
EPISODE THREE:
ICE ODYSSEY

1
00:00:00,000 --> 00:00:04,330
I can’t really name anyone that has so much integrity as she does to the things she’s accomplishing. It’s pretty

2
00:00:04,330 --> 00:00:08,530
to the things she’s accomplishing. It’s pretty amazing

3
00:00:26,850 --> 00:00:30,690
Having Claire as a role model, just a strong woman in science

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00:00:30,690 --> 00:00:36,030
and just so smart and so kind. It’s just a huge confidence booster

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00:00:36,030 --> 00:00:41,630
it just, hey I could do that too. That’s possible, that’s successful, that’s what I want to do.

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00:00:41,630 --> 00:00:44,430
I would characterize her as a pioneer in the field.

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00:00:44,430 --> 00:00:49,570
The amount and quality of the work she’s put out, is second to none.

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00:00:49,570 --> 00:00:54,150
I know people who have a lot of tenacity, I know people who have integrity.

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00:00:54,150 --> 00:00:59,420
But it’s rare that people have both together in that combination that Claire does.

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00:01:00,080 --> 00:01:06,320
Every morning, Dr. Claire Parkinson gets up before sunrise and runs two miles to work.

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00:01:06,320 --> 00:01:10,340
She hasn’t missed a day in nearly forty years.

12
00:01:11,960 --> 00:01:16,510
NASA Explorers

13
00:01:19,110 --> 00:01:21,940

Cryosphere

14
00:01:21,940 --> 00:01:25,240
Ice Odyssey

15
00:01:25,240 --> 00:01:28,340
Episode Three

16
00:01:32,190 --> 00:01:37,390
To know the evolution of sea ice and how we observe it from space, is to know Claire.

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00:01:37,390 --> 00:01:40,530
This year, she celebrating forty years at NASA.

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00:01:40,530 --> 00:01:51,340
When I arrived at Goddard, which was in July 1978, it was an incredibly exciting period here.

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00:01:51,340 --> 00:01:57,590
Satellites were pretty new, but a lot of data had been collected.

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00:01:57,590 --> 00:02:03,100
NASA scientists were inundated with information and Claire was in a cohort looking at sea ice,

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00:02:03,100 --> 00:02:07,820
trying to make sense of a jumble of very raw, very new data.

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00:02:07,820 --> 00:02:12,330
It was around that time, that Claire and her team, at the time led by Dr. Jay Zwally

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00:02:12,330 --> 00:02:16,530
created the principle sea ice record that we use today.

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00:02:16,530 --> 00:02:21,130
How does something like that record help you do your job?

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00:02:21,130 --> 00:02:26,500
Oh, that record is fundamental to understanding sea ice.

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00:02:26,500 --> 00:02:30,640
So without it, we wouldn’t know how rapidly it's changing.

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00:02:43,580 --> 00:02:47,450
You may not realize it, but Claire’s work studying the changing extent

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00:02:47,450 --> 00:02:52,440
of the ice caps deeply affected our understanding of climate change and relatedly,

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00:02:52,440 --> 00:02:56,720
our understanding of how climate change affects life on Earth.

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00:02:58,900 --> 00:03:05,870
One of the clearest signals for climate change that resonates with people

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00:03:05,870 --> 00:03:10,630
has been the shrinking of this polar ice cap in the summer

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00:03:10,630 --> 00:03:14,620
that we’re able to see because of Claire’s work.

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00:03:14,620 --> 00:03:20,620
After we had a record that was about fifteen to twenty years long,

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00:03:20,620 --> 00:03:28,900
we started noticing that the extent of sea ice in the Arctic was getting smaller over time.

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00:03:30,760 --> 00:03:33,530
Sea ice is formed on the surface of the ocean

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00:03:33,530 --> 00:03:36,250
and therefore is made from sea water.

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00:03:36,250 --> 00:03:38,610
The biggest concentration is in the Arctic.

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00:03:38,610 --> 00:03:42,850

And it’s also where the biggest loss in sea ice is occurring.

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00:03:42,850 --> 00:03:47,890
Every year NASA reports on the sea ice minimum and maximum extents.

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00:03:47,890 --> 00:03:51,220
As expected, the data is concerning.

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00:03:51,220 --> 00:03:58,030
By now, not only has this trend toward lesser ice continued,

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00:03:58,030 --> 00:04:06,340
but it’s even accelerated so that now the decreases are greater than what they had been.

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00:04:10,500 --> 00:04:14,350
These trends are deeply troubling, but one thing’s for sure:

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00:04:15,260 --> 00:04:19,630
our awareness of shrinking sea ice extent due to climate change was propelled

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00:04:19,630 --> 00:04:23,710
faster and further after Claire Parkinson arrived at NASA.

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00:04:23,710 --> 00:04:30,170
I mean, she takes her job seriously and the health and welfare of those instruments in space.

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00:04:30,170 --> 00:04:33,850
Yup, she’s on it. You know it’s one of the things you don’t worry about,

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00:04:33,850 --> 00:04:37,560
because Claire’s in the loop on these things. It’s gonna be fine.

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00:04:38,440 --> 00:04:41,570
In science, we stand on the shoulders of giants,

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00:04:41,570 --> 00:04:45,150
on the shoulders of those who explored before us.

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00:04:45,150 --> 00:04:51,190
But then some among us are giants.

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00:04:54,420 --> 00:04:56,630
On the next episode of Cryosphere

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00:04:56,630 --> 00:05:00,020
For a scientist, its incredibly exciting to be studying these

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00:05:00,020 --> 00:05:01,590
glaciers and ice sheets right now because

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00:05:01,590 --> 00:05:05,170
they're doing something that hasn't happened in thousands of years.