## EXTENSION OF THE INTEGRAL OPERATOR ON HARDY SPACES

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ABSTRACT. We will present some results concerning integral operator  $T_g$  on Hardy spaces  $H^p$ ,  $p \in [1, \infty)$ . In particular we will be interested in analyzing an optimal domain of  $T_g$ , i.e. the biggest space  $[T_g, H^p]$ ,  $H^p \subset [T_g, H^p]$ , such that the integral operator still has it's values in  $H^p$ . We will also show some applications to Libera type operators. The obtained results extends the recent studies of G. Curbera and W. Ricker on Cesáro operator. Talk is based on joint work with P. Mleczko.