1086-00-1388 **Louis Bohorquez*** (ljbohorquez@gmail.com), 12640 Redberry St, El Monte, CA 91732, and **Jason Xu** (jasonxu90@gmail.com), 5637C Brooklyn Ave NE, Seattle, WA 98105. *Regional Coverage with Steerable Satellite Sensors.*

We consider the problem of calculating visibility periods during which a steerable satellite sensor can capture a set of target points on the earth. Precisely locating these periods requires calculating the optimal pointing direction at any given point in the satellite orbit. We reduce this problem to a minimax optimization problem, and discuss two solutions, detailing an iterative algorithm as well as a precise mathematical solution. Results to the steerable sensor problem are an improvement over previous fixed sensor capabilities. Finally, we recommend ideas for future research directions toward improving these algorithms. (Received September 21, 2012)