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Ho Hon Leung* (hohonleung@math.cornell.edu), Malott Hall 120, Department of Mathematics, Cornell University, Ithaca, NY 14853-4201. *Divided difference operators in Kasparov's equivariant KK-theory*. Preliminary report.

Let G be a compact connected Lie group with maximal torus T . Let A, B be G - C^* -algebras. We define certain divided difference operators on Kasparov's T -equivariant KK-group $KK_T(A, B)$ and show that $KK_G(A, B)$ is a direct summand of $KK_T(A, B)$. More precisely, a T -equivariant KK-class is G -equivariant if and only if it is annihilated by an ideal of divided difference operators. This result is a generalization of work done by Atiyah, and Harada, Landweber and Sjamaar. The talk will include its relation to symplectic geometry. (Received January 19, 2011)