1067-30-1085   **Mark W. Coffey*** (`mcoffey@mines.edu`), Department of Physics, 16th and Illinois Streets, Colorado School of Mines, Golden, CO 80401. *An effective asymptotic formula for the Stieltjes constants.*

The Stieltjes constants $\gamma_k(a)$ appear in the regular part of the Laurent expansion of the Hurwitz zeta function $\zeta(s,a)$ about its pole at $s = 1$ and the case $\gamma_k(1)$ [1] is of particular importance in analytic number theory. We present an asymptotic expression for $\gamma_k(a)$ for $k \gg 1$ that encapsulates both the leading rate of growth with k and the oscillations with k and a. This result is effective for computation, giving accurate values for both magnitude and sign for even moderate values of k. Comparison to some other work is made. Joint work with Charles Knessl.

[1] C. Knessl and M. W. Coffey, Math. Comp. (2010). (Received September 18, 2010)