

1145-35-1942 **Pierre Millien*** (pierre.millien@espci.fr), Institut Langevin, 1 rue jussieu, 75018 Paris, France. *Direct reconstruction method in Magneto acoustic tomography.*

We present a direct method for reconstructing the electrical conductivity of a medium in a magneto-acoustic experiment. A medium is embedded in a strong magnetic field while ultrasonic impulses propagate inside. An electrical current is measured on the boundary of the medium. From this an internal electrical current can be reconstructed, and we show how to recover the conductivity from these measurements by solving a first order transport equation. (Received September 24, 2018)