



This is a graded discussion: 10 points possible

due Feb 27



Z6 Zoom Chat with Scientist/Alumni, 4 pm Fri Feb 25

Feb 25 at 6:44pm

[Erin O'Connor](#)

24

Zoom Chat with Scientist / Alumni, Fri Feb 25 at 4 pm (Extra Credit if you attend LIVE)

We had a great Zoom Meeting. Here is the recording:

<https://youtu.be/ogH7z73pMI0> [\(https://youtu.be/ogH7z73pMI0\)](https://youtu.be/ogH7z73pMI0)

- Jason Barrios, former student at SBCC who is now completing a major in Physics at UCSB and working toward a PhD in experimental astro-particle physics. He is also the tutor for our class and very knowledgeable with many of the advanced topics we have been discussing. Don't hesitate to reach out to him. For our Zoom Chat he will share with us some very amazing internship experiences he has had over the past few years. We want to encourage SBCC Students to look into internship opportunities NOW, not later. There are many programs specifically directed toward Community College students and the opportunities and experiences are very valuable. Jason can speak toward this first-hand. If you have questions about his research projects and/or internship experiences, or just to say hello, you can email him at jabarrios19@gmail.com (<mailto:jabarrios19@gmail.com>).

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).





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

Feb 25, 2022



I really enjoyed hearing from Jason today. He's already had so many valuable internship experiences! I'd very much like to take advantage of similar opportunities and it was wonderful to hear that there are so many to be found just through a simple Google search. It was also nice to hear from someone who's in Astronomy/Physics but isn't taking an engineering path, like me.



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

4:43pm



Originally Posted 3/5/22

I'm glad you enjoyed the talk, and of course, thank you for attending and participating with your great questions.



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

Feb 27, 2022



Hi everyone!

I liked this Zoom Chat with Jason Barrios; it was quite an exciting meeting that taught us a lot. I find it very important that he was an SBCC student, and it is because we can see that he

knows a lot. He is not saying things that don't make sense, which motivates me to continue studying to have similar knowledge every day. I liked that he is a firm supporter of almost everything on the internet, especially physics things.

What a nice meeting!

← Reply



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

4:41pm

Originally Posted 3/5/22

Great! Glad you enjoyed the meeting and I hope to invite YOU back someday to my classes to give a talk. Keep on truckin!

← Reply



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

Feb 27, 2022

I admire Jason's excitement for what he does. When he explains what he has done throughout school so far and his internships you can hear the excitement in his voice and recognize his passion for what he does. I also admire his work ethic, three summer internships, and advanced knowledge of his major. I think Jason's course throughout college given him switching majors can be relevant to my life as I am considering switching majors to astronomy or physics. I think Jason's approach towards his education through his passion to learn has helped him succeed, if he has great excitement talking about his accomplishments I imagine his excitement to learn is astronomical, which is inspiring.

← Reply



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

4:42pm

Originally Posted 3/5/22

Yes, Jason is very enthusiastic about science and genuinely enjoys being in school and learning about these things. It's good to encourage people to advocate for themselves and be intentional about forging their path into the future. It's relevant for you and all students because it's very common for students to not know what to major in and to try one thing for a while and then switch to another. I think it's a very healthy approach because if you don't try things out you may always wonder if you had made the right choice. If you try things out and then you settle on a particular path, you feel much more confident and motivated and are willing to work harder to make your chosen educational path succeed.

← [Reply](#)



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

Feb 27, 2022

This week's zoom was very interesting and I think it's also so cool to have former students speak to us about their experience and how they took their education further in pursuit of degrees involving astronomy. Jason was very interested in the topic of astronomy and physics and he asked questions about how and why which is the best way to learn, trying to challenge if you will the ideas that you are learning so that you can have a greater understanding of the material. The internships that he has done sound amazing, he was able to analyze data and work on projects that contributed to all scientists in the field. Looking into the grand scale of the universe is something that most people will never be able to do, so I think it's really cool that he was able to share that experience with us.

This is relevant to my learning because he says that he started as an art history major then switched to physics and astronomy which is super cool because it helps me feel better when questioning my major. He is showing us that it's ok to switch and taking a semester of classes that you are truly interested in will help you to be 100% certain that's the carrier that you want to pursue.

← [Reply](#)



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

Mar 5, 2022

That's a good observation that Jason's willingness to ask questions and to seek out projects and interesting things to do, had a lot to do with what he's doing now and where he's at educationally. It's good to encourage people to advocate for themselves and be intentional about forging their path into the future. It's relevant for you and all students because it's very common for students to not know what to major in and to try one thing

for a while and then switch to another. I think it's a very healthy approach because if you don't try things out you may always wonder if you had made the right choice. If you try things out and then you settle on a particular path, you feel much more confident and motivated and are willing to work harder to make your chosen educational path succeed.

← [Reply](#)



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

Feb 27, 2022

It was really great hearing about Jason's work and journey being a CC student. It was great hearing how CC students can get the same opportunities as University students in terms of internships. I also never realized how potentially challenging and complex internship jobs can be. The place Jason internshipped at seemed very high level and like requested a lot. Jason's work was incredibly fascinating and a little confusing too. This zoom chat opened my eyes to how potentially easy it can be to get into the field of science.

← [Reply](#)



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

Mar 5, 2022

That's great to hear that you are interested in science and might even consider majoring in it. It's good to try out different classes in different majors and pick the one that motivates you the most. And yes, it's one of the things I'm hoping to accomplish with these interviews is to make it less intimidating for city college students in my classes too apply for internships. Many internships are targeted for community college students and they are looking for exactly your type of background. They don't expect you to know everything but they are hoping you are genuinely interested and willing to work hard to learn and contribute.

← [Reply](#)



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

Feb 27, 2022

I thought it was very impressive that he was doing 3 interns, all as a first year transfer. It really shows his passion in his work and studies from the way he talks, his excitement and "go get it"

attitude is inspiring.

← [Reply](#)



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

4:44pm

Originally Posted 3/5/22

And in the ways you just described, you are just as energetic and inspiring and talented! I look forward to inviting YOU back to be one of my speakers in the future someday.

← [Reply](#)



Brian Wolden (<https://canvas.sbcc.edu/courses/46681/users/274832>)

Feb 27, 2022

It was really great to meet Jason and hear about his experience finding physics as his major and transferring from SBCC to UCSB. I was really impressed by the interesting and cutting edge work he is doing as an undergrad. It's great to see that, if you work hard and are passionate about what you are learning, you can be rewarded with important projects that help advance science while also continuing your education! It was also great to get some insight and advice in regard to coding if I want to continue my education in physics. Additionally, learning how he got to what he is doing is, obviously, valuable information for those who want to do something similar in our educational journey. I'll definitely be visiting Jason during office hours, if for no other reason than to chat about the interesting concepts we are learning in class.

← [Reply](#)



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

Mar 5, 2022

Yes, that is my hope, that the students in my class now, such as yourself, will see similarities in some of the guest speakers that I bring to the Zoom Chats. These students that are now at UCSB or have finished school and working, were perhaps just like you when they were here at SBCC some years past. Thank you for your participation and I look forward to inviting you back to be one of my speakers in the future someday.

← [Reply](#)



<https://>

Alak Fryt (He/Him) (<https://canvas.sbcc.edu/courses/46681/users/354278>)

Feb 27, 2022

Something that I found interesting about Jason Barrios' discussion was when he was discussing his engineering internship and how they were using lasers to cut into material and make really fine ablations. He mentioned how they were trying to minimize the uniformities that they received when firing the lasers and one type of instability that he mentioned was a Rayleigh-Taylor instability. Barrios helped me to visualize it by describing it as dropping a little bit of milk into a cup of water which is what a Rayleigh-Taylor instability would look like. I only thought this was interesting because I see this type of instability quite a lot at Starbucks. Whenever customers order a sweet cream cold brew, we finish off the drink by topping off the cold brew with about half an inch of sweet cream. The cold brew is a dark brown color while the sweet cream is white and so watching how the colors blend is a really interesting and pretty instability to see.

← [Reply](#)



<http>

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

Mar 5, 2022

This is great to hear you taking what Jason said about mixing, and applying it to your experiences at Starbucks. Physics is about the world around us and there are examples of very advanced concepts happening all around us and the time in our everyday lives. Just think of the weather, and how complicated and difficult it is to predict, and it has everything to do with fluid dynamics and pressure and temperature and energy and all sorts of advanced physics Concepts.

← [Reply](#)



<https://>

Lukas Gott (<https://canvas.sbcc.edu/courses/46681/users/417976>)

Feb 27, 2022

I found the portion on how Jason's experimental laser work and new calculations could lead to autonomous laser machine to be the most interesting. Maybe this is a bit strange, but I found it weird that this idea was leftover for paid interns experimenting with the laser. I would have thought a scientist in need of time improvement would have thought about that idea. Either way it's incredibly inspiring to know they had the opportunity to figure that out and really let's us young students know we have opportunity in the real world to make a difference.

← Reply



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

Mar 5, 2022

Yes, interns are often surprised at their able to contribute in a real way, to discover things and work on projects that no one else has worked on and with autonomy and responsibility. But these scientists have so many interesting projects to work on, they need the help and they know that you interns are very talented and want to give you the chance to participate too.

← Reply



Lucca Gambone (<https://canvas.sbcc.edu/courses/46681/users/405319>)

Feb 28, 2022

While listening to the lecture *found it interesting about the lecture is how he started as a history major. Thinking this is what he was interested in but by living and experiencing life he noticed that, that was not his path, I can relate to this, I came to City College thinking I wanted to do business and economics. But by being here in Santa Barbara and living and experiencing My thought process on education/ Career path changed I went from wanting to be a business man to wanting to learn how to communicate effectively amongst groups of people and become a great public speaker, and use that to my advantage in getting exposure for my art. I would have never learned this about my self. Until I got out of my comfort zone and moved to Santa Barbara for school, I would also say I learned so much about my self when I took my first job down here at Santa Barbara at a pottery studio, it was not an internship it was a full time job but the lessons I learned from the job are similar to what Jason learned at the museum and his other internships. And that is I learned what captivated me I learned what my interests where, and that would have never happened if I did not go out of my comfort zone much Like Jason.*

← Reply



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

Mar 5, 2022

These are great lifelong lessons and thank you for sharing your experience with the class through this discussion post. I think the point to be made is for students to get out there and be involved with things that you find interesting and that you want to develop skills for

that you can someday apply to your life or to your future career. Jason is doing it through internships, and you did it by traveling to a new country and getting out of your comfort zone and taking a full-time job in a field that you are interested in and want to learn more about.

← [Reply](#)



[https://](https://canvas.sbccc.edu/courses/46681/users/408920) **Benet Bouchard (She/Her)** (<https://canvas.sbccc.edu/courses/46681/users/408920>)

Mar 1, 2022

I really enjoyed this zoom chat, Jason seems to be very passionate about his work and education which made this very engaging. I found it so interesting that he has been a part of so much research. Specifically, I found the work he did with General Atomics on inertial confinement fusion. I definitely relate to his perspective on having a hands-on experience helping to apply what he had learned to educational/career opportunities.

← [Reply](#)



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

Mar 5, 2022

Glad you enjoyed Jason's talk. What I wanted to share with the class is how he was able to do these things while at SBCC (or the summer right after he left). I want all of you (students of SBCC) to feel like you can do these things too.

← [Reply](#)



[https://](https://canvas.sbccc.edu/courses/46681/users/122267) **Lexie Brent** (<https://canvas.sbccc.edu/courses/46681/users/122267>)

Mar 1, 2022

Jason's work ethic, knowledge, and experience so far are all very impressive! I found it interesting how much of the work in his internships he had to do himself, especially having to learn the material *and* build things on his own. I can't say that I would enjoy being left to figure things out myself as I prefer explanations and instructions to be as detailed as possible so I can retain the information and meet expectations. But I also understand that feeling of pride that he mentioned at having figured it out and made it by yourself. I hope to be fortunate enough in my future endeavors to find a sweet spot between sufficient helpful guidance and individual understanding and creation.

Also, I didn't know about the harsh lunar dust, how fascinating!

← [Reply](#)

○



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

Mar 5, 2022



Keep in mind that when you are starting to learn something, early on in your educational path or subject area, you need more guidance than later on when you have learned foundational principles and are able to use them to come up with something new. So I don't want students to feel intimidated by science or these internships or the speakers that I bring in, I want you rather to realize that they were just like you here at SBCC and as they progressed in their education they became more knowledgeable and confident and able to do things on their own. That is what would happen if you were to go into an internship someday. You would be ready for it and you would do just fine.

← [Reply](#)

