Opticks is an extensible open source software suite that enables geospatial analysts to create actionable intelligence from remote sensing data. Opticks supports still imagery, motion imagery, and many GEOINT data formats, including those used for TIR, SAR, OPIR, environmental, multispectral, hyperspectral, and image spectroscopy data analysis.
Opticks offers the most advanced extension capability of any other remote-sensing tool, and provides analysts the capability to:

- Supports data from various sensors to include spectral, OPIR, Radar, SAR, and imagery
- Zoom, pan, rotate, layer, and geo-reference both still and motion imagery
- Quickly layer GIS features, annotations, results, and other information to provide context
- Display images such as colormap, histogram, and transparency
- Display and process large datasets (>4 GBs)
- Quickly combine and repeat processing steps using graphical wizards
- Combine multiple views and add text and graphic annotations
- Process data in BIP, BSQ or BIL interleaves
- Process data types including NITF 2.0, NITF 2.1, GeoTIFF, ENVI, ASPAM/PAR, CGM, DTED, Generic RAW, ESRI Shapefile, HDF5, AVI, MPEG, JPEG, GIF, PNG, BMP, and DigitalGlobe 8-band data
- Add new features using extensions available at http://Opticks.org

Opticks’ spectral data analysis extensions provide a wide variety of analytical capabilities such as SAM, CEM, ELM and IARR computations. With Python or an Exelis IDL software license, the scripting extensions enable analysts to combine the power of Opticks’ data visualization with the flexibility of Python’s and IDL’s data manipulation capability.

**OVERVIEW**

Opticks is a free and open source software tool. Ball, the U.S. Air Force, and other organizations continue to support this effort. Sign up on the Opticks mailing lists to get user updates and developer information.

Take advantage of these Opticks features:

- Native functionality built using a public API to support development of new functionality
- LGPL licensing — embed without restriction
- More than 100 developers registered on the site
- Extensive API documentation and developer tools
- More than 150 plug-ins included in the software

Opticks offers the most advanced extension capability of any other remote-sensing tool, and provides analysts the capability to:

- Supports data from various sensors to include spectral, OPIR, Radar, SAR, and imagery
- Zoom, pan, rotate, layer, and geo-reference both still and motion imagery
- Quickly layer GIS features, annotations, results, and other information to provide context
- Display images such as colormap, histogram, and transparency
- Display and process large datasets (>4 GBs)
- Quickly combine and repeat processing steps using graphical wizards
- Combine multiple views and add text and graphic annotations
- Process data in BIP, BSQ or BIL interleaves
- Process data types including NITF 2.0, NITF 2.1, GeoTIFF, ENVI, ASPAM/PAR, CGM, DTED, Generic RAW, ESRI Shapefile, HDF5, AVI, MPEG, JPEG, GIF, PNG, BMP, and DigitalGlobe 8-band data
- Add new features using extensions available at http://Opticks.org

Opticks' spectral data analysis extensions provide a wide variety of analytical capabilities such as SAM, CEM, ELM and IARR computations. With Python or an Exelis IDL software license, the scripting extensions enable analysts to combine the power of Opticks’ data visualization with the flexibility of Python’s and IDL’s data manipulation capability.

**OUR ROLE**

Ball Aerospace developed Opticks as an easy-to-use geospatial data analysis tool for the U.S. Air Force, specifically the National Air and Space Intelligence Center.