

Abstract

The Defense Meteorological Satellite Program (DMSP) Operational Linescan System (OLS) has a low light imaging capability designed for clouds detection using moonlight. The OLS has two spectral bands (Visible and Thermal Infrared). Visible band can detect nighttime lights such as city lights, and fishing boats. However, the DMSP/OLS visible image (DMSP/OLS-V) has only 1 km resolution and 6 bits per pixel, which makes it difficult for detail monitoring on coastal area. On the other hand, ISS image has a high spatial resolution. By overlaying geographic information such as topographical maps and satellite images, quantitative analysis can be conducted. It enables us to accurately grasp spatial distribution of fishing lights in coast areas. We, by using the ISS images complementarily, developed a method to improve the DMSP/OLS-V spatial resolution, and estimated fishing lights in coast area.