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Daniel J. Miller* (dmille10@emporia.edu), Emporia State University, Department of, Mathematics, Computer Science and Economics, 1200 Commercial Street, Campus Box 4027, Emporia, KS 66801, and **Raf Cluckers**, Katholieke Universiteit Leuven, Departement Wiskunde, Celestijnenlaan 200B, B-3001, Leuven, Belgium. *Sums of products of real globally subanalytic functions and their logarithms are stable under integration.*

We prove two basic theorems on (Lebesgue) integration of sums of products of globally subanalytic functions and their logarithms, called constructible functions. The first theorem states that constructible functions are closed under integration, and the second treats integrability issues in families. These theorems generalize and provide a natural framework for the previous work by Lion - Rolin [1] and by Comte - Lion - Rolin [2] on parameterized integrals and on parameterized volumes of globally subanalytic sets.

[1] J.-M. Lion and J.-P. Rolin, *Intégration des fonctions sous-analytiques et volumes des sous-ensembles sous-analytiques*, Ann. Inst. Fourier (Grenoble) **48** (1998), 755-767.

[2] Comte, G. and Lion, J.-M. and Rolin, J.-P., *Nature log-analytique du volume des sous-analytiques*, Illinois J. Math. **44** (2000), no. 4, 884-888. (Received September 16, 2008)