Erratum: Aberrant CR structures

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There is an error in the paper [1]. It was asserted that the complex vector fields of equation (4.10) define a CR structure. In general, they do not. As a consequence Theorem 1 must be modified and Theorem 2 discarded.

Here is the correct version of Theorem 1. Condition (0.6) is the requirement that the Levi form has n-1 eigenvalues of one sign while the remaining eigenvalue is of the opposite sign.

Theorem 1 Let the CR structure C on Ω satisfy Condition (0.6). Then given any point p_0 of Ω , there is a CR structure $\tilde{C}(p_0)$ in a neighborhood of p_0 , also satisfying (0.6), agreeing with C to infinite order at p_0 and such that the following is true:

The differential at p_0 of every germ at p_0 of a CR function (in the sense of $\tilde{C}(p_0)$) of class C^1 , vanishes.

The existence of an aberrant system of vector fields is now an open question (except in three dimensions, see [2]).

References

- [1] Jacobowitz H. and Treves F., Aberrant CR structures. Hokkaido Math. J. 12 (1983), 276–292.
- [2] Jacobowitz H. and Treves F., Nowhere solvable homogeneous partial differential equations. Bull. AMS, (New Series) 8 (1983), 467–469.