1108-53-568   **Ivko M Dimitric*** (`ivko@psu.edu`), 2201 University Dr., Penn State University Fayette, Lemont Furnace, PA 15456. *Low-type submanifolds of complex space forms.* Preliminary report.

CR-submanifolds of low Chen-type in complex projective and hyperbolic spaces are studied. 2-type totally real submanifolds are characterized in terms of standard extrinsic invariants, the result further specialized to Lagrangian submanifolds with parallel mean curvature vector. We also prove some non-existence results for certain families of CR-submanifolds of Chen-type two. For example, there exist no holomorphic submanifolds of the complex hyperbolic space which are of 2-type via the standard embedding by the projectors. This is in contrast to the situation in a complex projective space, where there exist some parallel Einstein submanifolds of 2-type. We further show that there are no ruled hypersurfaces of Chen-type two in a complex space form. (Received January 20, 2015)

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