1056-14-1473   **Ahmet Emin Tatar*** (`atatar@math.fsu.edu`), 356 Pennell Circle Apt 8, Tallahassee, FL 32310.
Tensor Product of Picard Stacks.

In SGA4 Exposé XVIII, Deligne constructs an algebraic model for the 2-category of Picard stacks in terms of length 2 complexes of abelian sheaves. He uses this model to define the tensor product of Picard stacks. He also proves that this tensor product has a similar universal property as the tensor product of modules. In this talk, we will generalize Deligne's work to Picard 2-stacks. We will first construct an algebraic model for the 3-category of Picard 2-stacks which we will then use to define the tensor product of Picard 2-stacks. (Received September 21, 2009)