## 1030-32-341

X. Gong, Madison, WI, and S. M. Webster\* (webster@math.uchicago.edu), 5734 University Ave, Chicago, IL 60637. Local integrability problems for CR structures and vector bundles. Preliminary report.

We simplify and sharpen our earlier arguments for the existence and regularity of the solutions. For vector bundles over a strictly pseudoconvex real hypersurface in complex n-space, n > 3, we eliminate completely the need for smoothing operators, avoid the Nash-Moser methods, and succeed with a KAM argument which yields results which are sharp relative to both regular and Folland-Stein Holder norms. This also improves on the results of Ma-Michel. The methods are developed so as to be applicable to the more difficult CR embedding problem. (Received August 06, 2007)