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S. Estrada, X. Fu and A. Iacob* (aiacob@georgiasouthern.edu). *Totally acyclic complexes.*

It is known that over an Iwanaga-Gorenstein ring the Gorenstein projective (Gorenstein injective, Gorenstein flat) modules are simply the cycles of the exact complexes of projective (injective, flat) modules. We consider the question: are these characterizations working only over Iwanaga-Gorenstein rings?

Among other results we prove the following theorem:

Let R be a two sided noetherian ring of finite finitistic flat dimension that satisfies the Auslander's condition. The following are equivalent:

1. R is Iwanaga-Gorenstein.
2. Every acyclic complex of injective left (right) R -modules is totally acyclic. (Received January 01, 2017)