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ADDENDUM TO "MANIFOLDS OF ALMOST HALF OF THE MAXIMAL VOLUME"

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The following is to clarify the historical background for Gromov's Compactness Theorem used in the above paper.

Theorem 1 of this paper depends on a version of Gromov's Compactness Theorem for extracting a subsequence from a given sequence in the class $\{(M^n, g) | K_1 \leq K(M) \leq K_2, \text{vol}(M) \geq V_0, \text{and } d(M) \leq D_0\}$ such that the Rienmannian metrics of the subsequence converges in the C^1 sense to a $C^{1,\alpha}$ limit metric, $\alpha < 1$. The compactness theorem was first given by Gromov in [G] in the C^0 sense and Katsuda provided some of the details in [K]. Later, the $C^{1,\alpha}$ version of the compactness theorem was proved by R. E. Greene–H. Wu [G-W] and S. Peters [Pe] independently. Some applications, geometric and other properties of the limit metric were studied by M. Berger [B] and the author [D] as well as several others. In [Pu], C. C. Pugh studied the $C^{1,1}$ conclusions.

Recently, the author received a reprint [N] from I. G. Nikolaev. Theorem 2 of [N] states that in a space of bounded curvature M (in the sense of A. D. Alexandrov) it is possible to introduce the structure of a Riemannian manifold with the help of local harmonic coordinates, which form an atlas of smoothness $C_{3,\alpha}$ and the metric tensor in the harmonic coordinates belong at least to $W_q^2 \cap C_{1,\alpha}(\Omega)$, where Ω is some region of E^n, in which local harmonic coordinates are defined, $q > n = \dim\ M$ is an arbitrary number, and $\alpha = 1 - (n/q)$.

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