

Solar nebular theory

[Science](#), [Astrology](#)



The first video, The " Solar Nebular Theory", describes the planetary formation through a collapsing cloud of dust and gas that spins in the same direction at a fast pace. Through angular momentum, as it collapses even more, it speeds up and flattens into a disk. As it flattens, the materials start to come together and planets start to form as well as a young star is created in the middle. What I liked about the video is how they used good analogies such as the pizza and the figure skater to get the idea of angular momentum across.

What I didn't like about the video is how they didn't go more in depth about the other bodies that are created around the star. To make it better I would've used our solar system as an example in order to relate to it better. The 2nd video is the Planetesimal video. It goes on to describe how particles grow by condensation, the process of adding matter to an atom or molecule. Once they get to a big enough size, the particles start to stick to others through a process called accretion. Planetesimals continue to grow by colliding and sticking to others until it gets large enough to turn into a protoplanet.

The stage where iron falls to the core and heat is generated while lighter materials stay on the outside to create the earth's crust. What I did not like about the video is how they do not specify how long it takes for it to turn into a protoplanet from a planetesimal. The woman talks about millions of years to get to the diameter of the particle to centimeters until they start to collide, but lacks the information of how long the collisions take to get bigger. They could improve the video by adding these details into it.

What I liked about the video is how it goes in depth about protoplanets and the gravitational collapse as the textbook had me somewhat confused. The 3rd video is the extra solar planets. It is about how to detect planets outside of our solar system that gravitate around other stars. They don't try and find planets directly, they observe the stars in which they believe planets gravitate around and watch how the star reacts. The way they can measure this is through the Doppler affect. As the planet gravitates around it, it pulls the star in different directions.

So when a star comes towards you, its light gets compressed, and when it is moving away, the light waves get stretched. What I liked about the video is the way they illustrated how the Doppler affect worked with visuals as oppose to the dog theory in the textbook. That being said, what I didn't like about the video was how they focused solely on detecting planets through the Doppler affect, I would improve upon this video by not leaving out the other approach of detecting the difference in light when a planet moves in front of it.

The 4th video is about meteorites. It discusses how meteoroid's cause meteors, that is until it reaches the ground and are renamed to meteorites. It then describes how each meteorite is classified by its composition. Each different composition inside a meteorite allows geologists to identify their space origins. What I liked about the video is how they discussed the different kinds of meteorites and the significance of different compositions of the meteorites. What I didn't like is how they did not touch upon meteor showers and different meteor showers.

To improve this video I would've included some facts of the Perseid meteor shower. The 5th video is about asteroids. It discusses how Italian astronomer Piazzi discovered the first asteroid. Now there are over 100, 000 asteroids that lay in the asteroid belt near Mars and Jupiter. They also describe the reason the asteroids are in the belt could be due to a planet that never formed. The pull of Jupiter's gravity kept the particles accelerating so fast, they could never accrete.

What I liked about the video is how it spent the most time discussing why the asteroid belt exists as that caught my attention the most in the textbook, where it's only mentioned briefly. What I didn't like about the video is it didn't discuss the shapes and size of the asteroids themselves. To improve this video I would've added some interesting facts from the textbook such as some asteroids are 200km in diameter. The 6th video is about comets. It talked about how civilization was influenced from comets and the association of comets to Earth through religious or mythological oriented societies and how they were viewed as a bad omen. What I did not like about this video is how it did not describe at all what a comet is, or what it is made up of. They could make this video better by discussing the basics of a comet, not just the historic significance it played on our societies. That being said, what I did like about this video is the telling of how it played a role in our societies that if something bad happened, and a comet was in the sky, it started to be associated with each other.