



For the International Polar Year, the Canadian Coast Guard Ship *Amundsen* will spend 15 consecutive months in the Canadian Arctic. The crew's efforts will be devoted to the following three main scientific research projects: the Circumpolar Flaw Lead System Study (CFL), the Inuit Health Survey, and ArcticNet.

Preparations for this journey present the Canadian Coast Guard with many challenges: we need only to think of refuelling or the logistics of the crew changes every six weeks. The CCGS *Amundsen's* crew is responsible to ensure that conditions on board and around the ship are favourable for scientific work because safety is of the utmost importance for the scientists and any visitors.



During her expedition, the CCGS *Amundsen* will explore several parts of the Canadian Arctic. The most northerly point reached will be at 81° north latitude in Kane Basin. The icebreaker will also have to go through the Northwest Passage at its most difficult point: Bellot Strait which is on the continent's northernmost boundary.

The Circumpolar Flaw Lead System Study mission, which is expected to take 10 months, is the most challenging for the Canadian Coast Guard. The CCGS *Amundsen* will need to retain her mobility while overwintering in the Western Arctic. For a Canadian icebreaker, this would be a historic first to succeed in navigating throughout the winter months. The key to this exploit will be the meticulous preparation which is dependent on the crew's invaluable experience and expertise. The 39 seagoing personnel have to contend with the ice, the prevailing winds and the currents to avoid that the CCGS *Amundsen* becomes icebound. In winter 2007, two aerial patrols were done to observe the ice dynamics in this area. The information gathered was carefully reviewed and compared to a large quantity of historical data on ice.

On her return to Quebec City in November 2008, the CCGS *Amundsen* will have travelled more than 27,000 nautical miles or 50,000 km which is more than the Earth's circumference. Thirty-three Inuit communities will have been visited, fifty tonnes of food consumed and 120,000 meals served.



