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Aspects regarding decay of superfluid vortices in dense quark matter S KUMAR MALLAVARAPU, MARK ALFORD, Washington University in Saint Louis — It has been mentioned in current literature that the so called superfluid vortices/strings in high density color flavor locked phase of dense quark matter might be unstable. A regular superfluid string could decay into more fundamental strings known as semi-superfluid strings. Each semi-superfluid string has a non-zero color flux. It has been calculated that a combination of three such semi-superfluid strings which have zero net color flux is more stable than a single superfluid string, so long as the separation between the semi-superfluid strings is much larger than the size of each one. Is the semi-superfluid string configuration more stable than the superfluid string even for small separations? Does the single superfluid string spontaneously break into semi-superfluid strings? In this talk we offer results and insight that would help us answer these questions.

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