



To: Kwok Chan, FCC
From: Paul Moller, Motorola, Inc.
Subject: FCC ID IHDT5YA1 SAR Data
Date: October 2, 1998

cc: John Kalenowsky, Motorola, Inc.

Kwok,

In your memo dated September 22, 1998, in the third paragraph you pointed out that the SAR plots are not centered around the peak SAR location. Yes this is correct. The reason for this is the fact that the location of highest SAR is located at the very edge of the phone, and also at a location on the phantom where it is difficult for the IDX™ SAR measurement system to measure the SAR. This is due to the steep slope of the surface of the phantom and the way the measurement system detects the phantom's surface. The original plots supplied in my memo dated September 11, 1998 and titled: "SAR Test Report for Motorola portable cellular phone (FCC ID IHDT5YA1)", for channel 991 shows the location of peak SAR at the edge of the scan area and thus not captured well. We have re-tested the same phone under the same test conditions except that we have moved the phone by 2mm in the +X direction so as to facilitate the better capture of the peak SAR location. The phones contact with the phantom is the same in all other respects. The attached plots are the results of that test showing this time an SAR value of 1.35mW/g as measured on the right side talk position, on channel 991 with the antenna in the retracted position. This is very close to the value of 1.36mW/g previously measured. Figure A below is the picture of the phone with the new contour plot overlaid. This would serve to replace Figure 5 in the referenced report.



Figure A

If you have any further questions please feel free to contact me directly at 847-523-5210.

Paul Moller

File : c:/idx3/SYSTEM/SARMEAS3/data/Normal/98100102_ZOOM.VLT
Start : 1-Oct-98 09:38:01 am End : 1-Oct-98 09:45:20 am

Radio Type : Motorola
Model Number : SWF3042A
Serial Number : DFF901BC
Frequency : 824.04 MHz
Peak Trans. Pwr : 0.500 W
Start Trans. Pwr : 0.500 W
Antenna Type : Helical
Antenna Posn. : In
Phantom Type : Head
Phantom Posn. : Right Ear
Scan Type : ZOOM/SAR
Probe Name : 034
Field Type : E Field
Orientation : 0 Degrees

Mixture Type = Brain
Mixture Dielectric Constant = 41.000
Mixture Conductivity = 0.850

Comment :
ch991/pwr2/Rd1.7/JK

Robot : ROBOT1

Probe Offset = 0.28 cm
Sensor Factor = 0.0108
Conversion Factor = 0.691

034 Amplifier Channel Settings : 0.160 0.132 0.104

Max Location : X = -7.750, Y = -2.750, Z = 0.000 (cm) Value = 23.309

Measured Values (volts) =
2.271E-002 1.745E-002 1.276E-002 1.019E-002 8.208E-003 6.373E-003
4.532E-003 3.192E-003 2.673E-003 2.814E-003 2.839E-003

Calc. Voltage @ Surface (Vs) = 0.0267

Voltage @ 1.00 cm (Vt) = 0.0154

Ave. Voltage (Vs+Vt)/2 = 0.0210

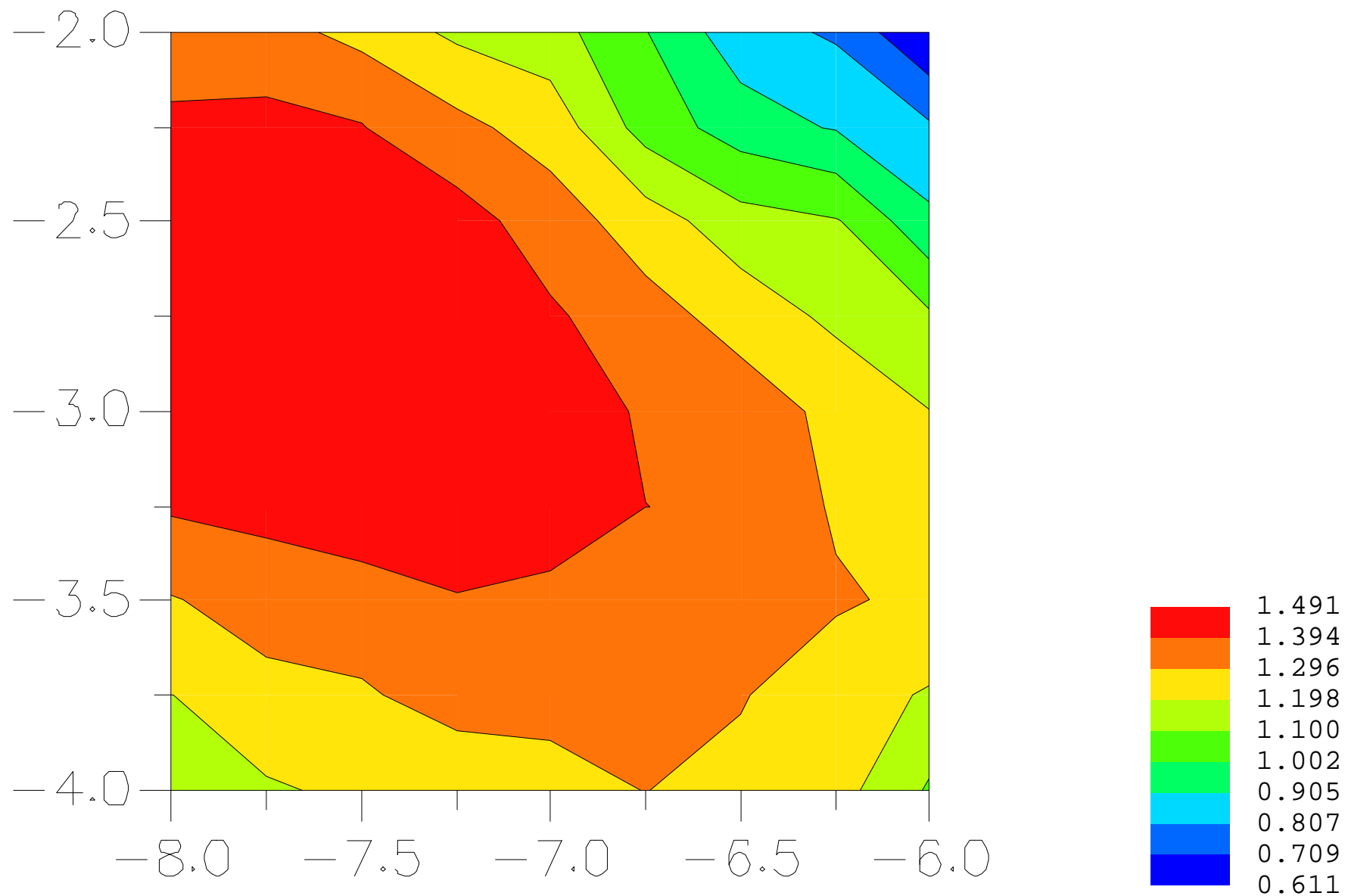
Ave. SAR over 1 g (mW/g) = 1.3463

File : 98100102_ZOOM.VLT

Start : 1-Oct-98 09:38:01 am End : 1-Oct-98 09:45:20 am

Motorola/SWF3042A/DFP901BC;824.04MHz;0.500W;Helical/In;

Head/Right Ear;ZOOM/SAR;034/E Field/0 DegreesBrain/41.000/0.850

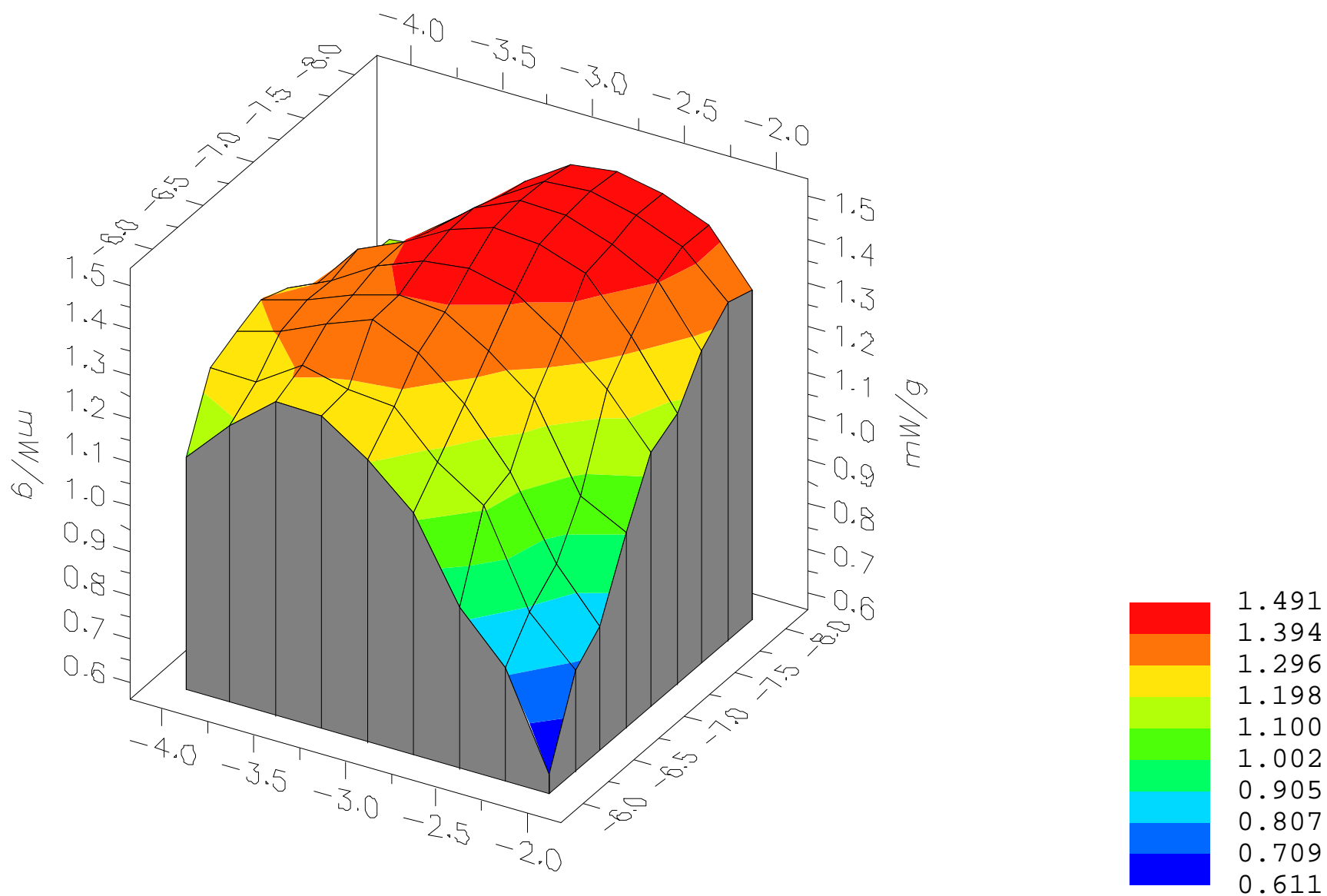


File : 98100102_ZOOM.VLT

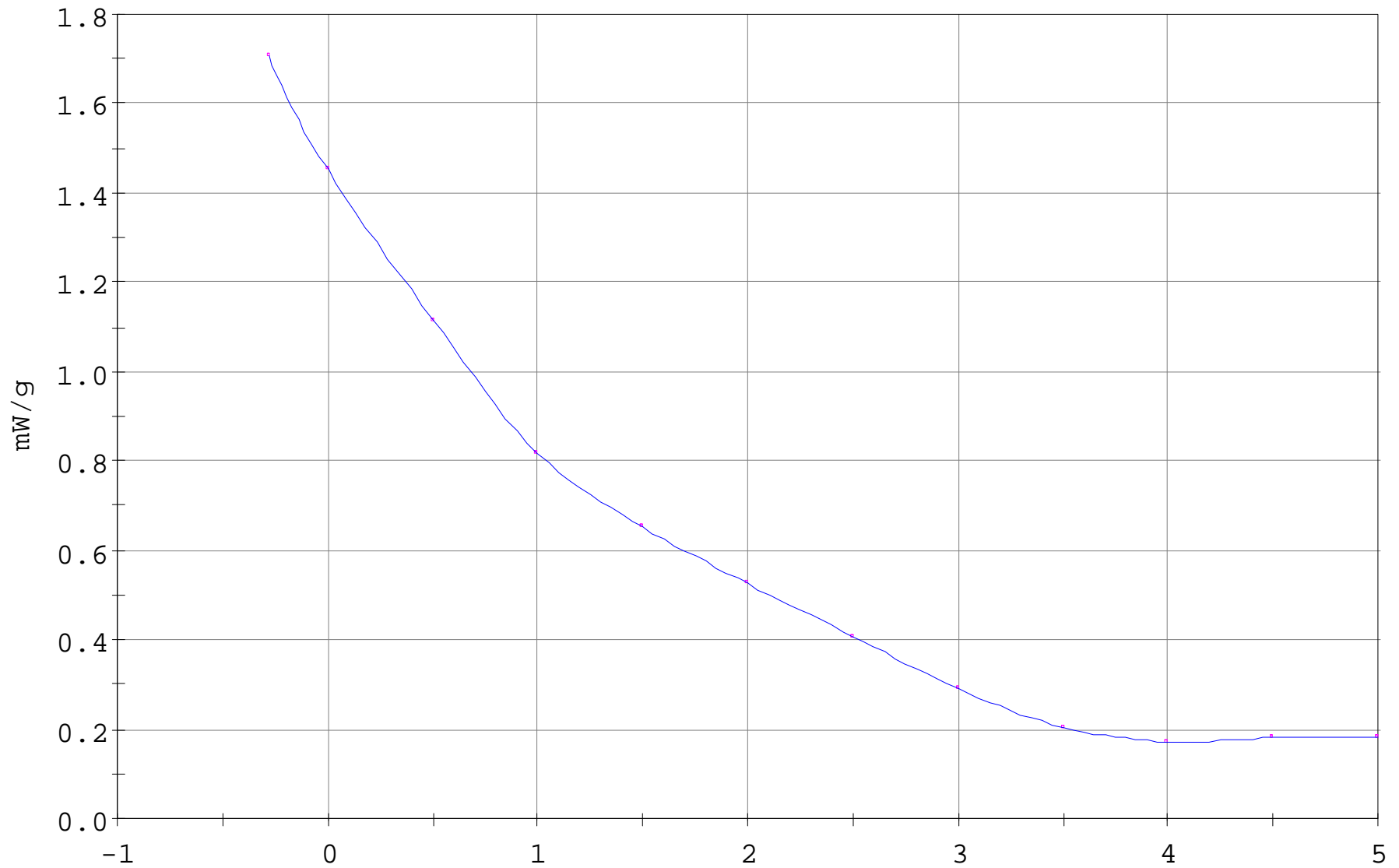
Start : 1-Oct-98 09:38:01 am End : 1-Oct-98 09:45:20 am

Motorola/SWF3042A/DFP901BC;824.04MHz;0.500W;Helical/In;

Head/Right Ear;ZOOM/SAR;034/E Field/0 DegreesBrain/41.000/0.850



SAR Scan
File : 98100102_ZOOM.VLT
Start : 1-Oct-98 09:38:01 am End : 1-Oct-98 09:45:20 am
Motorola/SWF3042A/DF901BC;824.04MHz;0.500W;Helical/In;
Head/Right Ear;ZOOM/SAR;034/E Field/0 DegreesBrain/41.000/0.850



File : c:/idx3/SYSTEM/SARMEAS3/data/Normal/98100102_AREA.VLT
Start : 1-Oct-98 09:29:38 am End : 1-Oct-98 09:38:01 am

Radio Type : Motorola
Model Number : SWF3042A
Serial Number : DFF901BC
Frequency : 824.04 MHz
Peak Trans. Pwr : 0.500 W
Start Trans. Pwr : 0.500 W
Antenna Type : Helical
Antenna Posn. : In
Phantom Type : Head
Phantom Posn. : Right Ear
Scan Type : AREA
Probe Name : 034
Field Type : E Field
Orientation : 0 Degrees

Mixture Type = Brain
Mixture Dielectric Constant = 41.000
Mixture Conductivity = 0.850

Comment :
ch991/pwr2/Rd1.7/JK

Robot : ROBOT1

Probe Offset = 0.28 cm
Sensor Factor = 0.0108
Conversion Factor = 0.691

034 Amplifier Channel Settings : 0.160 0.132 0.104

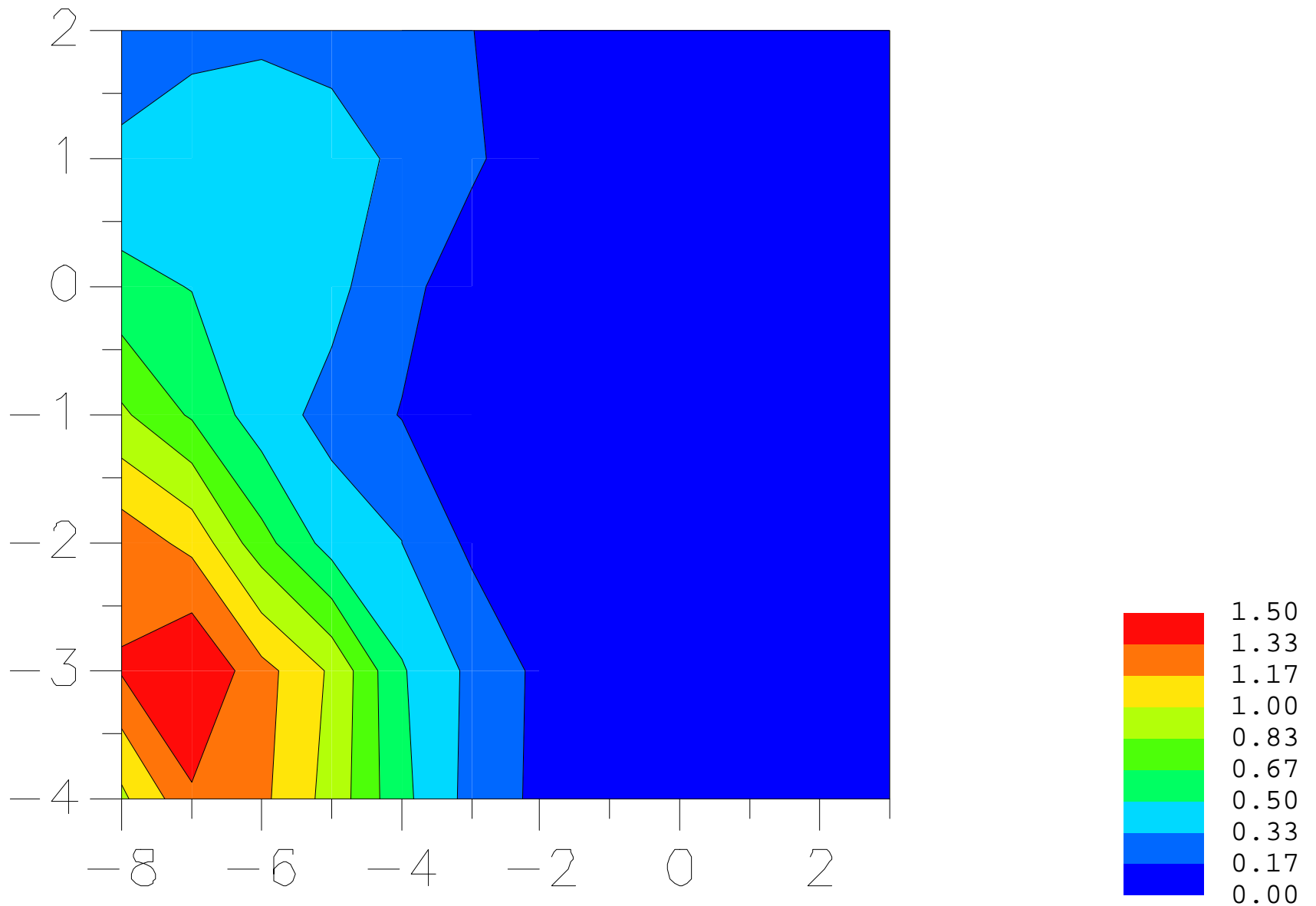
Max Location : X = -7.000, Y = -3.000, Z = 0.000 (cm) Value = 23.416

Area too wide. SAR value not calculated. Will be calculated on zoom scan.

File : 98100102_AREA.VLT

Start : 1-Oct-98 09:29:38 am End : 1-Oct-98 09:38:01 am

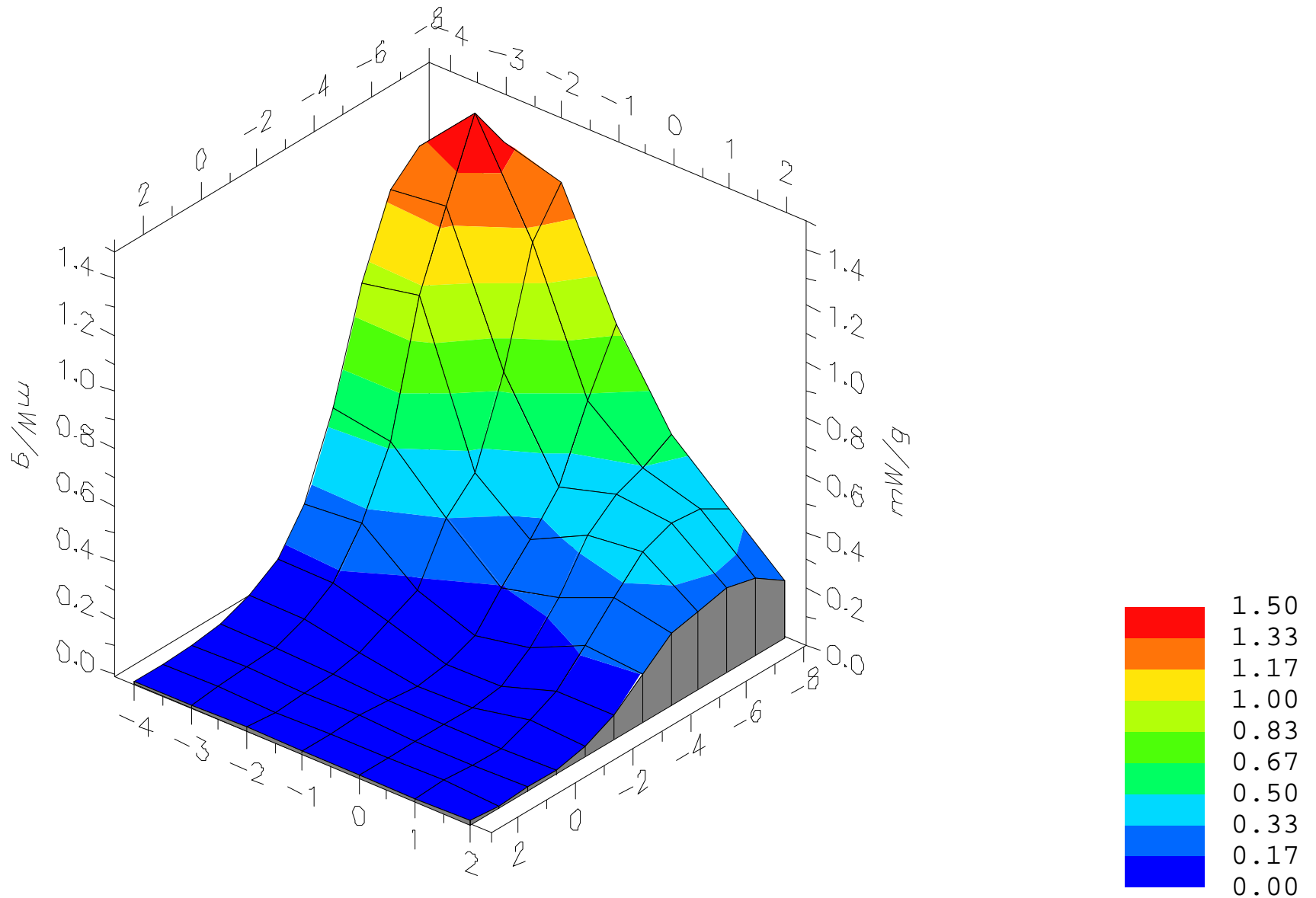
Motorola/SWF3042A/DFE901BC;824.04 MHz;0.500W;Helical/In;
Head/Right Ear;AREA;034/E Field/0 DegreesBrain/41.000/0.850



File : 98100102_AREA.VLT

Start : 1-Oct-98 09:29:38 am End : 1-Oct-98 09:38:01 am

Motorola/SWF3042A/DF901BC;824.04 MHz;0.500W;Helical/In;
Head/Right Ear;AREA;034/E Field/0 DegreesBrain/41.000/0.850



X-Z Plane Slice Y=-3.000
File : 98100102_AREA.VLT
Start : 1-Oct-98 09:29:38 am End : 1-Oct-98 09:38:01 am
Motorola/SWF3042A/DFP901BC;824.04 MHz;0.500W;Helical/In;
Head/Right Ear;AREA;034/E Field/0 DegreesBrain/41.000/0.850

