1117-17-403 E. G. Jurisich* (jurisiche@cofc.edu) and B. L. Cox. Free field realizations of the three-point algebra.

The definition of the three point algebra will be reviewed, and two field representations for this algebra will be introduced. The three-point algebra is perhaps the simplest nontrivial example of a Krichever-Novikov algebra beyond an affine Kac-Moody algebra. We provide a natural free field realization in terms of a beta-gamma system and the oscillator algebra of the three-point affine Lie algebra when $\mathfrak{g} = \mathfrak{sl}(2, C)$. (Received January 18, 2016)