Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Calibration Certificate

Dosimetric E-Field Probe

Type:	**ET3DV6**
Serial Number:	**1577**
Place of Calibration:	**Zurich**
Date of Calibration:	**Apr. 20, 2001**
Calibration Interval:	**12 months**

Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:	Nikolova Neviana
Approved by:	Niels Kuster

Schmid & Partner
Engineering AG

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Probe ET3DV6

SN:1577

Manufactured: April 6, 2001
Calibrated: April 20, 2001

Calibrated for System DASY3

DASY3 - Parameters of Probe: ET3DV6 SN:1577

Sensitivity in Free Space

NormX	**1.94** $\mu V/(V/m)^2$
NormY	**1.80** $\mu V/(V/m)^2$
NormZ	**1.77** $\mu V/(V/m)^2$

Diode Compression

DCP X	**100** mV
DCP Y	**100** mV
DCP Z	**100** mV

Sensitivity in Tissue Simulating Liquid

Head **450 MHz** ε_r **= 43.5 ± 5%** σ **= 0.87 ± 10% mho/m**

ConvF X	**7.44**	extrapolated	Boundary effect:
ConvF Y	**7.44**	extrapolated	Alpha **0.27**
ConvF Z	**7.44**	extrapolated	Depth **3.05**

Head **900 MHz** ε_r **= 42 ± 5%** σ **= 0.97 ± 10% mho/m**

ConvF X	**6.93**	± 7% (k=2)	Boundary effect:
ConvF Y	**6.93**	± 7% (k=2)	Alpha **0.34**
ConvF Z	**6.93**	± 7% (k=2)	Depth **2.74**

Head **1500 MHz** ε_r **= 40.4 ± 5%** σ **= 1.23 ± 10% mho/m**

ConvF X	**6.26**	interpolated	Boundary effect:
ConvF Y	**6.26**	interpolated	Alpha **0.44**
ConvF Z	**6.26**	interpolated	Depth **2.34**

Head **1800 MHz** ε_r **= 40 ± 5%** σ **= 1.40 ± 10% mho/m**

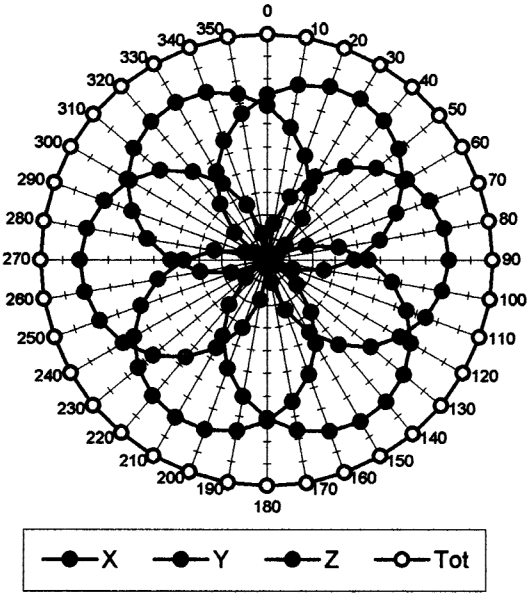
ConvF X	**5.92**	± 7% (k=2)	Boundary effect:
ConvF Y	**5.92**	± 7% (k=2)	Alpha **0.49**
ConvF Z	**5.92**	± 7% (k=2)	Depth **2.13**

Sensor Offset

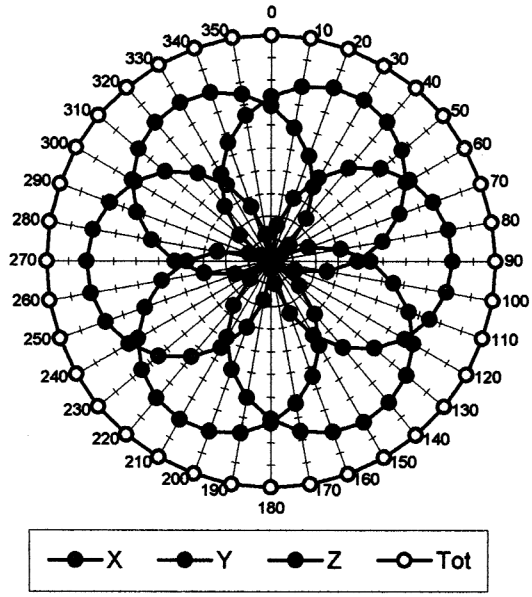
Probe Tip to Sensor Center	**2.7**	mm
Optical Surface Detection	**1.8 ± 0.2**	mm

Receiving Pattern (ϕ), θ = 0°

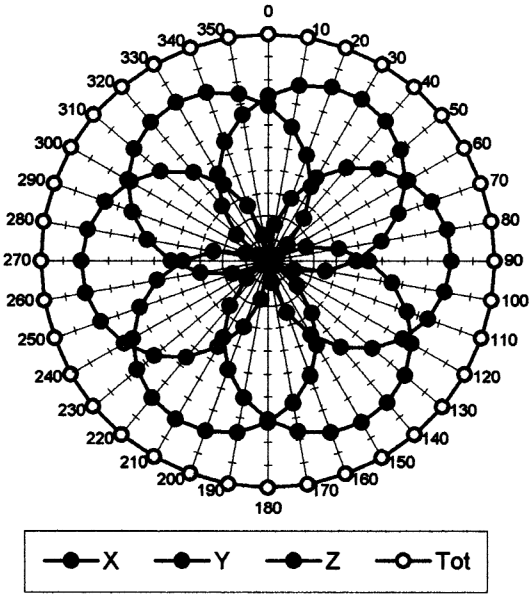
f = 30 MHz, TEM cell ifi110



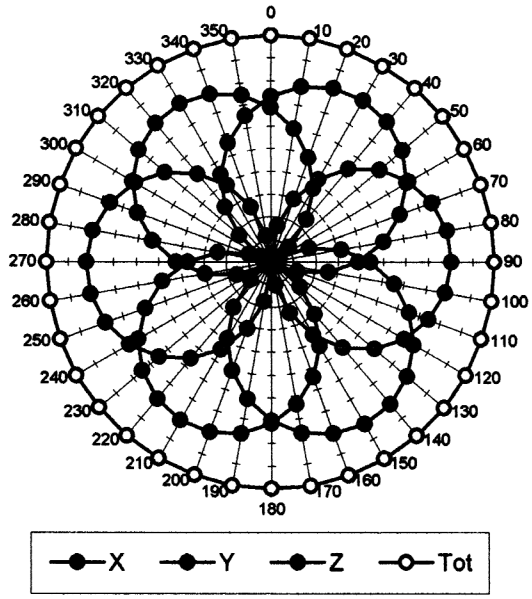
f = 100 MHz, TEM cell ifi110

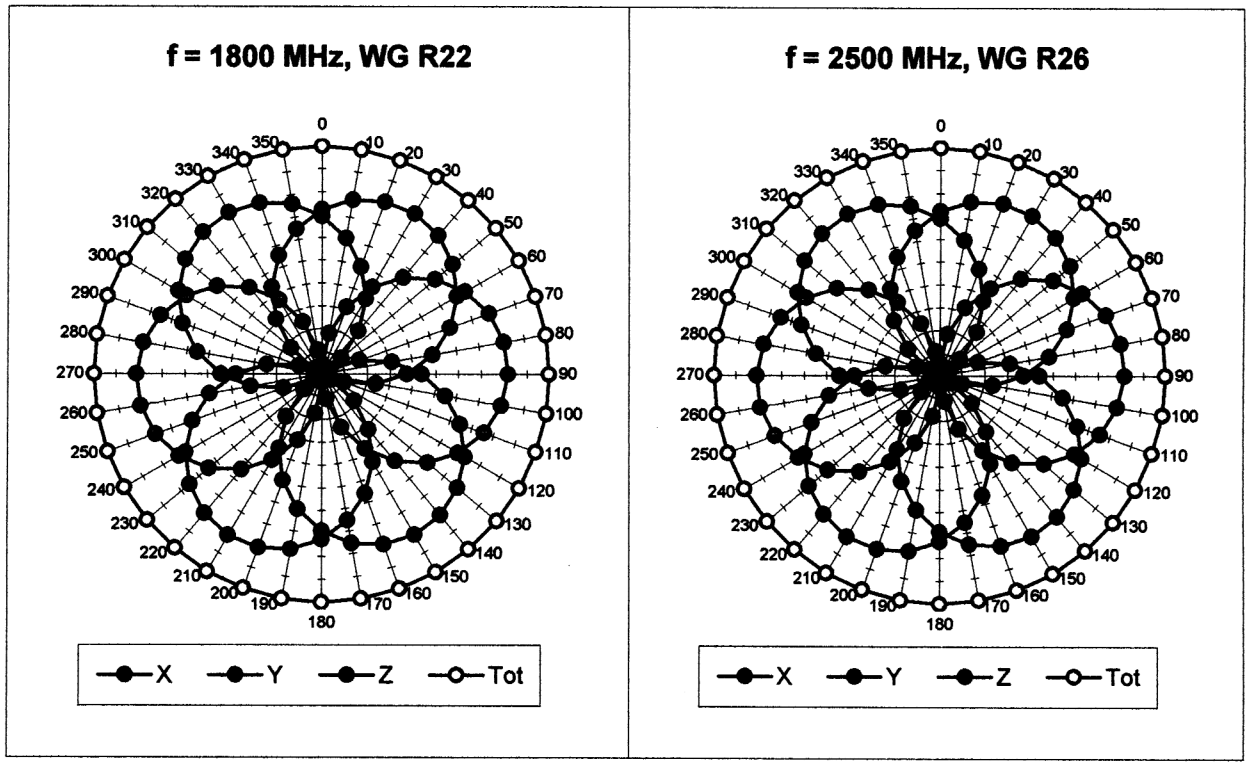


f = 300 MHz, TEM cell ifi110

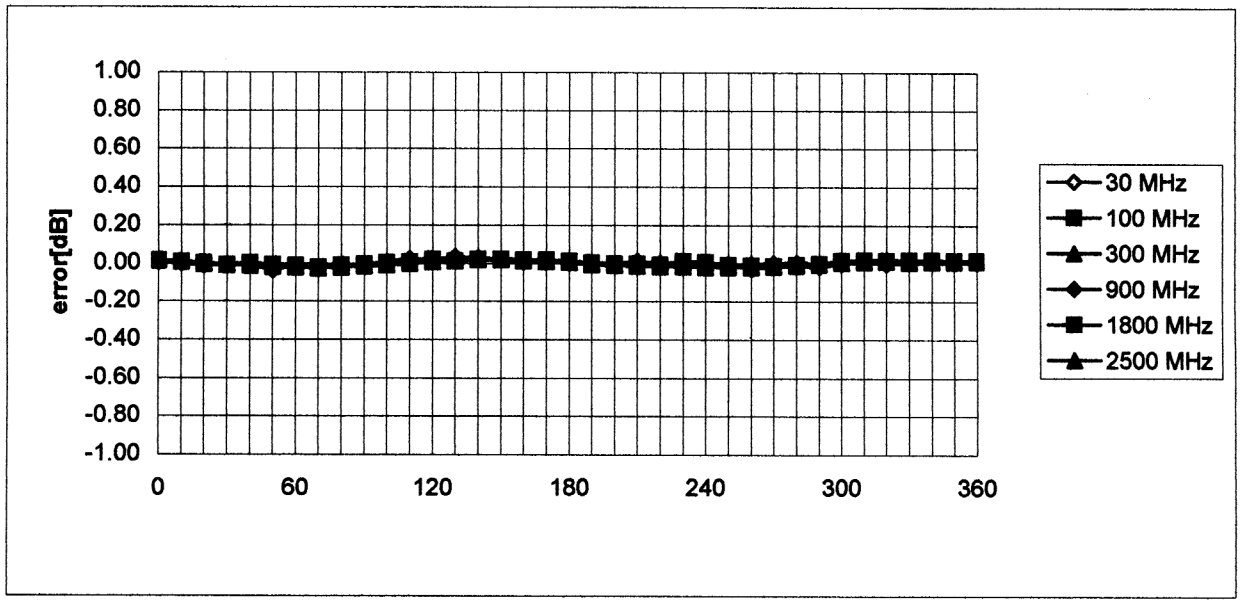


f = 900 MHz, TEM cell ifi110



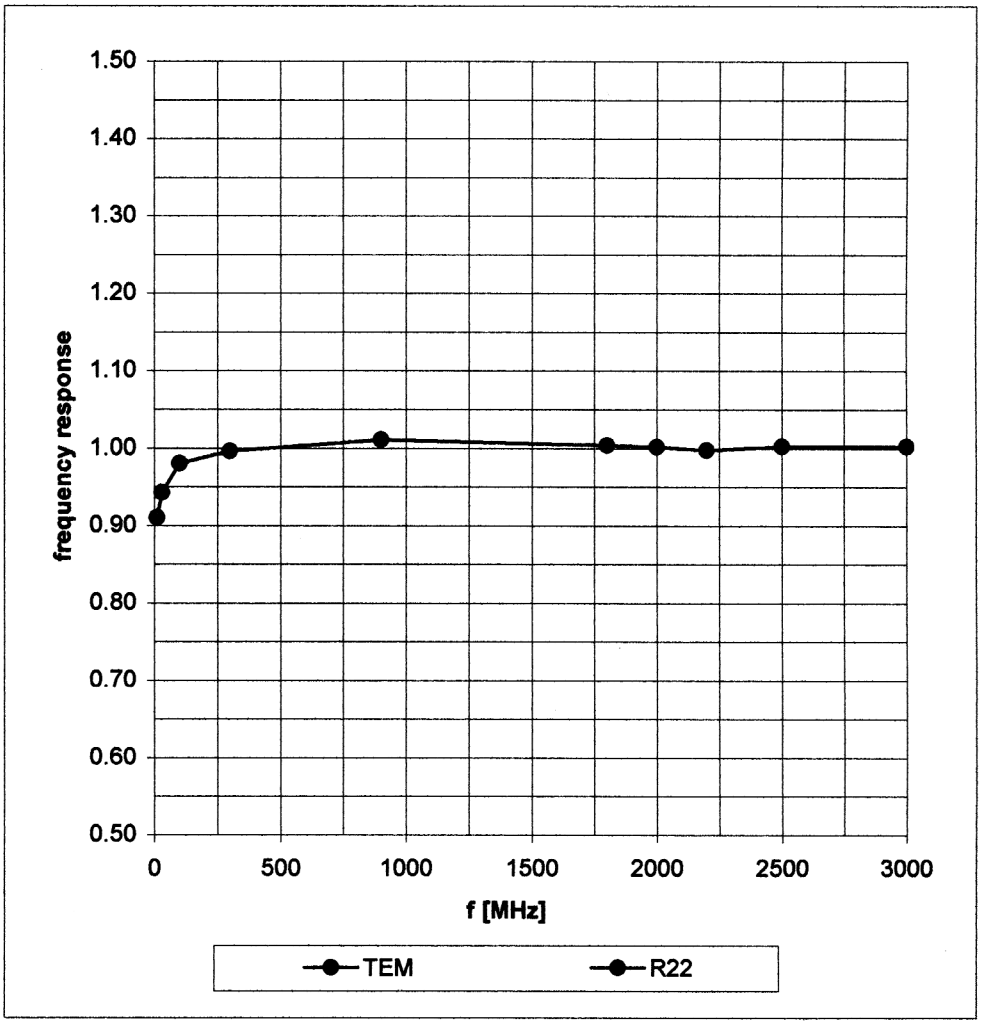


Isotropy Error (ϕ), θ = 0°



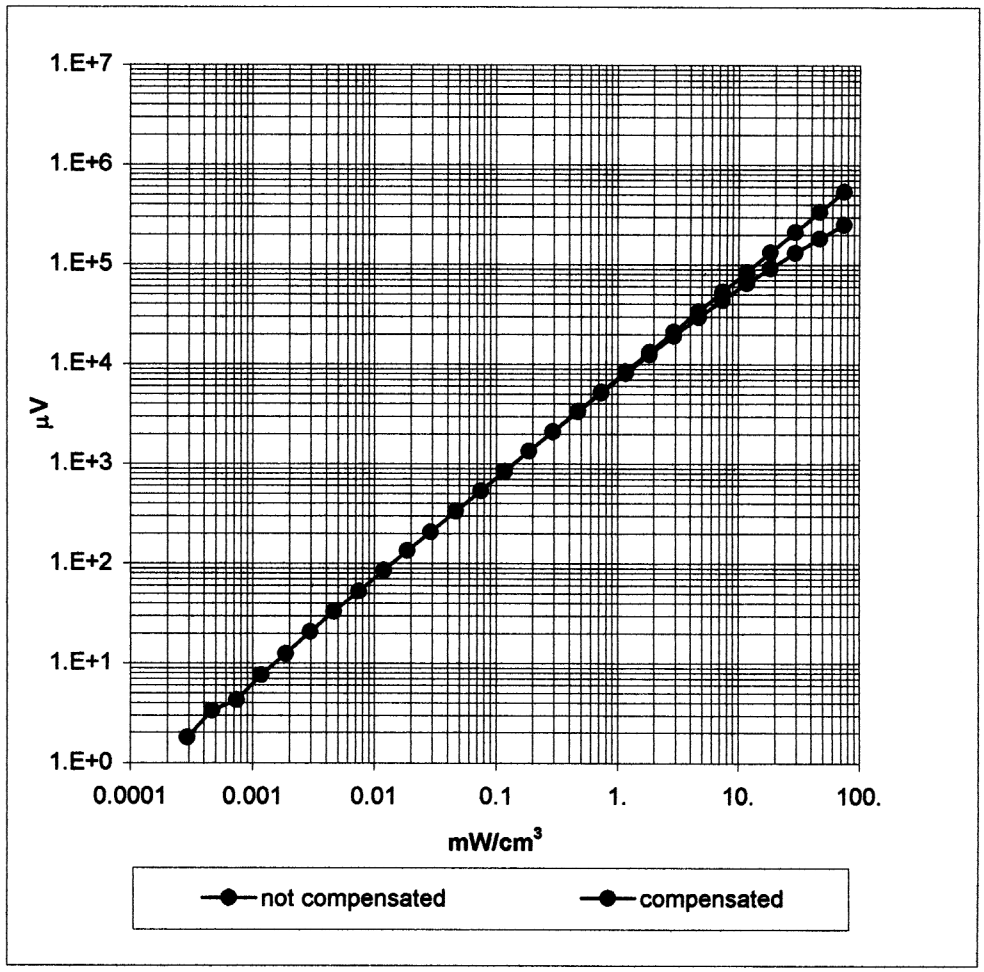
Frequency Response of E-Field

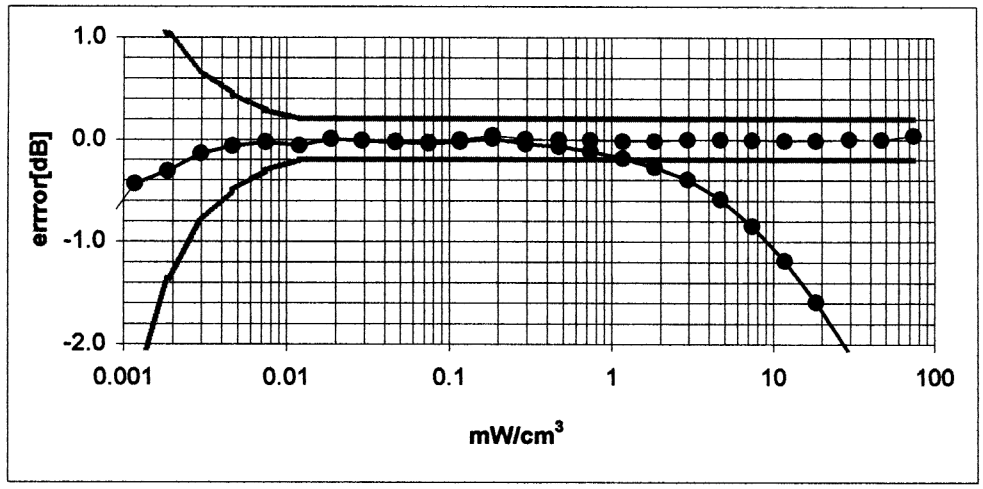
(TEM-Cell:ifi110, Waveguide R22)



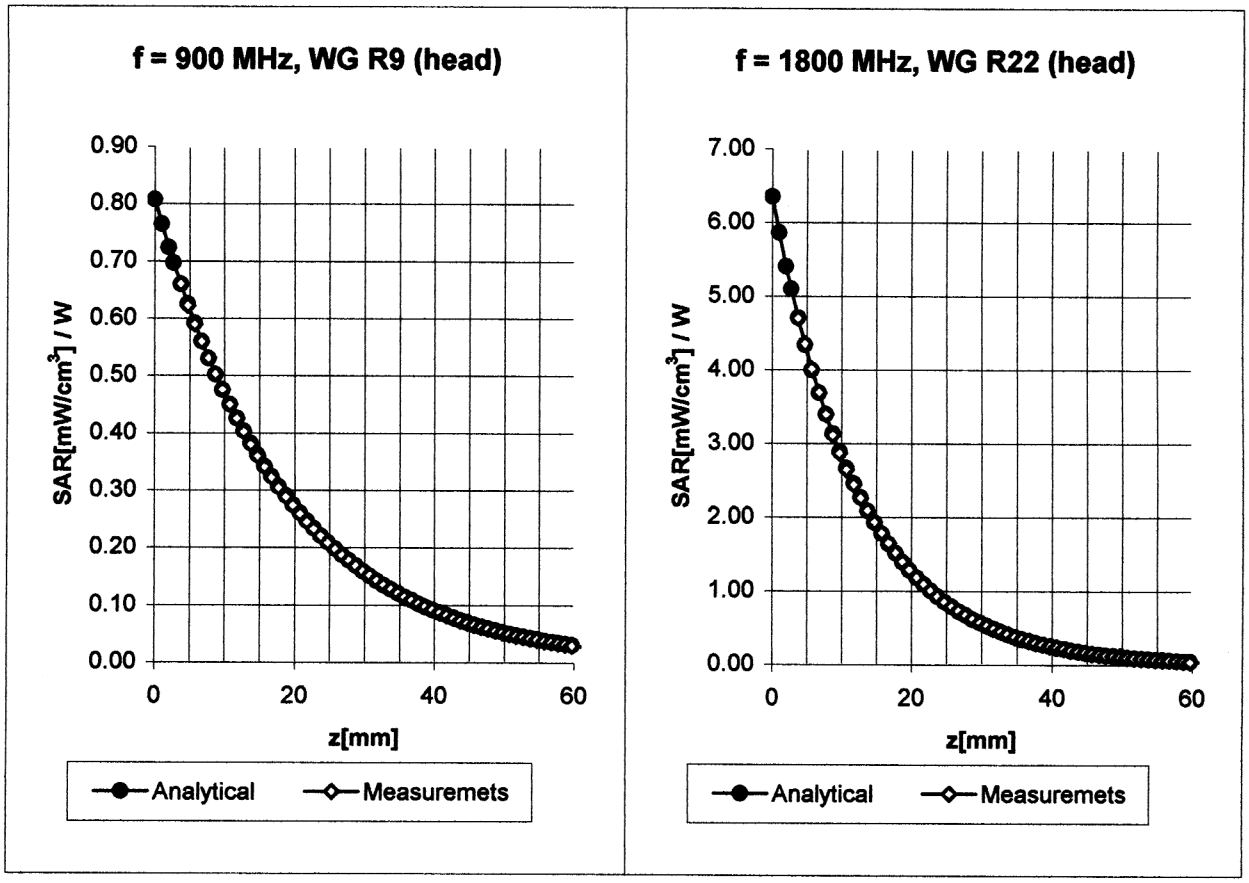
Dynamic Range f(SAR_{brain})

(TEM-Cell:ifi110)





Conversion Factor Assessment



Head **900 MHz** ε_r **= 42 ± 5%** σ **= 0.97 ± 10% mho/m**

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ConvF Z	**6.93** ± 7% (k=2)	Depth	**2.74**

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Deviation from Isotropy in HSL

Error (θ,φ), f = 900 MHz