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A simple regulator formula for higher Chow groups of real varieties. Preliminary report.

Using techniques from geometric measure theory and equivariant topology we describe an explicit regulator formula for regulator maps sending higher Chow groups of a smooth real variety into an equivariant version of Deligne homology with integral coefficients. This extends previous work of Kerr, Lewis and Mueller-Stach to cycles with integral coefficients and the approach works for both real and complex varieties. (Received February 11, 2014)