D Drissi* (drissi@sci.kuniv.edu.kw), Department of Mathematics, Kuwait University, P.O.Box 5969, Kuwait, Kuwait. Resolvent algebras and Deddens algebras for rank-one and finite rank perturbations operators. Preliminary report.

For a given operator $A$ on a Hilbert space $H$, and let $D_n(A)$ be a sequence of invertible operators on $H$. We consider the algebras

$$B = \{ T \in L(H) : \sup_{n>0} \| D_n(A)T D_n(A)^{-1} \| < \infty \}$$

First, we characterize these algebras when $A$ is a rank-one / finite rank perturbation operator, and their commutant. This may help to generalize Lomonosov’s Lemma on the hyperinvariant subspaces. (Received September 16, 2013)