1145-35-1430 Linhan Li and Jill Pipher* (jill_pipher@brown.edu). Boundary behavior of solutions of elliptic operators in divergence form with a BMO anti-symmetric part.

We consider the boundary behavior of solutions to divergence-form operators with an elliptic symmetric part and a BMOanti-symmetric part in non-tangentially accessible (NTA) domains. We establish the Hölder continuity of the solutions at the boundary, existence of elliptic measures ω_L associated to such operators, and the well-posedness of the continuous Dirichlet problem as well as the $L^p(d\omega)$ Dirichlet problem in NTA domains. The equivalence in the L^p norm of the square function and the non-tangential maximal function under certain conditions remains valid. When specialized to Lipschitz domains, it is possible to extend, to these operators, various criteria for determining mutual absolute continuity of elliptic measure with surface measure. The L^p -solvability of the Dirichlet problem for operators with more regular coefficients is in progress. (Received September 21, 2018)