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FACTORIZATION OF COMPACT COMPLEX 3-FOLDS WHICH ADMIT CERTAIN PROJECTIVE STRUCTURES

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A complex manifold X, $\dim X=3$, is of Class L, if, by definition, X contains a subdomain which is biholomorphic to a neighborhood of a projective line in a complex projective space of dimension three. In [Ka2][Ka3], we have defined complex analytic connected sum (which was called "connecting operation") of manifolds of Class L. In this paper, we shall consider how to factorize a compact manifold of Class L into prime ones. To describe our results, we introduce Klein combination of manifolds of Class L, which is a generalization of complex analytic connected sum. Our first result is that, *if a compact manifold of Class* L *is of Schottky type, then it is a Klein combination of Blanchard manifolds and* L-*Hopf manifolds* (Theorem A) (see § 1 for the definitions). This result is an analogue of Kulkarni's [Ku]. We shall prove some properties of L-Hopf manifolds (Theorem B, § 4) and give a rough classification of Blanchard manifolds (Theorem C, § 5). There are many manifolds of Schottky type. In fact, we see that *a complex analytic connected sum of Blanchard manifolds and* L-*Hopf manifolds is of Schottky type* (Theorem D).

Our work is motivated and strongly influenced by that of Kulkarni [Ku]. Theorem A and its proof is an analogue of his Theorem 6.3 and its proof.

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CONTENTS

1. Definitions and Statements of Results. Let Ω be a subdomain in a complex

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