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Adrian Jenkins* (majenkin@math.purdue.edu), Department of Mathematics, Purdue University, 150 N. University Street, West Lafayette, IN 47907-2067. *Further Normalizations of Poincaré-Dulac Normal Forms in \mathbf{C}^{n+1} .*

The goal of this talk is to consider further formal normalizations of the mappings

$$F(z, w_1, \dots, w_n) = (f(z), \lambda_1 w_1(1 + g_1(z)), \dots, \lambda_n w_n(1 + g_n(z))), \quad (1)$$

where f is tangent to the identity, $g_i(0) = 0$ for each $i = 1, \dots, n$, and the eigenvalues λ_i possess no resonances. Note that these mappings constitute the so-called *Poincaré-Dulac Normal Forms* for the mappings

$$F(z, w_1, \dots, w_n) = (z + O(2), \lambda_1 w_1 + O(2), \dots, \lambda_n w_n + O(2)). \quad (2)$$

We will demonstrate further formal normalizations of these mappings, and create a "test for divergence" for the conjugating maps H , giving some examples of divergence. (Received January 16, 2006)