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Jianguo Cao* (cao.7@nd.edu), Departmant of Mathematics, University of Notre Dame, Notre Dame, IN 46556, **Huijun Fan**, Department of Mathematics, Peking University, 100871 Beijing, Peoples Rep of China, and **Francois Leddreppier**, Department of Math, University of Notre Dame, Notre Dame, IN 46556. *Positive harmonic function on open manifolds with non-positive curvature.*

Let M^n denote a closed Riemannian manifold with non-positive sectional curvature and Ballmann rank-one. Suppose that $\tilde{M}^n$ is the universal cover of M^n with the lifted metric. It is known that there is a positive Green's function G on $\tilde{M}^n$. Let $\sigma : S^1 \to M^n$ be a non-trivial closed geodesic and $\tilde{\sigma}$ be its lifting.

Theorem A Let M^n, $\tilde{M}^n$, σ and $\tilde{\sigma}$ be as above. Suppose that $\tilde{\sigma}$ is not a boundary of any totally geodesic flat half plane in $\tilde{M}^n$. Then (1) For any unbounded sequence $\{x_j\} \to \tilde{\sigma}(\infty)$, the limiting function $u_{\{x_j\}}(x) = \lim_{j\to\infty} \frac{G(x,x_j)}{G(x_0,x_j)}$ exists,which is non-constant; (2) The limit $u_{\{x_j\}}(x)$ is independent of the choices of $\{x_j\} \to \tilde{\sigma}(\infty)$; (3) The Martin boundary of $\tilde{M}^n$ contains a dense subset of the sphere at infinity.

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