
SAO 206462
Central star
(marked)
Spiral arms
Circumstellar disk

1
00:00:00,000 --> 00:00:03,990
(Music)

2
00:00:04,010 --> 00:00:08,020
Hi! I'm Mark Kuschner, an astronomer at NASA's Goddard Space

3
00:00:08,040 --> 00:00:12,040
Flight Center. Many of us astronomers, have been searching for

4
00:00:12,060 --> 00:00:16,070
exoplanets and trying to learn how they form. One

5
00:00:16,090 --> 00:00:20,090
strategy is to search for lots of young stars still surrounded by protoplanetary

6
00:00:20,110 --> 00:00:24,100
disks and debris disks. These clouds of gas, rock,

7
00:00:24,120 --> 00:00:28,110
ice and dust are the same types of environments that gave

8
00:00:28,130 --> 00:00:32,120
rise to our own solar system. From 2010 to 2011

9
00:00:32,140 --> 00:00:36,140
NASA's WISE mission scanned the entire infrared sky

10
00:00:36,160 --> 00:00:40,190
and captured beautiful imagery. I'm most excited about

11
00:00:40,210 --> 00:00:44,220
this imagery because of all the new disks we can find in it.

12
00:00:44,240 --> 00:00:48,240
The WISE mission imaged about half a billion objects all

13
00:00:48,260 --> 00:00:52,270

over the sky. Only a small fraction of these sources

14
00:00:52,290 --> 00:00:56,280
are actually stars with disks. We can't find them with computer

15
00:00:56,300 --> 00:01:00,300
software, because the clues are too subtle.

16
00:01:00,320 --> 00:01:04,320
The human eye can sort things out, but it would take years for astronomers

17
00:01:04,340 --> 00:01:08,330
to visually evaluate all these different sources.

18
00:01:08,350 --> 00:01:12,350
So last year, NASA and Zooniverse launched Disk Detective.

19
00:01:12,370 --> 00:01:16,380
At Disk Detective dot org, you can watch

20
00:01:16,400 --> 00:01:20,410
ten second videos of images from the WISE All-Sky

21
00:01:20,430 --> 00:01:24,430
survey and other projects. Some images show

22
00:01:24,450 --> 00:01:28,440
protoplanetary and debris disks - the homes of extrasolar

23
00:01:28,460 --> 00:01:32,450
planets. Others contain galaxies, asteroids,

24
00:01:32,470 --> 00:01:36,460
nebulae, and other objects. We've asked you to

25
00:01:36,480 --> 00:01:40,470
help us figure out which is which. Today we're celebrating

26
00:01:40,490 --> 00:01:44,510
that in our first year, volunteers at DiskDetective.org

27
00:01:44,530 --> 00:01:48,540
have classified one million videos. The disk

28
00:01:48,560 --> 00:01:52,540
candidates they found went to telescopes in California, Arizona,

29
00:01:52,560 --> 00:01:56,560
New Mexico and Argentina for follow up. And we

30
00:01:56,580 --> 00:02:00,590
expect that the top stars from those lists will become future targets

31
00:02:00,610 --> 00:02:04,600
for even bigger telescopes like Hubble and the James Webb Space

32
00:02:04,620 --> 00:02:08,630
Telescope, which will search for patterns in the disks and for

33
00:02:08,650 --> 00:02:12,640
extrasolar planets they may contain. We hope you'll join

34
00:02:12,660 --> 00:02:16,690
us as we continue our search!

35
00:02:24,730 --> 00:02:20,710
(music)