



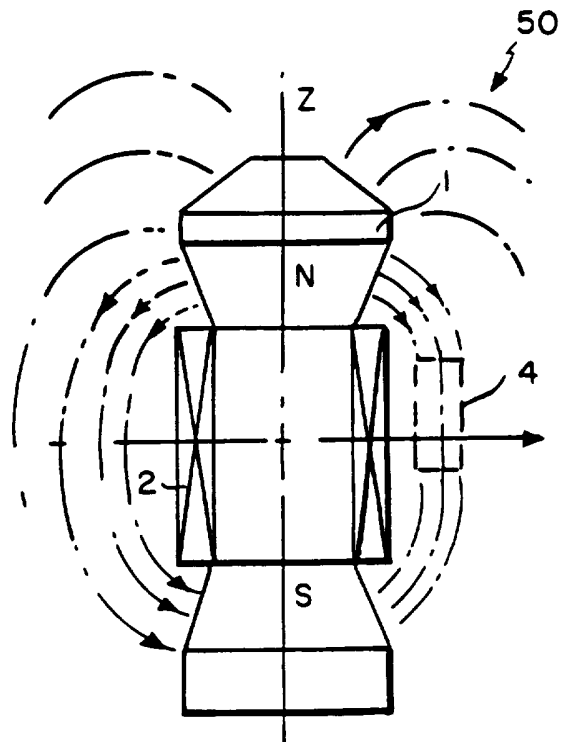
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<p>(21) International Application Number: PCT/US96/13115 (22) International Filing Date: 14 August 1996 (14.08.96) (30) Priority Data: 08/515,483 15 August 1995 (15.08.95) US (71) Applicant: BRIGHAM AND WOMEN'S HOSPITAL [US/US]; 75 Francis Street, Boston, MA 02115 (US). (72) Inventors: PULYER, Yuly, M.; 350 Revere Beach Boulevard, Revere, MA 02151 (US). PATZ, Samuel; 32 Harrison Street, Brookline, MA 02146 (US). (74) Agents: NEUNER, George, W. et al.; Dike, Bronstein, Roberts & Cushman, 130 Water Street, Boston MA 02109 (US).</p>	<p>(81) Designated States: CA, JP, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 17 April 1997 (17.04.97)</p>	

(54) Title: MRI PROBE FOR EXTERNAL IMAGING

(57) Abstract

A magnetic resonance imaging (MRI) probe (7) having an external background magnetic field B_0 is described. The probe has a primary magnet (1, 10, 10', 20, 21, 30) having a longitudinal axis and an external surface extending in the axial direction and a rf coil (13, 18, 80) surrounding and proximal to the surface. The magnet provides a B_0 field having an external region of substantial homogeneity proximal to the surface. Preferably, the B_0 field is provided by two magnets (20, 21) spaced axially and in axial alignment and wherein the region of homogeneity intersects a plane located between the magnets and perpendicular to the axis. For MR imaging, surrounding the primary magnet are r-, z- and ϕ - gradient coils (2, 56, 57) to provide spatial encoding fields.



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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER
 IPC(6) : G01R 33/38, 33/387; A61B 5/055
 US CL : 324/318, 322; 128/653.2
 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 324/318, 322, 300, 307, 309, 311, 312, 313, 314, 319, 320; 128/653.1, 653.2, 653.3

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,390,673 A (KIKINIS) 21 February 1995, col. 3, line 60; col. 6, lines 57-66; col. 4, lines 1-4.	1-12
Y,P	US 5,462,054 A (RAPOPORT et al) 31 October 1995, Figures 1-23; col. 3, lines 8-53.	3,4
Y	US 5,334,937 A (PECK et al) 02 August 1994, Figure 2, col. 6, lines 17 - 42.	5,9
A	US 5,296,811 A (EHNHOLM et al) 22 March 1994.	1-12
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