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Phenomenological Theory for Pseudogap States in High T_c Cuprate

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Abstract. Pseudogap phase in the underdoped region of high- T_c cuprate is one of the challenging issues in condensed matter physics. In this talk, I will describe a phenomenological theory for this phase, based on analogies to the approach to Mott localization at weak coupling in lower dimensional systems. I will make comparisons of the theory to a series of the experiments, including angle resolved photoemission spectroscopy, scanning tunneling microscope.