

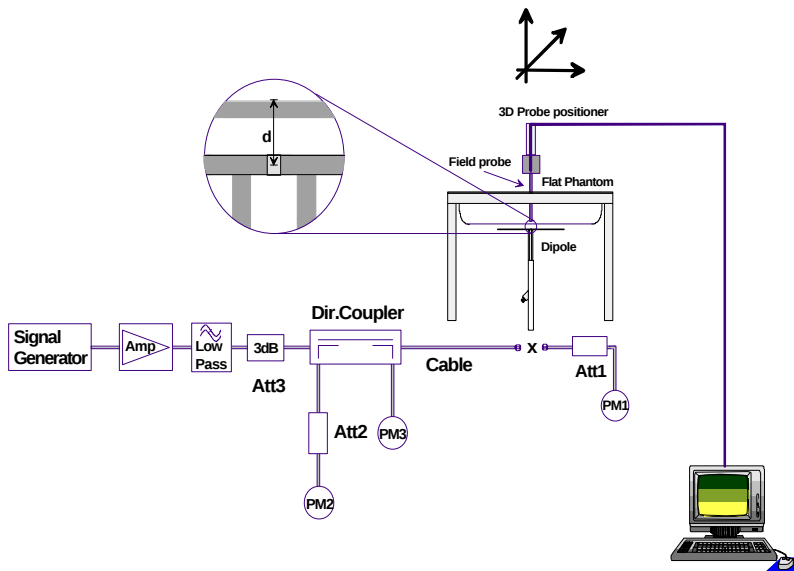
SYSTEM PERFORMANCE CHECK

Prior to the evaluation a system check was performed at the planar section of the SAM phantom using a 900MHz dipole (see system validation procedures). The dielectric parameters of the simulated tissue fluids were measured prior to the system check using an 85070C Dielectric Probe Kit and an 8753E Network Analyzer (see printout of measured fluid dielectric parameters). A forward power of 250mW was applied to the dipole and system was verified to a tolerance of $\pm 10\%$ (see system check test plots).

SYSTEM PERFORMANCE CHECK											
Test Date	Equiv. Tissue	SAR 1g (W/kg)		Dielectric Constant ϵ_r		Conductivity σ (mho/m)		ρ (Kg/m ³)	Ambient Temp.	Fluid Temp.	Fluid Depth
		Target	Measured	Target	Measured	Target	Measured				
01/20/03	900MHz (Brain)	2.78	2.64	41.5 $\pm 5\%$	40.0	0.97 $\pm 5\%$	0.97	1000	23.2 °C	22.7 °C	≥ 15 cm
01/22/03	900MHz (Brain)	2.78	2.69	41.5 $\pm 5\%$	42.2	0.97 $\pm 5\%$	0.99	1000	23.0 °C	23.4 °C	≥ 15 cm

Note(s):

1. The ambient and fluid temperatures were measured prior to, and during, the fluid dielectric parameter check and the system performance check. The temperatures listed in the table above were consistent for all measurement periods.



System Check Setup Diagram



900MHz System Check Setup Photograph

System Performance Check - 900MHz Dipole

SAM Phantom; Flat Section

Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0; 900 MHz Brain: $\sigma = 0.97$ mho/m $\epsilon_r = 40.0$ $\rho = 1.00$ g/cm³

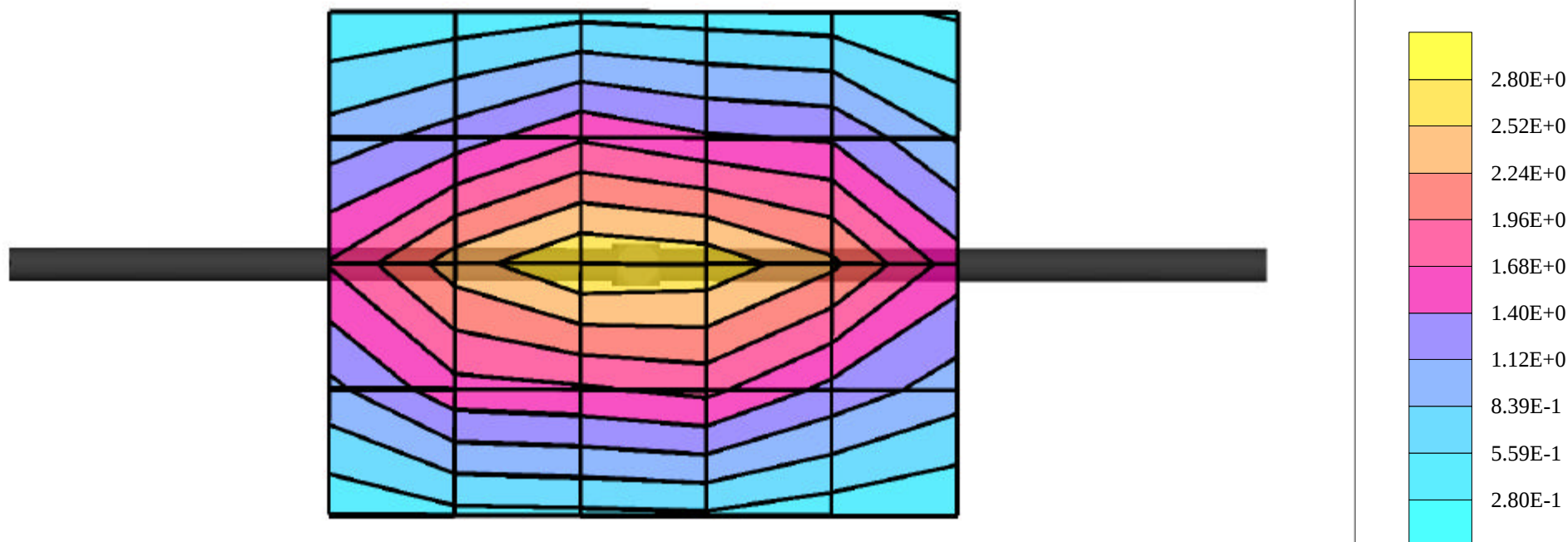
Cube 5x5x7: Peak: 4.32 mW/g, SAR (1g): 2.64 mW/g, SAR (10g): 1.65 mW/g, (Worst-case extrapolation)

Penetration depth: 11.0 (10.1, 12.6) [mm]; Powerdrift: -0.01 dB

Ambient Temp: 23.2°C; Fluid Temp: 22.7°C

Forward Conducted Power: 250 mW

Date Tested: January 20, 2003



900MHz System Performance Check

Measured Fluid Dielectric Parameters (Brain)

January 20, 2003

Frequency	ϵ'	ϵ''
800.000000 MHz	41.2525	19.7778
810.000000 MHz	41.1923	19.7841
820.000000 MHz	41.0703	19.8069
830.000000 MHz	40.9113	19.8137
840.000000 MHz	40.7167	19.7682
850.000000 MHz	40.5467	19.7182
860.000000 MHz	40.3898	19.6256
870.000000 MHz	40.2452	19.5629
880.000000 MHz	40.1791	19.4799
890.000000 MHz	40.1062	19.4704
900.000000 MHz	40.0463	19.4279
910.000000 MHz	39.9254	19.4875
920.000000 MHz	39.7693	19.4794
930.000000 MHz	39.5870	19.4175
940.000000 MHz	39.4706	19.3383
950.000000 MHz	39.4111	19.2820
960.000000 MHz	39.3253	19.2255
970.000000 MHz	39.1967	19.1740
980.000000 MHz	39.1189	19.1270
990.000000 MHz	39.0456	19.1027
1.000000000 GHz	38.9457	19.0874

System Performance Check - 900MHz Dipole

SAM Phantom; Flat Section

Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0; 900 MHz Brain: $\sigma = 0.99$ mho/m $\epsilon_r = 42.2$ $\rho = 1.00$ g/cm³

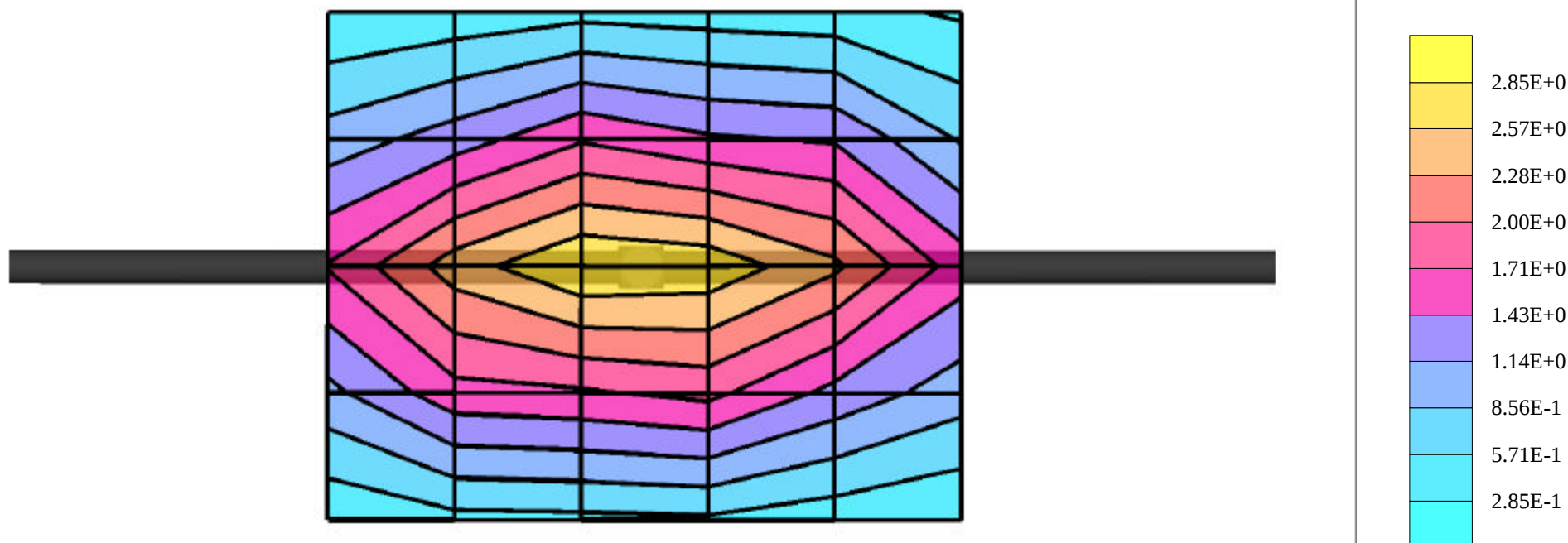
Cube 5x5x7: Peak: 4.41 mW/g, SAR (1g): 2.69 mW/g, SAR (10g): 1.68 mW/g, (Worst-case extrapolation)

Penetration depth: 11.1 (10.0, 12.7) [mm]; Powerdrift: -0.03 dB

Ambient Temp: 23.2°C; Fluid Temp: 23.4°C

Forward Conducted Power: 250 mW

Date Tested: January 22, 2003



900MHz System Performance Check

Measured Fluid Dielectric Parameters (Brain)

January 22, 2003

Frequency	ϵ'	ϵ''
800.000000 MHz	43.3516	20.1355
810.000000 MHz	43.2387	20.0978
820.000000 MHz	43.1176	20.0745
830.000000 MHz	42.9900	19.9955
840.000000 MHz	42.8743	19.9998
850.000000 MHz	42.7084	19.9252
860.000000 MHz	42.6266	19.9111
870.000000 MHz	42.4653	19.8597
880.000000 MHz	42.3624	19.8538
890.000000 MHz	42.2575	19.8290
900.000000 MHz	42.1716	19.7246
910.000000 MHz	42.0775	19.6990
920.000000 MHz	41.9824	19.6600
930.000000 MHz	41.8844	19.6181
940.000000 MHz	41.7835	19.5880
950.000000 MHz	41.6394	19.5632
960.000000 MHz	41.5590	19.5477
970.000000 MHz	41.4532	19.5035
980.000000 MHz	41.3108	19.5099
990.000000 MHz	41.2196	19.4911
1.000000000 GHz	41.1367	19.4474