

**Example:** Sample note by students sharing knowledge with the group.

**Just wondering here**  
Glen Wagner  
5/24/2018, 11:01:07 AM

**Can a Pla**  
Katherine Idzik  
5/24/2018, 11:32

**Brown dwarf planets**  
Rebekah Sales  
5/25/2018, 10:58:32 AM

**Deuterium**  
Jeffrey Koehler  
5/25/2018, 11:28:35 AM

**Brown**  
Jeffrey Koehler  
5/25/2018, 11:32

## Detecting Space-Time Ripples

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Detecting Space-Time Ripples

**Scaffolds:**

Theory Building ▾

- Picture with Explanation
- Video with Explanation
- New Information
- Evidence
- A theory I found
- A better theory
- This theory cannot explain
- I need to understand
- I'm still wondering...
- Aha moment!!!
- Putting our knowledge together
- Building on your work
- Reference

Keyword(s):

**Tools:**

Recovery

Insert image or file:

There is no image attachment in this contribution.

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**Video with Explanation** - As well as giving a rundown of ripples in space-time from black holes at the start of the video (which seem to only come from merging black holes, to my understanding?), this video explains just how we detected these ripples for the first time.

The scale of the ripples by the time they reached Earth (after travelling for more than a billion years) was extremely minute - a difference of 1 to  $10^{21}$ . As such, the detection equipment had to be monumentally precise. The detection equipment, as well as being precise, is also highly unique - each laser (of the two) is powered by a megawatt of energy (enough to power a thousand homes), and the tunnels in which those parallel beams are contained is the second largest vacuum in the world behind the Large Hadron Collider.

There's more than that explained in the video as well. I highly recommend giving it a watch!- 🍌

**The Absurdity of Detecting Gravitational Waves**  
**HOW IS THIS POSSIBLE?**