#16—Julienne Stroeve, Mark Serreze, Walt Meier, Andy Mahoney, and Ted Scambos
1. Julienne Stroeve, Mark Serreze, Walt Meier, Andy Mahoney, Ted Scambos

2. Estimate of sea ice extent for the month of September 2008 - remains unchanged from May outlook, 3.5 million sq-km.

3. Principal Method used for Outlook: based on survivability rates of various ice age classes through the summer. Specifically, the estimate is calculated by multiplying the average (for the period 1985-2007) amount of ice that does not survive the summer (between the March maximum and the September minimum) by this year's March extent. Further revision of the estimate depends on evolving summer atmospheric and oceanic conditions.

4. The September estimate is based on survival rates for different age classes through the summer, as determined by the Maslanik et al. (2007) ice age maps. This is a purely statistical estimate and does not take into consideration summer atmospheric or oceanic conditions that effect the summer ice cover. A cooler than normal summer and/or a circulation pattern that tends to keep ice in the Arctic and/or produce a less compact ice cover will allow a greater amount of ice to survive and this estimate could be biased low. A warm summer and/or circulation pattern that fosters ice loss and a more compact ice cover will perhaps result in even less ice than given by our estimate. Analysis of summer conditions to date reveal that the melt began earlier than usual over the western and central Arctic Ocean, helping to set the stage for strong ice losses in this region during summer through the ice-albedo feedback mechanism. Furthermore, sea level pressure patterns are starting to lock into a combination of a dipole pattern (high over Canada, low over Siberian oceans) and a dominant low pressure cell within Arctic Basin. Both patterns favor reductions in ice extent, especially in the western Arctic. These patterns look to persist for at least the next week. Overall, June 2008 ice extent is now tied with that in 2007.

Estimated end-of-summer minimum sea ice extent for 2008 based on previous years' melt data

2007 record minimum extent: 4.13 mil.sq. km

Average estimate: 3.59 mil.sq. km