

CLOSED OPERATOR INEQUALITIES AND OPEN PROBLEMS

AMEUR SEDDIK

Abstract. In [3, 4], we have given some characterizations of some subclasses of complex Hilbert space normal operators by inequalities. In this note, we shall reformulate these results using a concept of closed inequalities. Also, we shall give some new characterizations. Some open problems concerning closed inequalities are posed at the end of this note.

Mathematics subject classification (2010): 47B47.

Keywords and phrases: Invertible operator, normal operator, unitary operator, self-adjoint operator, unitary reflection operator, operator inequality.

REFERENCES

- G. CORACH, R. PORTA, AND L. RECHT, An operator inequality, Linear Algebra Appl., 142 (1990), 153–158.
- [2] A. MCINTOSH, Heinz inequalities and perturbation of spectral families, Macquarie Mathematical Reports, Macquarie Univ., 1979.
- [3] A. SEDDIK, Some results related to Corach-Porta-Recht inequality, Proc. Amer. Math. Soc., 129 (2001), 3009–3015.
- [4] A. SEDDIK, On the injective norm and characterization of some subclasses of normal operators by inequalities or equalities, J. Math. Anal. Appl., **351** (2009), 277–284.

