



US006087992A

United States Patent [19]

[11] Patent Number: **6,087,992**

Anderson

[45] Date of Patent: **Jul. 11, 2000**

[54] **ACOUSTICALLY DRIVEN PLASMA ANTENNA**

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[57] ABSTRACT

[21] Appl. No.: **09/273,817**

A plasma antenna with an acoustic modulator is provided. An ionizer produces a plasma in a horizontal tube to form a bounded plasma column extending along a longitudinal axis. An amplitude-, phase- or frequency-modulated signal is applied to an acoustic transducer that directs an acoustic wave along the longitudinal axis into the plasma. The acoustic wave acts as an ion acoustic wave to oscillate ions parallel to the axis. This movement radiates an amplitude-, phase- or frequency-modulated electromagnetic field from the plasma column.

[22] Filed: **Mar. 22, 1999**

[51] Int. Cl.⁷ **H01Q 1/26**

[52] U.S. Cl. **343/701; 315/111; 333/99 PL; 250/282**

[58] Field of Search **343/701; 333/99 PL; 315/111, 111.4; 250/281, 282, 287, 423; 53/15, 17**

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16 Claims, 3 Drawing Sheets

