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**Matthew B. Stenzel\*** ([stenzel.3@osu.edu](mailto:stenzel.3@osu.edu)), Ohio State University at Newark, 1179 University Drive, Newark, OH 43055. *A proof of a Theorem of Boutet de Monvel*. Preliminary report.

We use the transgression formula and the Laplace transform to obtain the Hadamard-Zelditch parametrix for the Poisson operator on a compact, real analytic Riemannian manifold,  $X$ , starting from the heat kernel. We use this to prove the Theorem of Boutet de Monvel which says that the operator  $e^{-t\sqrt{\Delta}}$  followed by analytic continuation to a Grauert tube  $M_t$  of radius  $t$ , is a continuous bijection of the Sobolov spaces,  $e^{-t\sqrt{\Delta}}: H^s(X) \rightarrow \mathcal{O}^{s+\frac{n-1}{4}}(\partial M_t)$ . As an application we discuss an  $L^2$ -isometry theorem reminiscent of the Segal-Bargmann transform on a compact Lie group. (Received September 21, 2011)