1078-32-267 Camille Plénat and David J. A. Trotman* (trotman@cmi.univ-mrs.fr), Centre de Mathématiques et Informatique, Aix-Marseille Université, 39 rue Joliot-Curie, 13453 Marseille Cedex 13, France. On Teissier's 1972 conjecture concerning the equimultiplicity of families of complex hypersurface-germs with constant Milnor number.

As a parametrised version of Zariski's (still unanswered) question about the topological invariance of the multiplicity of a complex hypersurface singularity, Teissier conjectured in 1972 that families of isolated complex hypersurface singularities with constant Milnor number are equimultiple. We show that any possible drop in multiplicity in a polynomial family F(z,t) of complex analytic hypersurface singularities with constant Milnor number, parametrised by t, is controlled by the powers of t in that the coefficient of t^k must have a multiplicity greater than or equal to m - k + 1 where m is the multiplicity of f(z) = F(z, 0). We prove equimultiplicity of μ constant families of the form $f + tg + t^2h$ if the singular set of the tangent cone of f = 0 is not contained in the tangent cone of h = 0. Generalising our proof of this provides further constraints on possible counterexamples to Teissier's conjecture. (Received December 11, 2011)