1118-28-154 **Christopher J Bishop** (bishop@math.stonybrook.edu), Department of Mathematics, Stony Brook University, Stony Brook, NY 11794-3651, **Hrant Hakobyan*** (hakobyan@math.ksu.edu), Department of Mathematics, Kansas State University, Manhattan, KS 66502, and **Marshall Williams** (mcwill@math.ksu.edu), Department of Mathematics, Kansas State University, Manhattan, KS 66502. *Quasiconformal dimension distortion of generic Ahlfors regular subsets.*

We show that if $f : X \to Y$ is a quasisymmetric mapping between Ahlfors regular spaces, then for "almost every" bounded Ahlfors regular set $E \subseteq X$ we have

$$\dim_H f(E) \leq \dim_H E.$$

If additionally, X and Y are Loewner spaces then for "almost every" Ahlfors regular set $E \subset X$ we have

$$\dim_H f(E) = \dim_H E.$$

The precise statements of these results are given in terms of Fuglede's modulus of measures.

As a corollary of these general theorems we show that if f is a quasiconformal map of $\mathbb{R}^N$, $N \geq 2$, then for Lebesgue a.e. $y \in \mathbb{R}^N$ we have

$$\dim_H f(y + E) = \dim_H E.$$

A similar result holds for Carnot groups as well.

For planar quasiconformal maps, our general estimates imply that if $E \subset \mathbb{R}$ is Ahlfors d-regular, $d < 1$, then some component of $f(E \times \mathbb{R})$ has dimension at most $2/(d + 1)$, and we construct examples to show this bound is sharp.

These results generalize work of Balogh, Monti and Tyson and answer questions posed by these authors. (Received January 29, 2016)