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Zhenbo Qin* (zq@math.missouri.edu), Department of Mathematics, University of Missouri, Columbia, MO 65211, and **Wei-Ping Li**. *Stable bundles on Calabi-Yau manifolds and Donaldson-Thomas invariants.*

We apply the technique of chamber structures of stability polarizations to construct the full moduli space of rank-2 stable sheaves with certain Chern classes on Calabi-Yau manifolds which are anti-canonical divisor of P^1XP^n or a double cover of P^1XP^n . These moduli spaces are isomorphic to projective spaces. As an application, we compute the corresponding Donaldson-Thomas invariants. (Received August 08, 2005)