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Andrey Todorov* (andreytodorov@msn.com), 900 Bush #815, San Francisco, CA 94109.

Boundaries of the Kahler Cone of Calabi-Yau manifolds.

In this talk we will outline the proof that the harmonic representative of the class of cohomology in the Kahler cone of a Calabi-Yau manifold with respect to any CY metric can be realized as an imaginary part of a Kahler metric. This result implies that the harmonic representatives of the classes of cohomology on the boundary of the Kahler cone with respect to CY metric when multiplied by i are semi-positive. They define a holomorphic foliation of the CY manifold. This foliation is a fibration when the class of cohomology on the boundary of the Kahler cone has integer periods. (Received February 26, 2007)