

Pinhole camera to seek out new worlds

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It has the technology to land men on the moon and send probes into the darkest reaches of space. But Nasa's newest project has more in common with school science lessons than Star Wars.

The agency is planning to build a pinhole camera in space to spot planets orbiting distant stars. This particular device, however, will be a little larger than its classroom cousins: the new worlds imager would be the size of a football field with a hole 10m (30ft) wide in the centre.

Essentially, though, it would work in the same way — light entering the pinhole forms an image on photographic film at the far end of the box.

A sharp image is possible because the pinhole prevents interference by scattered rays of light. In the same way, the new

worlds imager would act as a "starshade", cutting out scattered light so that planets can become visible.

A spacecraft equipped with a telescope would trail tens of thousands of miles behind the starshade to collect and process the light.

The system, currently under consideration, could theoretically detect planets as small as the Earth's moon and search for indicators of life such as water, oxygen and ozone.

The man behind the scheme is Webster Cash of the University of Colorado at Boulder. "In its most advanced form, the new worlds imager would be able to capture actual pictures of planets as far away as 100 light years," he said.

The idea is one of 12 selected for funding by Nasa. Others included a lunar space elevator and a magnetised beam plasma propulsion system.