



Major Esa missions rely on British tech

Clip taken from 'The Sky at Night - The Billion Pixel Camera', BBC Four.

MAGGIE ADERIN-POCOCK:

As well as Gaia, this company has built sensors for the Rosetta comet landing mission, planet-hunter Kepler and the Mars Curiosity rover.

What they're actually doing in there is cleaning the detectors before they are sent off for testing.

Dust isn't the only challenge in making the sensors. They also have to be designed to cope with the violent experience of being launched into space. Chief engineer David Morris simulates the conditions of a launch with a vibration test.

So, what sort of force are you putting it under?

DAVID MORRIS:

It goes up to 50 times the force due to gravity on Earth simply by this vibration in three axes.

MAGGIE ADERIN-POCOCK:

So it seems really odd because you spend so much time making these wonderful detectors and then you put them through hell.

DAVID MORRIS:

They have to go through hell because otherwise we won't be confident they'll survive when they go through the hell of launch. But it is always traumatic, worrying about whether or not what we've designed and built will survive this sort of extreme violence.

MAGGIE ADERIN-POCOCK:

This process reveals the key to successful space engineering - extreme precision married with extreme robustness.