

8.13 THE LIDAR RADAR OPEN SOFTWARE ENVIRONMENT (LROSE) “BLAZE” RELEASE

MICHAEL M. BELL¹, MICHAEL J. DIXON², WEN-CHAU LEE²

¹ Colorado State University, USA

² National Center for Atmospheric Research, USA

mmbell@colostate.edu

The Lidar Radar Open Software Environment (LROSE) is being developed to meet the challenges of complex lidar and radar processing needs and help address the “big data” problem faced by users in the research and education communities. Through support from the National Science Foundation, the LROSE project is developing a “Virtual Toolbox” stocked with core algorithm modules for those typical processing steps that are well understood and documented in the peer-reviewed literature. The first formal release of LROSE is called “Blaze” (a climbing rose) and focuses on key software building blocks for data processing: Convert, Display, Quality Control, Grid, Echo, and Wind. The Blaze release consists a suite of well-documented software modules for performing radar and lidar analysis with tutorials and starter kits aimed at facilitating community development and enhancement. By combining the open source approach with recent developments in virtual machines and cloud computing, we are developing a system that is both highly capable and easy to run on virtually any hardware, without the complexity of a compilation environment. The Blaze release of LROSE will be presented, along with a roadmap for future software releases.