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*Vanishing conharmonic tensor of normal locally conformal almost cosymplectic manifold*

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**Abstract:** The main purpose of the present paper is to study the geometric properties of the conharmonic curvature tensor of normal locally conformal almost cosymplectic manifolds (normal LCAC-manifold). In particular, three conharmonic invariants are distinguished with regard to the vanishing conharmonic tensor. Subsequently, three classes of normal LCAC-manifolds are established. Moreover, it is proved that the manifolds of these classes are  $\eta$ -Einstein manifolds of type  $(\alpha, \beta)$ . Furthermore, we have determined  $\alpha$  and  $\beta$  for each class.

**Keywords:** normal locally conformal almost cosymplectic manifold; conharmonic curvature tensor; constant curvature;  $\eta$ -Einstein manifold

**AMS Subject Classification:** 53C55, 53B35

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