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Stewart Baldwin* (baldws1@auburn.edu), Department of Mathematics and Statistics, Auburn University, Auburn, AL 36849-5310. *Problems on distinguishing inverse limit spaces*. Preliminary report.

We consider a number of questions of the following (vague) type. Given a class C of maps on topological spaces, what topological invariants on the members of C can be used to distinguish the corresponding inverse limit spaces? A well known problem of this type is Ingram's Conjecture (still not solved in all cases).

Ingram's Conjecture: Let C be the class of tent maps of an interval $I = [f^2(c), f(c)]$ having slope λ for $1 < \lambda \leq 2$ (where $c \in I$ is the critical point). Then $f, g \in C$ have homeomorphic inverse limits if and only if they have the same slope.

A number of questions of the same general type will be asked, only a few of which will be answered. (Received September 11, 2007)