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Izabella Laba* (ilaba@math.ubc.ca), Department of Mathematics, University of British Columbia, Vancouver, B.C. V6T 1Z2, Canada. *Arithmetic progressions in sets of fractional dimension.*

Let $E \subset \mathbf{R}$ be a closed set of Hausdorff dimension α . We prove that if α is sufficiently close to 1, and if E supports a probability measure obeying appropriate dimensionality and Fourier decay conditions, then E contains non-trivial 3-term arithmetic progressions. (Joint work with Malabika Pramanik.) (Received August 09, 2008)