
Feb 10, 2013

1
00:00:00,020 --> 00:00:04,180
After a long winter's freeze,
the sea ice covering

2
00:00:04,200 --> 00:00:08,370
the Arctic Ocean has reached
its maximum extent

3
00:00:08,390 --> 00:00:12,550
and is showing signs of its
annual spring melt. This
maximum

4
00:00:12,570 --> 00:00:16,580
wasn't as big as it could have
been though – it turned out to
be the fifth smallest

5
00:00:16,600 --> 00:00:20,750
winter peak in 35 years of
satellite measurements.

6
00:00:20,770 --> 00:00:24,910
Every year, scientists pay
close attention to changes in
Arctic sea ice.

7
00:00:24,930 --> 00:00:29,060
In winter, the frozen ocean
surface expands rapidly to
cover

8
00:00:29,080 --> 00:00:33,200
everywhere from the Hudson Bay
to Russia to the northwest
coast of Alaska.

9
00:00:33,220 --> 00:00:37,350
In the summer, the ice melts
back dramatically, exposing
more

10
00:00:37,370 --> 00:00:41,380
dark ocean water to the rays of
the sun.

11
00:00:41,400 --> 00:00:45,450
But those summer minimum
extents have also generally
been getting smaller.

12
00:00:45,470 --> 00:00:49,510
In September of 2012, Arctic
sea ice shrank to its

13
00:00:49,530 --> 00:00:53,540
lowest extent ever measured in
the satellite era.

14
00:00:53,560 --> 00:00:57,720
While a thinning ice cap and
warm temperatures were likely
responsible for most

15
00:00:57,740 --> 00:01:01,900
of that melt, a strong Arctic
cyclone in August also helped
break

16
00:01:01,920 --> 00:01:06,080
up ice north of the Bering
Strait. A large chunk of sea
ice broke

17
00:01:06,100 --> 00:01:10,260
off from the ice pack and was
transported south to warmer
waters, where it melted.

18
00:01:10,280 --> 00:01:14,450
A thin ice cap also may have
contributed

19
00:01:14,470 --> 00:01:18,620
to a recent fracturing event
north of Alaska this winter.

20
00:01:18,640 --> 00:01:22,810
The scale of this phenomenon is
almost hard to imagine

21
00:01:22,830 --> 00:01:26,980
-- cracks in the ice hundreds
of miles long.

22
00:01:27,000 --> 00:01:31,150
Sea ice far from shore is
always at the mercy of ocean
currents and winds,

23
00:01:31,170 --> 00:01:35,330
so fractures in the ice are a
regular event, but the
impressive scale

24
00:01:35,350 --> 00:01:39,480
of the cracks here may be due
to the prevalence of younger,
thinner ice

25
00:01:39,500 --> 00:01:43,610
that we've seen in recent
years.This year's smaller
winter

26
00:01:43,630 --> 00:01:47,740
maximum sea ice extent
continues a trend of modest
decreases

27
00:01:47,760 --> 00:01:51,840
in winter maximums. Since the
size of the sea ice

28
00:01:51,860 --> 00:01:55,920
cap each season is dependent on
many factors, like
temperatures,

29
00:01:55,940 --> 00:01:59,970
winds, and ocean currents, it
doesn't necessarily mean that a
this year's

30
00:01:59,990 --> 00:02:04,010
smaller maximum sets the stage
for another record minimum this
summer.

31
00:02:04,030 --> 00:02:08,190
But researchers say the
thinning of the ice does make
the ice cap more

32
00:02:08,210 --> 00:02:12,390
vulnerable to melting events in
the future, to the point where
we might see