1085-44-182Linh V Nguyen* (lnguyen@uidaho.edu), Department of Mathematics, University of Idaho, 875Perimeter Drive MS 1103, Moscow, ID 83844. On the spherical mean transform arising in
thermo-acoustic tomography.

We consider the spherical mean transform on the set of spheres whose centers belong to a hyper-surface in a Euclidean space. The transform has been intensively studied recently due to its various applications, especially in thermo-acoustic tomography (TAT). In this talk, we will discuss recent progresses on the problems of inverting the transform and characterizing its range. (Received September 10, 2012)