HIPSBURN OBSERVER EXCLUSIVE!

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SADIE INTERVIEWS FRED STEVENSON, DR OF ASTRONOMY AT THE KIELDER OBSERVATORY

As part of my topic on 'Space' my Auntie Caroline introduced me to her friend Fred who works at the Kielder Observatory. He also lectures in maths and physics. We met up earlier this week and I managed to ask him some questions about space and his job as an astronomer.

Fred first became interested in astronomy at the age of seven or eight and has been studying galaxies ever since. Fred needed to do science, physics and lots of maths at school until he knew enough to get himself a job looking at the solar system.

Fred looked into universes and stars but lots of different astronomers study different things, e.g. some are space scientists and build satellites. He also tours people round the observatory and they look through the telescopes.

S: Why is Kielder such a good place to observe the universe?

F: The main reason is that it is remote and away from the light pollution e.g. lampposts, of the towns and cities. There's much less artificial light at Kielder so it means the sky seems darker and the stars shine brighter. But like anywhere if there is cloud you can't see as much!

S: What do you think is the most interesting planet or star?

F: Earth because it is amazing and there is so much to it, and Saturn because of the rings.

S: Do you think that it's possible that there could be life on other planets?

F: I would love to know! But I think it's very possible because there are other planets similar to Earth and evidence shows that's there could be. People are working all the time to find out.

S: Why do stars twinkle?

F: They don't actually twinkle, it's the earth's atmosphere that makes it seem that way. If you were up on the International Space Station they would be 'steady'

S: How many stars are there in the known universe?

F: Nobody knows for sure, though experts estimate there may be 3 000 000 000 (3 billion)

S: Do all of the planets all orbit the sun in the same plane?

F: All of the main ones do, and always have done, like a disc. Pluto is 17 degrees different.

S: How far can you see with your telescope?

F: I can see galaxies around 50 million light years away. 1 light year is the distance that light travels in 1 year. The light from a torch goes at 300 000 km per second so light gets to the moon in 1 second. If you keep going at that speed

you cover a distance called a light year, each one is 9.5 trillion km. The nearest star to us is 4 light years away.

S: What is your typical work day like?

F: I leave home near Amble at 3-4 pm. The most important thing when I arrive at Kielder is to light the fire and put the kettle on! I then turn on the telescopes and visitors start arriving at the observatory. If the sky is clear, I give a short talk – if it is cloudy I do a longer talk! I take the visitors on a tour and give information and answer their questions and most importantly let them watch the stars, which takes me up to 11pm and then I close the building. Some visitors decide to camp overnight.

If I am not at Kielder in the evening I am sometimes asked to give talks or go to astronomy events.

S: What is the most interesting things you have seen through your telescope?

F: That's a difficult question. Not long ago I saw the most distant Quasar (the area surrounding a black hole) which is 2.5 billion light years away.

S: What interests to you have other than astronomy?

F: I enjoy rock climbing and walking, listening to music, cycling and kayaking. I like travelling to see eclipses; I am going to see one in America on 21st August. Four out of the five I have gone to see have been successful. My partner Clare has seen 3 out of 3!