

DMSP/OLS夜間可視画像を用いたいか釣り漁業のモニタリング

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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 (V and TIR) and V band gains are controlled under the condition of solar elevation and lunar phase and elevation. This unique capability can also detect nighttime lights such as city lights, and fishing boats. The other hand, V band gain control makes difficulties for quantitative analysis.

We developed a method to estimate fishing lights power quantitatively with a single frame of V band image by using reported fishing lights power value from voluntary fishing vessels. This method allows you to analyze DN for a single frame of V band quantitatively without the gains setting information and can also be used as one of utilized fishery resource monitoring system. We hope the method will be of help for keeping rule of International fishery convention resolution.