

Hypergolic Fuels

Written by pimpitcha

Tuesday, 22 December 2015 15:28 -

{youtube}IcjYdEW_HLQ{/youtube}

In this episode, There are a few ways to use chemistry to power a rocket, but all involved an oxidiser and a fuel. And with no oxygen in space, what's the best solution? Professor Andrea Sella from University College London discusses the solid state boosters of the space shuttle, the cryogenic liquid approach used in the 1970s, and demonstrates to dramatic effect the power that hypergolic reactions can provide.

Hypergolic mixtures spontaneously ignite, remove the need for a spark in space, and give a huge relative reaction. Andrea combines nitrogen dioxide and dimethylhydrazine to demonstrate how just a tiny amount of these substances can pack a powerful punch.

'A Place Called Space' is the 2015 Royal Institution advent calendar. Every day in the run up to Christmas we'll be releasing an original piece of content exploring the human experience and cultural significance of space travel. With hand-drawn animations, experiments in zero gravity, interviews with astronauts and creative data visualisations, the calendar will fire you into space every morning.

'A Place Called Space' channels the voices of seasoned astronauts and expert scientists through the eyes of a team of talented animators, film-makers and artists, bringing you a thought-provoking gem to kick-start each day.

□□□□□ : <http://richannel.org>

□□□□□ :□ https://youtu.be/IcjYdEW_HLQ

□□□□□□□□□□ : [The Royal Institution](#)