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Jonathan M Borwein* (jborwein@cecm.sfu.ca), Department of Mathematics and Statistics, Simon Fraser University, Burnaby, BC V5A 1S6, Canada, and **David Borwein** and **Bernard J Mares**. *Multi-variable sinc integrals and the volumes of polyhedra*.

Using classical Fourier transform techniques, we establish inequalities for integrals of the form

$$\int_0^\infty \prod_{k=0}^n \frac{\sin(a_k x)}{a_k x} dx.$$

We then give quite striking closed form evaluations of such integrals and finish by discussing various extensions and applications. The first part of this work is available at www.cecm.sfu.ca/preprints in:

David Borwein and Jonathan M. Borwein, "Some remarkable properties of sinc and related integrals," *The Ramanujan Journal*, in press. [CECM Preprint 99:142].

while later work is joint with B.J. Mares as well. (Received September 24, 2000)