

**Project Title:** Developing a camera chute to monitor halibut bycatch reduction for Alaska groundfish trawl fisheries

**Organization:** AFSC; UW Electrical Engineering; Alaska Seafood Cooperative

**Award Amount:** Ongoing grants and base funding to AFSC EM Innovation Project

**Period:** 2014 - ongoing

**Project Abstract:**

AFSC EM Innovation Project has been developing and testing a camera chute system as a tool for catch monitoring, along with our work on monitoring systems for longline vessels. The primary application for camera chutes has been counting and measuring bycaught halibut as they are sorted out of trawl catches and released, though they have also been tested on two years of trawl surveys and a pot vessel for species identification. Camera chutes detect passage of a fish and trigger strobes and a camera to collect and store an image. For the halibut bycatch application, onboard software processes each image to estimate the fish length and accumulates total counts and weights (based on LW table) for each catch. Image analysis algorithms have been developed by our collaborators at the University of Washington Electrical Engineering Department.

Camera chutes have been deployed on four Bering Sea catcher-processors participating in the Alaska Seafood Cooperative's Exempted Fishery tests of expedited release of halibut through deck sorting. One of these vessels is on its fourth chute deployment, with the longest lasting more than 2 months. The chutes provide an opportunity to reduce observer work and achieve faster deck release operations.

Other camera chute projects include support for a collaborating grant project on Gulf of Alaska trawlers (described separately) and testing the potential to detect and identify salmon from groundfish deliveries to shoreside plants.

The camera chute is moving steadily towards a mature technology, ready for implementation for fisheries management. While basic functions have been available for some time, substantial improvements have been made and are planned to achieve robust, consistent, and reliable use in the challenging at-sea environment.