

An aircraft suited to verification or peacekeeping missions should meet the following criteria:<sup>11</sup>

- sufficient payload to provide for the required sensors, processing equipment and storage;
- good range capability with the payload, ensuring large coverage per sortie;
- broad range of operating altitudes without adverse operational or economic effects;
- ability to transport passengers (for example, observers for the underlying state) without loss of surveillance capability;
- ability to operate from a majority of airfields; and
- low operating costs coupled with high dispatch reliability.

Table 6 outlines the performance characteristics for three potential aircraft: a Cessna 441 Conquest, de Havilland Dash 8 Series 300, and a Canadair Challenger 600.<sup>12</sup> Table 7 compares operating costs for the aircraft in 1985 U.S. dollars.

	Cessna Conquest <sup>2</sup>	de Havilland Dash 8 Series 300	Canadair Challenger
Maximum Gross Weight (lbs.)	10 800	39 000	41 100
Maximum Payload (lbs.)	2 450	11 800	7 830
Payload with Maximum Fuel (lbs.) <sup>3</sup>	1 500	9 122	5 375
Maximum Ceiling (ft.) <sup>4</sup>	35 000	25 000	41 000
Maximum Cruise (knots) <sup>5</sup>	287	266	443
Maximum Range (INM) <sup>6</sup>	2 100	2 500	3 040
Maximum Endurance (hrs.) <sup>6</sup>	7.3	9.4	6.8
Maximum Range @ 5 000 ft. (1 INM)	866	1 273	1 490
Take-off Distance @ Sea Level (ft.)	2 465	3 700	5 750

**Table 6**

**Performance  
Characteristics  
for Selected  
Aircraft<sup>1</sup>**

1 Intera Technologies Ltd. "A Comparison of the Capabilities and Costs of Aircraft for an Iceberg Radar Surveillance Role." In *Iceberg Detection by Airborne Radar: Technology Review and Proposed Field Program*. (Toronto: CANPOLAR Consultants Ltd., September 1986), p. 23f. Environmental Studies Revolving Funds Report No. 045.

2 Single pilot, one operator. All others assume two pilots, one operator.

3 Payload refers to the equipment payload available plus three- or two-person crew as required.

4 Maximum ceiling is close to the optimum performance ceiling except for jets that have approximately 39 000 ft. ceiling for optimum performance.

5 Refers to optimum altitude. Will be slower at lower altitude.

6 Assumes maximum fuel load at takeoff, VFR conditions. Reserve not included.