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EDITORS' NOTE

The paper by Paul Baum and Alain Connes has been printed here as it was circulated in 1982, without change. (But we have updated the references that were preprints in 1982 and have appeared since; and a small number of typographical corrections have been made.) The subject has developed considerably over the last 18 years, as testified by the supplementary bibliography below, for which we express our debt to Alain Valette.

We would also like to make the following remarks:

(i) The conjecture on the invariance of certain foliation characteristic classes, alluded to at the end of Section 1 in the above paper, has appeared in:

BAUM, P. and A. CONNES. Leafwise homotopy equivalence and rational Pontrjagin classes. In: *Foliations (Tokyo, 1983)*. Adv. Stud. Pure Math. 5, 1–14. North-Holland, 1985.

(ii) Concerning Corollary 5 and Remark 7 of §5 above, Cédric Béguin has observed that it is necessary to assume that G is connected (and not only that $\pi_0(G)$ is finite), as is shown by the example in which G is the group $\{x \mapsto ax + b \mid a \in \mathbf{R}^*, b \in \mathbf{R}\}$ and H the subgroup $\{x \mapsto \pm x\}$. Indeed, the connectedness of H is used by Baum and Connes just after their Remark 4. This observation is repeated from

BÉGUIN, C. Autour de la conjecture des idempotents. Thèse, Université de Neuchâtel, 1999.

(iii) The conjecture on the range of the map $\text{tr}: K_0 C^*G \longrightarrow \mathbf{R}$ for a group G with torsion, stated just before Corollary 4 in §7, has been *disproved* in:

ROY, R. The trace conjecture – a counterexample. *K-Theory* 17 (1997), 209–213.

Roy's example indicates that, if G has p -torsion (p a prime) then higher powers of p in denominators do appear in the range of the trace map.

(iv) Finally, we would like to mention that the paper by P. Baum and A. Connes has motivated several books still in preparation, including one by J. Roe and N. Higson, and one by A. Valette.