



www.diskdetective.org

1
00:00:00,010 --> 00:00:03,010

[Music]

2
00:00:03,030 --> 00:00:07,050

I'm Marc Kuchner, a researcher at NASA's Goddard Space

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00:00:07,070 --> 00:00:11,150

Flight Center, and I work on understanding distant planetary systems.

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00:00:11,170 --> 00:00:15,180

A major quest of astronomers during the past 30 years

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00:00:15,200 --> 00:00:19,210

has been to discover exoplanets and learn how they form. One strategy

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00:00:19,230 --> 00:00:23,250

is to search for lots of young stars still surrounded by protoplanetary disks

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00:00:23,270 --> 00:00:27,310

and debris disks. These clouds of gas, rock,

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00:00:27,330 --> 00:00:31,440

ice, and dust, are the same types of environments that gave rise to our

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00:00:31,460 --> 00:00:35,530

own solar system. From 2010 to 2011,

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00:00:35,550 --> 00:00:39,640

NASA's WISE mission scanned the entire infrared sky

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00:00:39,660 --> 00:00:43,680

and captured beautiful imagery. I'm most excited about this imagery

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00:00:43,700 --> 00:00:47,730

because of all the new disks we can find in it. The WISE

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00:00:47,750 --> 00:00:51,760

mission imaged about half a billion objects all over the sky. Only a

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00:00:51,780 --> 00:00:55,850

few of these sources might actually be stars with disks, but we can't find them

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00:00:55,870 --> 00:00:59,950

with computer software because the clues are too subtle. The human eye can

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00:00:59,970 --> 00:01:03,970

sort things out, but it would take years for astronomers to visually evaluate

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00:01:03,990 --> 00:01:08,050

all the possible sources. That's why NASA and Zooniverse

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00:01:08,070 --> 00:01:12,080

are launching Disk Detective, a new citizen science project.

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00:01:12,100 --> 00:01:16,140

At DiskDetective.org, you'll see animated flipbooks of

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00:01:16,160 --> 00:01:20,240

images from the WISE All-Sky survey and other projects.

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00:01:20,260 --> 00:01:24,260

Some images show protoplanetary and debris disks--the homes of

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00:01:24,280 --> 00:01:28,290

extrasolar planets. Others contain galaxies, asteroids,

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00:01:28,310 --> 00:01:32,370

nebulae and other objects. When you go to the site and

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00:01:32,390 --> 00:01:36,390

classify objects, you'll be helping me and other NASA scientists

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00:01:36,410 --> 00:01:40,480

figure out which is which. DiskDetective.org

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00:01:40,500 --> 00:01:44,490

is a NASA-led crowdsourcing project whose main goal is to

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00:01:44,510 --> 00:01:48,530

produce publishable scientific results. The disks we find together

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00:01:48,550 --> 00:01:52,570

will be future targets for telescopes like Hubble and the James Webb Space

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00:01:52,590 --> 00:01:56,650

Telescope, which will search for patterns in the disks, and for

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00:01:56,670 --> 00:02:00,740

extrasolar planets they may contain. We hope you'll join us.

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00:02:08,840 --> 00:02:04,780

[Music]