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**This is a graded discussion: 10 points possible**

due Mar 6

**Z7 Zoom Chat with Scientist/Alumni, 7 pm Thr Mar 3**

Feb 28 at 4:36pm

[Erin O'Connor](#)

14

**Zoom Chat with Scientist / Alumni, Thr Mar 3 at 7 pm (Extra Credit if you attend LIVE)****We had a great Zoom Meeting. Here is the recording:****<https://youtu.be/subGVjUCuKA>** **<https://youtu.be/subGVjUCuKA>**

- Jared Goldberg, UCSB PhD candidate in Stellar Evolution. He probably knows more intimate details about the star Betelgeuse than you do of your loved ones. Jared did his undergraduate double major in "Physics and Philosophy" at Claremont McKenna College and took numerous courses from Harvey Mudd (where I went to school). He did a summer undergrad research fellowship at Caltech (another example of the value of internship experiences). Upon completion of his PhD he will join the Center for Computational Astrophysics in NYC as a Flatiron Research Fellow coming fall. Jared can offer insight and perspective on the differences between small liberal arts colleges vs large research institutions (both are good, but what are the pros and cons). Jared also has been teaching the Astronomy Lab courses for us here at SBCC for several years, and perhaps due to being a 3d degree black belt in Karate, he usually wins all arguments (though he credits his philosophy degree for that). Please join us for a lively conversation about exploding stars and the varied educational paths available to students in STEM at smaller schools vs bigger schools. Jared can be reached at [jgoldberg1@pipeline.sbccc.edu](mailto:jgoldberg1@pipeline.sbccc.edu).

Each week we will set up a Zoom chat with a scientist working with astronomy, astrophysics, cosmology, or science and engineering, or an alum of SBCC from our astronomy program to see what they are doing now with school, education, or their lives and careers. Some of our former students are doing amazing things. I will be reaching out to contacts I've made over my teaching career so that we can personalize and humanize the material and create more of an "in person" classroom environment.

These Zoom chats are optional. You are not required to attend, but you are certainly invited. These meetings will be at random various times during the week, subject to the availability of our prestigious guests. The meetings are not lectures. I'm more interested in chatting with our guests to have them tell you a bit about their school, work, and interest in astronomy and to give you an opportunity to ask questions and interact with them yourselves.

If you can not attend, that is fine, you will still get full credit by watching the recording and participating in a discussion about the Zoom meeting.

After participating in the Zoom Chat and/or watching a recording of the Zoom Chat, please post your reaction to the meeting. What did you find most interesting about what they are doing or what they had to say? How is it relevant to your life or educational pursuits? What qualities about their approach or perspective to education (or life) do you think has helped them succeed and to get to a place where a Black Holes Class teacher would want to invite them for a Zoom Meeting with their class (haha).



← Reply



**Malcolm Tircuit** (<https://canvas.sbccc.edu/courses/46681/users/427388>)

Mar 5, 2022



It was really great hearing Jared talk about being a PhD candidate. It was really inspiring to hear how motivated he is to educate and pursue science. I had no idea there was a difference between gravity waves and gravitational waves. It was also really cool learning about how simulations of celestial bodies work. Also, learning how fast the explosion of a star is was incredible. The fact that the matter being projected can reach speeds that would allow you to get from LA to Australia is amazing. It was even more mind-blowing that at that speed the whole process still takes days. It was also cool to hear that Jared submitted some of his diagrams to science art shows.

← Reply



**Erin O'Connor** (<https://canvas.sbccc.edu/courses/46681/users/24247>)

Mar 27, 2022



Yes, as an artist yourself, it's good to see that there are opportunities to be creative and colorful and expressive with art even though you're doing science.

← Reply



**Sarah Savage** (<https://canvas.sbccc.edu/courses/46681/users/375381>)

Mar 6, 2022



I was disappointed to not be able to attend this one as stellar evolution is definitely a subject I'd like to learn a lot more about. The simulation videos he had created showing the surface of a star "in action" and also the internal "fluid" motion of a star were very well done. Stars seem like much more complex and dynamic objects than just a ball of burning gas. He had some very helpful tips about continuing education too!

← [Reply](#)



**Erin O'Connor** (<https://canvas.sbccc.edu/courses/46681/users/24247>)

Mar 27, 2022

Yes, people think of stars as being burning balls of gas, which implies a rarefied gas such as in our atmosphere, but actually they are so massive and can be so dense and hot that they behave more like solids near the center and like liquid fluids in the mantle. Only in the chromosphere and corona are you dealing with gasses in a regular sense, and even then, we are talking about plasma at incredibly high temperatures.

← [Reply](#)



**Luke Rutherford** (<https://canvas.sbccc.edu/courses/46681/users/373514>)

Mar 6, 2022

I found Jared's outlook on his PhD and education refreshing. When he was describing how his choice in education is benefitting him because he would rather keep researching and educating himself compared to making more money with a job. I also enjoyed his enthusiasm for simulating blowing up stars. Jared's educational career is relevant to mine because he shares a passion for what he does despite being able to move on from school. I also enjoyed the way Jared spoke about what he does, he seems relaxed and knowledgeable and even included humor.

← [Reply](#)



**Erin O'Connor** (<https://canvas.sbccc.edu/courses/46681/users/24247>)

Mar 27, 2022

Yes. You should take his astronomy lab! Students really like him!

← [Reply](#)

[https://](https://canvas.sbcc.edu/courses/46681/users/403036)**Franco Diaz Campo** (<https://canvas.sbcc.edu/courses/46681/users/403036>)

Mar 6, 2022

Hi everyone!

I liked a lot this week's Zoom meeting!

I found it interesting that he seems such a young man, and I think he knows A LOT, and he talks as if he has been studying physics for the last 30 years of his life. He transmits a lot of security on what he says, and I think it is very nice to hear him talk because we know that he isn't lying and that all of what he is saying is because he has investigated it or studied it.

Another thing I found pretty interesting about the zoom meeting is that it wasn't boring to pay attention to what he was saying; I think it might be because he was very interactive with the professor and with all the presentations he had for this meeting.

I hope we still have a lot of meetings like this one, with young people that know what is happening.

Thanks for this incredible zoom meeting!

 [← Reply](#)<http>**Erin O'Connor** (<https://canvas.sbcc.edu/courses/46681/users/24247>)

Mar 27, 2022

That's helpful feedback to get, that you like the Young science types, and that this is helpful for you. I've been trying to mix it up with former students and young graduate students and also some seasoned long-term scientist.

 [← Reply](#)<https://>**Brian Wolden** (<https://canvas.sbcc.edu/courses/46681/users/274832>)

Mar 6, 2022

I really enjoyed this Zoom chat and related a lot to Jared's experiences. I too spent a lot of time growing up taking things apart and trying to figure out how they work. I am currently a philosophy major and I am thinking about switching (or double majoring) in physics as I find astrophysics and cosmology fascinating for many of the same reasons I love philosophy. Hearing about someone with such similar interests doing such incredible things in the field of

physics was very useful and inspiring! It was also great to get his advice on where to focus my coding energy.

← [Reply](#)



**Erin O'Connor** (<https://canvas.sbccc.edu/courses/46681/users/24247>)

Mar 27, 2022

It's good to hear that this speaker seemed relevant to you and your situation. Feel free to reach out to him. He teaches the lab classes and would love to hear from students.

← [Reply](#)



**Abigail Jacobs (She/Her)** (<https://canvas.sbccc.edu/courses/46681/users/367167>)

Mar 6, 2022

Jared Goldberg has accomplished so many things since SBCC which is very inspiring to me as I want to pursue my Ph.D. as well! I think his internship with Ligo was super interesting where they were searching for emerging black holes and neutron stars, which is also very relevant to our class. It's also super awesome that he is able to teach while earning his Ph.D. as it is something he really loves to do, he seems super passionate about it and I bet his class is super interesting.

← [Reply](#)



**Erin O'Connor** (<https://canvas.sbccc.edu/courses/46681/users/24247>)

Mar 27, 2022

Glad to hear you are inspired by Jared. Me too... haha! I think his love of science shows!

← [Reply](#)



**Naomi Xu** (<https://canvas.sbccc.edu/courses/46681/users/27955>)

Mar 7, 2022

I found it relatable that his reasoning for choosing a stem field unlike his parents, is because he likes to figure things out, he likes to take things apart and figure how to put them back, and

I feel like that problem solving attitude is something that many stem majors share, and why we do what we do.

I also started as a liberal arts major but I always liked math. It was always a little funny to me how shocked people were when they found out I was also taking pre-calc or calculus when most liberal arts degrees only require up to stats, if even.

← Reply



**Erin O'Connor** (<https://canvas.sbccc.edu/courses/46681/users/24247>)

Mar 27, 2022



Yes, it's definitely cool to be in stem or to be taking math. And fun to surprise people when talking with them if you are also doing an art or social science. When I graduated from college I wanted a break from science and I worked in a photo lab for a bit, but they almost didn't hire me because they couldn't understand why I would want to work there even though I had a degree in physics. But that just goes to show that getting a stem degree only opens up new opportunities, and you can still do art or music or photography or the humanities. You just have more options and can think more deeply about bigger things in the universe.

← Reply