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Jennifer Halfpap* (halfpap@mso.umt.edu), Department of Mathematical Sciences, University of Montana, Missoula, MT 59812. *The Holomorphic Extension of CR Functions on Tube-Like CR Manifolds of CR Dimension 1: An Alternative to Wedge Extendability.*

A remarkable difference between analysis in one and several complex variables is that in C^n there are open sets V for which there exists $U \supset V$ such that every holomorphic function on V extends holomorphically to U . More remarkably, holomorphic extension may be possible for a class of functions on certain manifolds. These manifolds (CR manifolds) retain some of the complex structure of C^n , and the appropriate class of functions (CR functions) consists of solutions to the tangential Cauchy-Riemann equations. Without further hypotheses on a CR manifold, CR extension may still not be possible. The problem of CR extension is to formulate these hypotheses, and when extension is possible, to describe the regions. Previous work has focused on establishing conditions for extension to “wedges.” However, wedges do not give an adequate description of the regions of extendability. Specifically, we expect a theory to describe regions which have roughly the same size and shape as the full regions, vary smoothly with the base point and the size of the open set on the manifold, and satisfy a natural containment condition. We show that wedges do not have these properties. We then develop an alternative description for tube-like CR manifolds of CR dimension 1. (Received July 29, 2005)