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This is a graded discussion: 10 points possible

Show Due Dates

Z1 Zoom Meeting with Scientist/Alumni 7pm Fri 1/21

Jan 18 at 10:22am

27

Erin O'Connor

Zoom Meeting with Scientist / Alumni, This Friday 1/21 at 7 pm
Meeting ID: 977 5426 1438, Passcode: 873684
https://sbcc.zoom.us/j/97754261438?pwd=MlNJZXBpcGRNVk5XNjh5MG5sYjFSQT09
(https://sbcc.zoom.us/j/97754261438?pwd=MlNJZXBpcGRNVk5XNjh5MG5sYjFSQT09)

- Hector Jimenez, former SBCC student now working as a scientist in the Airforce and flying C-130's as a navigator, and doing astrophotography with his own equipment from his back yard. My first PowerPoint image backdrop of the Orion Nebula was taken by Hector, and he will share with us more images and will tell us how he does it. Feel free to contact him by email at hfjmnz@gmail.com if you have follow up questions to our chat and/or about astrophotography.

We had a great Zoom Meeting. Here is the recording:
https://youtu.be/OWZI1Aumm28 (https://youtu.be/OWZI1Aumm28)

Each week we will set up a Zoom meeting 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.

Our first Zoom session will be scheduled for near the end of this week. I'll send out an announcement when I have the specifics. These Zoom meetings 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 Meeting and/or watching a recording of the Zoom Meeting, 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).

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Reply

(https:/)

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

Jan 29, 2022

What I found the most interesting was the quality of images Hector was able to get from his back yard! The images are truly beautiful and amazing. It's very exciting that one can get such clear images of objects as far away as other galaxies with portable equipment. I can definitely see myself getting into that sort of image capturing and compiling at some point in the future. I really appreciate Hector's approach to capturing these images and astronomy in that it sounds like he just kind of dove in and kept advancing his knowledge and capabilities in the subject. That sort of passion nearly always leads to success and his results clearly speak for themselves.

Reply

(http

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

Jan 30, 2022

Hi Brian. Yes, the technology available now to "regular people" like us, is unimaginable just a decade ago. Just a hundred years ago astronomers had to draw by hand anything they saw through a telescope because no photos could be taken. Even though photography existed, it required long exposures and with telescopes even a few seconds would blur the image. Now, we can "integrate" and "stack" images for 50 hours (as Hector does) and obtain results unimaginable even 10-20 years ago, even from your back yard and with light pollution, etc.

Reply

(http

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

4:10pm

Originally Posted 2/3/22

Yes, I think he has worked hard and has a lot of passions for what he does.

Reply

Sarah Savage (https://canvas.sbcc.edu/courses/46681/users/375381)

Jan 30, 2022

I am very impressed by Hector's astrophotography! I had no idea that someone could capture the cosmos like this on their own and have always assumed that all the astrophotography we see is coming from NASA. It clearly takes the right equipment and plenty of time and patience. 63 hours and 200 photos layered on each other?! The amount of post production required is eye-opening and gives me even more appreciation for the astrophotography I've seen.

If I'd been able to attend, I would have asked Hector if there are any astrophotography websites or blogs that he would recommend for beginners, and also whether his portfolio is viewable somewhere and if he's been able to turn his hobby into a business?

Reply

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

4:08pm

Originally Posted 2/3/22

Hi Sarah. Great questions! I can give you his email and you can ask him these things. Great questions.

Reply

Lexie Brent (https://canvas.sbcc.edu/courses/46681/users/122267)

Jan 30, 2022

Wow, Hector is really an inspirational person. To have a degree in physics, continue his education in engineering, work in the air force, and be an incredible astrophotographer on the side?! I just can't imagine. While that's not the path I plan on following, I do have some friends who are interested in telescopes and astrophotography and do it as a hobby. I once helped

them put together a giant telescope in a garage one exceptionally cold night and set it up in the backyard (just like Hector). But honestly, I didn't know the science of it, I was just helping. One of them has a pretty interesting instagram account for his images, @rooftop.astro if you'd like to check it out. I wonder if maybe one day they'll be working in that field and the experience they're gaining now will help them a lot. I admire what they do and hey, who knows, maybe they'll be invited to speak in an astronomy class one day hahaha.

Hector mentioned that he shoots for several nights sometimes, does it take more nights of imaging to get the complete high quality picture depending on the altitude of where you are and the light pollution there? Or, to phrase it differently – is the amount of time needed to get a high resolution picture affected by light pollution or would it have the same effect no matter how long you're shooting? I don't know anything really about astrophotography so forgive me if there's an obvious answer to this question.

Edited by **Lexie Brent** (https://canvas.sbcc.edu/courses/46681/users/122267) on Jan 30 at 8:09pm

Reply

(http

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

4:04pm

Originally Posted 2/3/22

Great questions. The more time you you shoot, the more you bring to life the dark and barely seeable stars and nebulosity. You also have to have clear nights and no wind and all that. So, it's challenging.

Great story about how you helped someone put together a telescope. Maybe "you" will be the one doing this and talking for my classes in the future. Hector didn't get into it until after he left SBCC.

Reply

(https:/

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

Jan 30, 2022

I think it's so cool that he went from SBCC to UCSB then to the airforce but continued on his journey with astronomy at home with his amazing telescopes! He is a piolet navigator which is super cool because part of my family is also in the military and my Uncle flies Black Hawks. I also thought it was really cool that he does astrophotography and his photos looked like they were from NASA, so beyond beautiful. The movie gravity and the new findings that they were able to come upon in the process of making the movie with an astronomer is super cool and I

would have never known that without this zoom! I think that this is relevant to my life and educational pursuits because I have always loved astronomy and this video made me want to continue learning more! Although I don't fully understand the math behind it all I am very excited to learn and come out of this class with a wonderful understanding. I think his passion has allowed him to be a guest in the class, also his the knowledge that he has gained since he attended this class.

Reply

(http

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

4:07pm

Originally Posted 2/3/22

Glad you liked meeting Hector. Are you talking about the movie Interstellar? Have you seen it?

Reply

(https:/

Franco Diaz Campo (https://canvas.sbcc.edu/courses/46681/users/403036)

Jan 30, 2022

What I liked most about this Zoom meeting was that Hector loves what he is doing. For him, taking all those incredible photos and studying about everything in space is not work; it is something else since he has a lot of passion. I am impressed by all his knowledge, and I like how he talks about it since he doesn't make the meeting boring; he makes it very funny and super attractive. Also, I like that he was an SBCC student since we see that all of us can graduate as he does and find a lot of passion in our future works. I liked this guy a lot, and I hope in all the weeks remaining, we can keep having guests like him who feel what they are doing and pass that passion on these topics to us.

Reply

(http

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

4:04pm

Originally Posted 2/3/22

Glad you enjoyed the talk. Join us in person next time. You can ask questions and interact.

Reply

Malachi Scott (https://canvas.sbcc.edu/courses/46681/users/409981)

Jan 30, 2022

The most interesting takeaway to me from this was how interesting and different it was that he completely finished formal schooling before joining the military. This is extremely relevant to my life as before I had figured out what I wanted to do one of my most considered options was to go through Officer schooling and join the Marine corp. .The fact that he was willing to go through formal education before joining the military shows how determined he was because it is not required in any shape, way or form. He just as easily could of enlisted and skipped all formal education. This combined with the perseverance and patience im sure was required I can almost guarantee are just a few of the qualities that got them an invite for a zoom meeting with a college class and former proff!

Reply

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

4:09pm

Originally Posted 2/3/22

Yes. Good comments. If you do go to school first, or while in the military, many more options and opportunities present themselves. The more you put into life, the more you can get out of life.

Reply

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

Jan 30, 2022

After listening to everything that Hector had to talk about, what I found most interesting was Hector's pictures from his telescopes at home. I think it's so incredible that he is able to see those types of images pretty much whenever he wants just from his backyard and at the star parties he goes to. I can totally understand how seeing those types of images for yourself can get you immediately invested into this sort of thing. I mean after taking Earth 101 last semester I've already become so intrigued in the universe and want to know more which is why I

decided to take this blackholes course. But seeing what Hector is capable of seeing at any point in time is reason enough to eventually invest in a telescope for myself in the future.

Reply

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

4:05pm

Originally Posted 2/3/22

Yes, it's a fun activity. You might enjoy getting involved yourself. Have you taken the lab class yet? If not, sign up for it next semester and you will get practice using telescopes.

Reply

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

Jan 31, 2022

I found Hector's passion for astrophotography the most interesting. Hearing him say that during Astronomy 101 he realized what he wants to do and following the path to where he is now is inspiring. It shows how he set his educational goals and professional goals and achieved them while continuing his passion for astrophotography on the side. Something relevant to my life is starting astrophotography with just a standard DSLR camera and a tripod. When I was young I would use my father's camera to take pictures of the night sky and I can remember the anticipation for the photo to be done. Hector's approach is driven by his passion for what he does, I think this is a good quality to have when learning because if you're interested in the subject learning it will be easier. After watching this lecture I am definitely more inclined to buy a telescope and take pictures on my own.

Reply

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

4:08pm

Originally Posted 2/3/22

That's great! Glad you enjoyed the talk and yes, you should try astrophotography someday. You can do a lot with a camera and tripod, even without a telescope.

Reply

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

Jan 31, 2022

What I thought was pretty cool from the lecture would have to how he could take such amazing pictures from his backyard using his own equipment. Space to me feels like its this huge distant, infinite thing that is not accessible from the ground but after that lecture Hector showed me that it is that accessible, and yes it is big and huge and scary, and we don't really have a full grasp on what space truly is but I think that is the most interesting part about it is that who knows what it is

Reply

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

4:06pm

Originally Posted 2/3/22

Hi Lucca. Great comments. Yes, space is big and vast and scary for everyone, but the more we learn and understand, the less intimidating it is. Keep up the good work!

Reply

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

Feb 3, 2022

I found it incredibly interesting that Hector has been so many places to pursue so many different passions. Going from Santa Barbara, to Florida, then Arizona all to follow his passions in becoming a pilot navigator, physicist, and engineer all while doing astrophotography is incredible. While I have no intention of becoming a pilot navigator, I have though it would be amazing to get my pilots license one day. I've been told that you have to put some serious hours into getting the pilots license, and while I'm not sure if Hector has a license, it's still quite impressive that he navigates such a large aircraft. I also appreciated how open he was about being able to use simple techniques for astrophotography as it really appealed to newcomers.

Reply

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

4:07pm

Originally Posted 2/3/22

Great. Glad you like to talk. Yes, I think he's a very inspirational former student, and you might be equally inspiring when I invite you back someday to talk to my classes. I have a private pilot's license. It's a bit involved, but very doable if that's something you're interested in. The most expensive part is getting your hours, that you need to qualify for the license. We can talk about it some time some more if you are interested.

Reply

Colby Downard (https://canvas.sbcc.edu/courses/46681/users/268882)

Feb 3, 2022

What I found most interesting about the photos that Hector collects is the hardware he uses to collect them, it is actually not as big as I thought. I was expecting the lenses and camera needed was more set up in a facility and would be near immovable once set up. It was also surprising to that his setup was just in his backyard. Hector being part of the military was also a big interest to me because the military is a career path that I am interested after college. So, seeing Hector's success through this route was exciting to look in upon. Being able to look at Hector's career was awesome and eye-opening for the many different routes this field can give to someone.

Reply

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

4:05pm

Originally Posted 2/3/22

Glad you like the talk. Great that you are interested in a career like his. I'm happy to put you in contact with him if you want to ask questions. Let me know. Also join us next time for a live talk. It's more interactive and fun that way.

Reply

Naomi Xu (https://canvas.sbcc.edu/courses/46681/users/27955)

Feb 9, 2022

I was so stunned by his incredible pictures, that he takes in his backyard no less! Learning how many images and post production edits it took to get there made me appreciate the incredible quality of the images that much more. My biggest take away from this, really is his dedication to his passion. He moved to whole new place, and just does this out of his backyard, all because he loves to, and I really admire that. He altered his work/life balance to a tee, and it was perfect for him. He's good enough to be a professional but chooses to keep that as a hobby, and I think that's why he was invited, to show students an alternate lifestyle we might not have thought of.

Reply

(http

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

4:11pm

Originally Posted 2/12/22

Yeah,... isn't it cool that he "chose" where to live and work based on if he can do astrophotography. Very cool!

Reply

(https:/

Malcolm Tircuit (https://canvas.sbcc.edu/courses/46681/users/427388)

Feb 12, 2022

I really enjoyed hearing about Hectors path to becoming a flight navigator and also how he developed his hobby of astrophotography. I never realized how accessible astrophotography could be to those who had no prior knowledge in the field. I always thought that you needed big cameras and super expensive telescopes to capture photos like Hector's. I was also very fascinated by the intricacies of it all. I didn't realize that capturing light from distant galaxies required long exposures that can span for hours. I was also fascinated by the star tracking system that has to be implemented into the telescope to follow the stars. I never though about or appreciated that aspect of astrophotography.

Reply

(http

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

4:09pm

Originally Posted 2/3/22

Yes, it's really amazing. A lot of it has to do with new CCD technology and the ability to "stack" images. It's very cool!

Reply