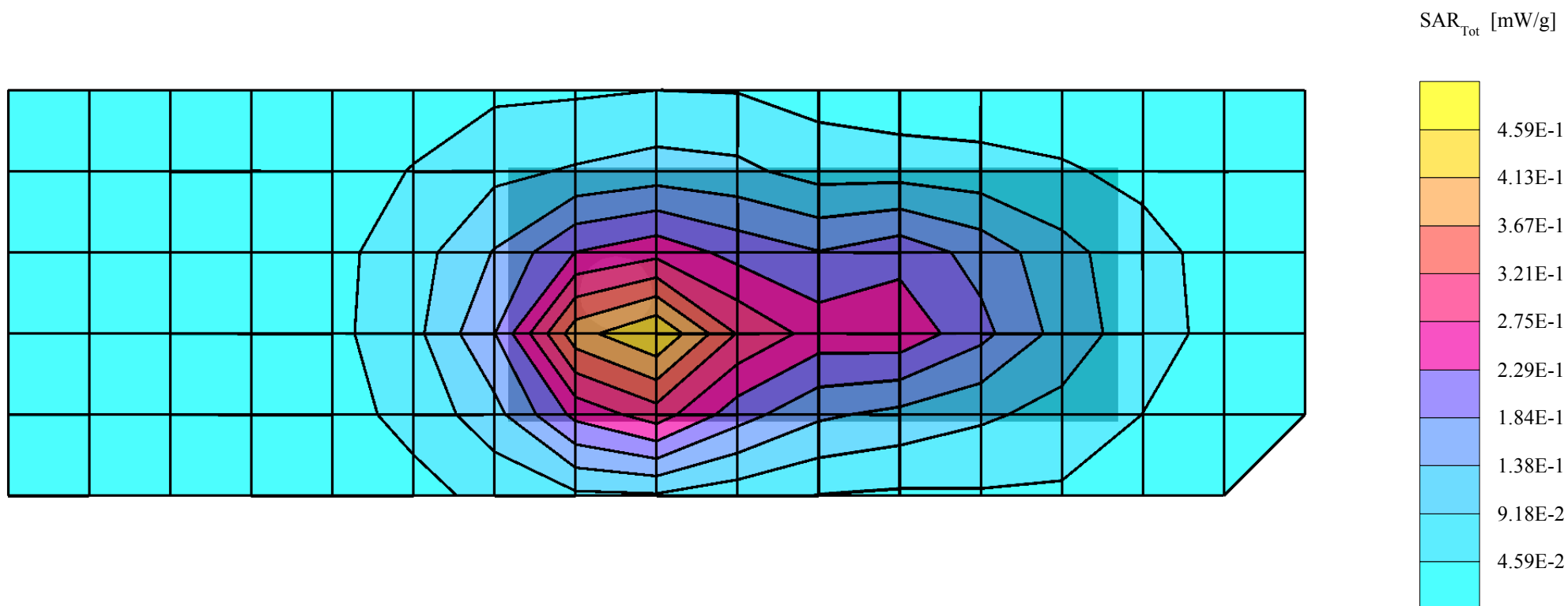
Probe: ET3DV6 - SN1505; ConvF(5.00,5.00,5.00)

Cube 5x5x7: SAR (1g): 0.440 mW/g, SAR (10g): 0.258 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 12.0

Powerdrift: -0.05 dB

Liquid Temperature (°C): 21.1



## NPM-10, GSM 850, Channel 251, Left Touch Position with Spider Accessory Cover

SAM 1 (Cellular - Brain Tissue) Phantom

Frequency: 849 MHz; Crest factor: 8.0

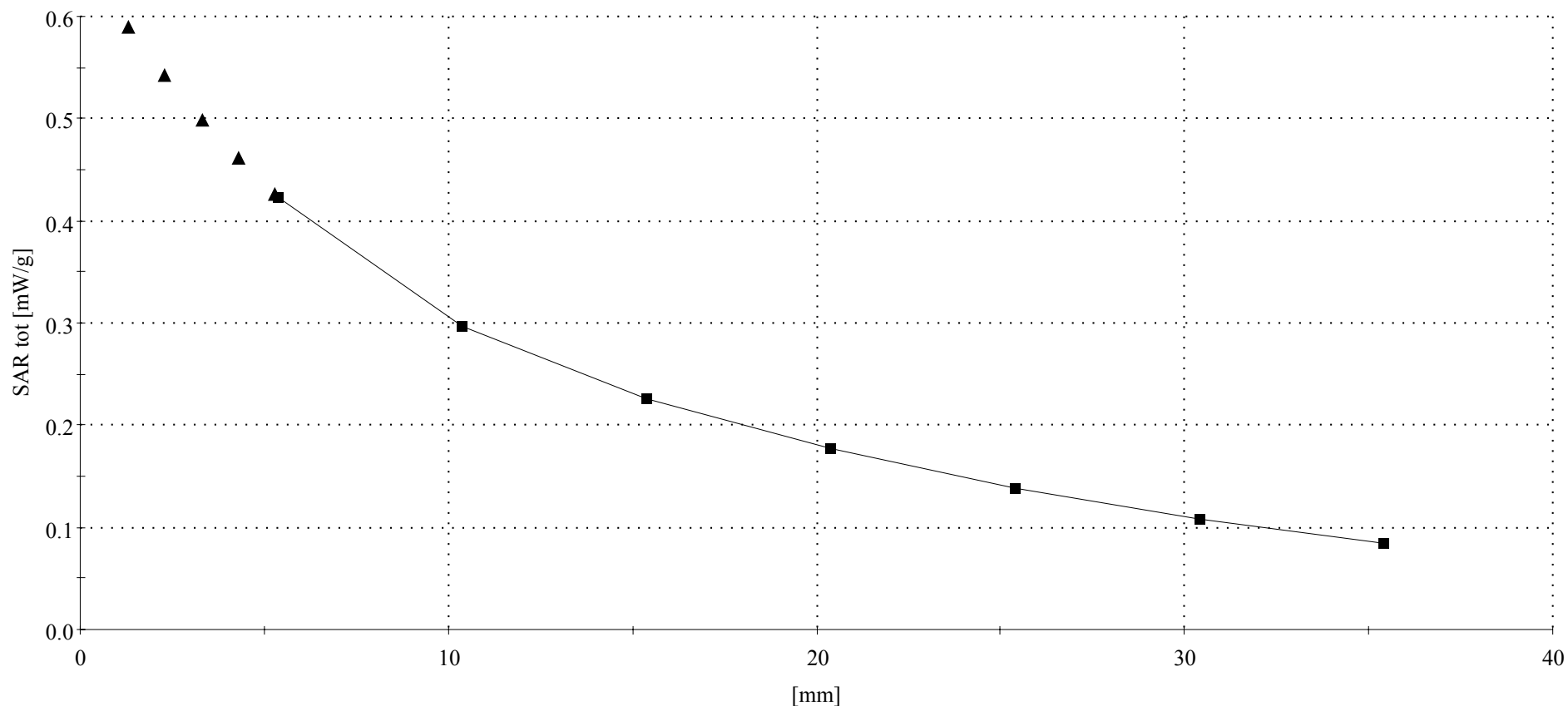
Cellular Band - Brain Tissue:  $\sigma = 0.90$  mho/m  $\epsilon_r = 40.9$   $\rho = 1.00$  g/cm<sup>3</sup>

Probe: ET3DV6 - SN1505; ConvF(7.00,7.00,7.00)

Cube 5x5x7: SAR (1g): 0.953 mW/g, SAR (10g): 0.659 mW/g, (Worst-case extrapolation)

Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0

Liquid Temperature (°C): 21.2



## NPM-10, GSM 850, Channel 190, Flat Position - Back of Phone with 1.5cm Spacer, Spider Accessory Cover and HDE-2 Headset

SAM 2 (Cellular - Muscle Tissue) Phantom

Frequency: 837 MHz; Crest factor: 8.0

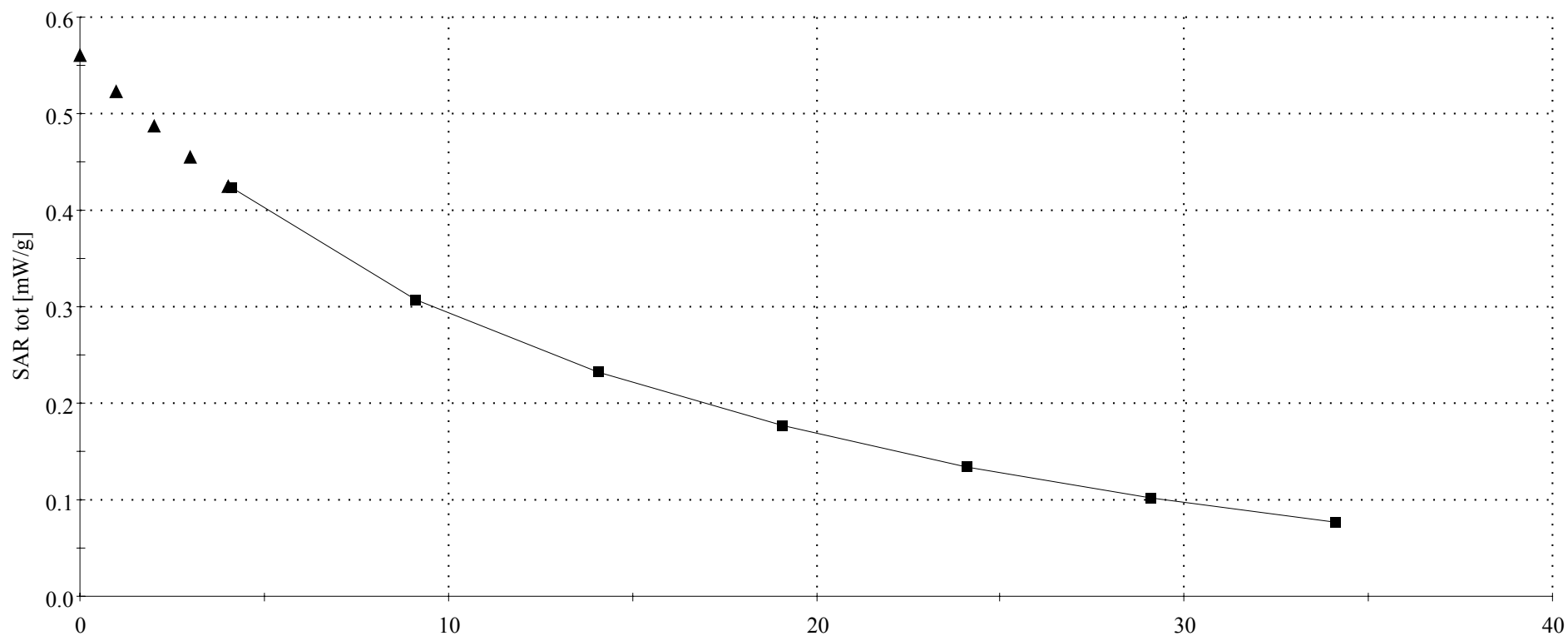
Cellular Band - Muscle Tissue:  $\sigma = 0.96$  mho/m  $\epsilon_r = 54.4$   $\rho = 1.00$  g/cm<sup>3</sup>

Probe: ET3DV6 - SN1505; ConvF(6.70,6.70,6.70)

Cube 5x5x7: SAR (1g): 0.592 mW/g, SAR (10g): 0.420 mW/g, (Worst-case extrapolation)

Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0

Liquid Temperature (°C): 21.6



## GMLNPM-10, GSM 1900, Channel 661, Right Tilt Position with Spider Active Cover and BLC-2 Battery

SAM 3 (PCS - Brain / Muscle Tissue) Phantom

Frequency: 1880 MHz; Crest factor: 8.0

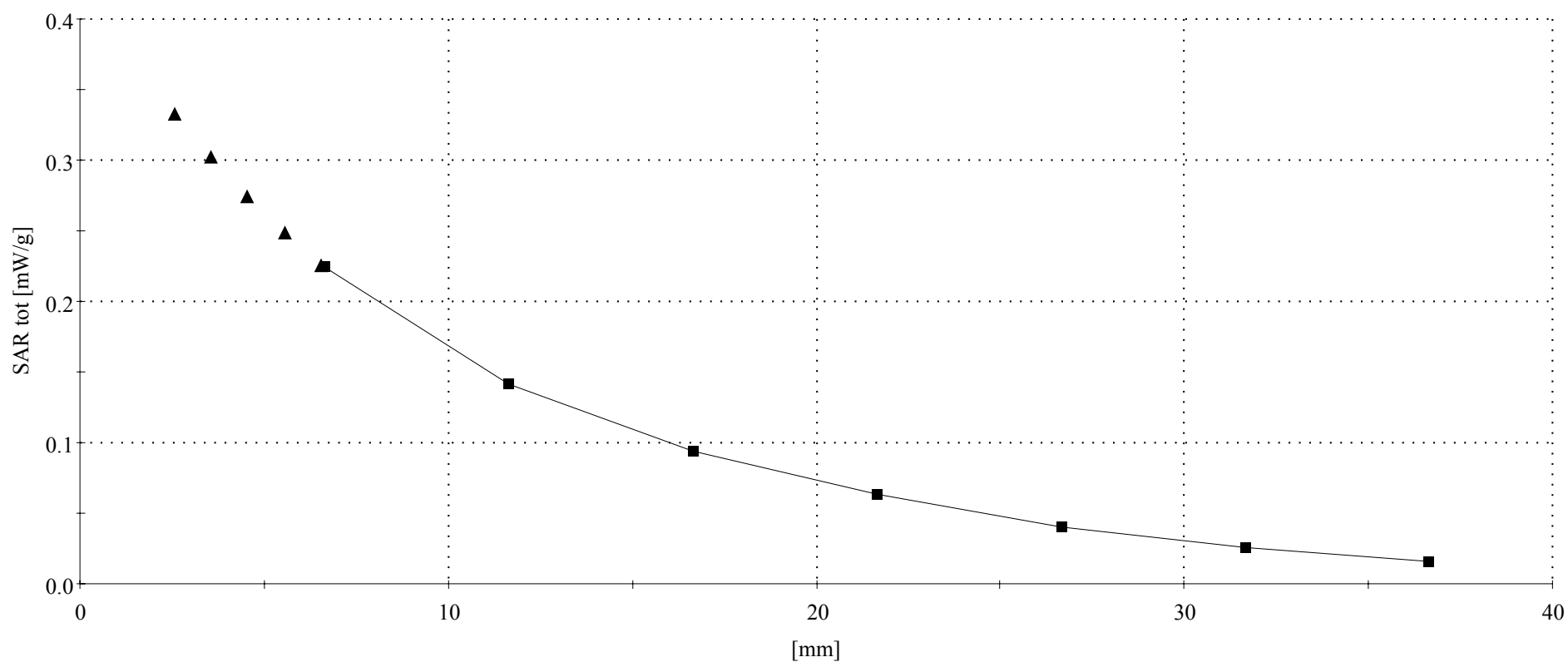
PCS Band - Brain Tissue:  $\sigma = 1.44$  mho/m  $\epsilon_r = 38.3$   $\rho = 1.00$  g/cm<sup>3</sup>

Probe: ET3DV6 - SN1505; ConvF(5.60,5.60,5.60)

Cube 5x5x7: SAR (1g): 0.455 mW/g, SAR (10g): 0.246 mW/g, (Worst-case extrapolation)

Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0

Liquid Temperature (°C): 20.0



# GMLNPM-10, GSM 1900, Channel 661, Flat Position - Back of Phone with 15mm Spacer, RITA B4.0T Active Cover, BLC-2 Battery and HDE-2 Headset

SAM 3 (PCS - Brain / Muscle Tissue) Phantom

Frequency: 1880 MHz; Crest factor: 8.0

PCS Band - Muscle Tissue:  $\sigma = 1.49$  mho/m  $\epsilon_r = 51.8$   $\rho = 1.00$  g/cm<sup>3</sup>

Probe: ET3DV6 - SN1505; ConvF(5.00,5.00,5.00)

Cube 5x5x7: SAR (1g): 0.440 mW/g, SAR (10g): 0.258 mW/g, (Worst-case extrapolation)

Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0

Liquid Temperature (°C): 21.1

