

Non-mechanical conformal beam steering system with an 80° x 80° field of regard. Joseph Buck, Steve Serati, Boulder Nonlinear Systems Inc. (USA); Jihwan Kim, Michael Escuti, North Carolina State University (USA); and Rob Morrison, Coherent Investments, LLC (USA).

ABSTRACT

Boulder Nonlinear Systems (BNS) has made several recent advances in applying liquid crystal (LC) devices for complex beam control and wavefront correction. These developments improve the performance of long-range, optical remote sensing systems while overcoming the limitations of mechanical pointing and stabilization techniques with reduced system complexity. Several approaches have been developed that allow high-efficiency steering and excellent accuracy over wide fields of view. This presentation provides an overview of the recent advances BNS has made in applying LC based spatial light modulators and active polarization gratings for non-mechanical beam control and wavefront correction.