1009-00-58 **Triet M Le*** (tle@math.ucla.edu), BOX 951555, Los Angeles, CA 90095-1555, **John B Garnett** (jbg@math.ucla.edu), BOX 951555, Los Angeles, CA 90095-1555, and **Luminita A Vese** (lvese@math.ucla.edu), BOX 951555, Los Angeles, CA 90095-1555. *Modeling oscillatory components in images as distributions in generalized Besov spaces.* Preliminary report.

An important problem in image analysis is the separation of large scales (cartoon features) from smaller periodic scales (texture) in images. Yves Meyer suggested that models such as Mumford-Shah or Rudin-Osher-Fatemi can be viewed as decomposition models into cartoon and texture, and not only as image segmentation and restoration models. In these two models, the texture component is modeled by a square-integrable function. Following Y. Meyer, we propose and analyze models where the textured component belongs to div(BMO) and generalized Besov spaces instead of L2, while the cartoon component is a function of bounded variation in a variational approach. Theoretical, approximations and numerical results of image decompositions will be presented. (Received August 01, 2005)