1041-14-223Sándor Kovács* (skovacs@u.washington.edu), University of Washington, Department of
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Shafarevich hyperbolicity for families over higher-dimensional base manifolds.

Generalizing the well-known Shafarevich hyperbolicity conjecture, it has been conjectured by Viehweg that a quasiprojective manifold that admits a generically finite morphism to the moduli stack of canonically polarized varieties is necessarily of log general type.

Given a quasi-projective threefold Y that maps to the moduli stack, we employ extension properties of logarithmic pluri-forms to establish a strong relationship between the moduli map and the minimal model program of Y: in all relevant cases the minimal model program leads to a fiber space whose fibration factors the moduli map. A much refined affirmative answer to Viehweg's conjecture for families over threefolds follows as a corollary. For families over surfaces, the moduli map can be often be described quite explicitly. (Received August 11, 2008)