1078-11-328 **Seok Ho Jin*** (archimed@postech.ac.kr), Hyoja-dong, Pohang, Kyeongsangbook-do, South Korea, **Su Bong Lim** (subong@postech.ac.kr), Hyoja-dong, Pohang, Kyeongsangbook-do, South Korea, and **Youngju Choie** (yjchoie@gmail.com), Hyoja-dong, Pohang, Kyeongsangbook-do, South Korea. *On regularizing the imaginary Doi-Naganuma lifting.*

Let K be an imaginary quadratic field. There is a map, the Doi-Naganuma lifting, taking classical Maass wave forms with respect to a congruence subgroup of $SL_2(\mathbb{Z})$ to modular forms for K. The aim of this paper is to extend this lifting to weak Maass forms and to construct automorphic objects with singularities on the quaternionic upper half-plane $\mathfrak{H}^1$.

The main tool we use is Harvey and Moore's extension of the Howe(or theta) correspondence to automorphic forms with singularities, which is called the regularized theta lifting. In this paper we'll mainly follow the arguments of Borcherds and Bruinier to apply this technique, to extend the lifting to the scope of weak Maass forms.

The main part of this paper will be about the convergence. In this paper we also determined the locations of the singularities and their singularity types. (Received December 12, 2011)