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#### SHIP DETECTION FROM LANDSAT

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Recent inspection of LANDSAT CCT printouts of New Zealand's Wellington Harbour and Cook Strait revealed that the detection of ships and the identification of related ship parameters are possible. Experience has shown that MSS band 7, because of low radiance values from water and the resultant high S/N ratio, is the best MSS band for a "quick look" inspection of CCT printouts for possible ships. Following verification of the target on the other MSS bands the ship's size, orientation, state of motion, and direction of movement, can be determined from the total number of pixels occupied by the target for each MSS band, the orientation of these pixels, and the target's maximum and total pixel radiance values.

Although the smallest positively identified vessel was 127 m in length, in theory 30 m long vessels should be identifiable under favourable conditions.

This paper presents the procedures used for detecting ships, and discusses the problems and limitations of the overall technique as related to ship parameters, sea state and turbidity, pixel overlap, and relative geometric fidelity between pixels.

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