



<p>ESOCast Episode 27: An ESO Astronomer at Work</p>	
<p>00:00 [Visuals start]</p> <p>[Narrator]</p> <p>1. What does it take to be a professional astronomer, working with the world's most powerful telescopes producing top-notch science? How does it feel to be working in exotic locations and collaborating with astronomers from around the world?</p> <p>Stay tuned to this ESOCast to go behind-the-scenes of an ESO astronomer at work in Chile.</p>	<p>Images:</p> <p>Paranal observatory</p> <p>Boffin meeting people</p>
<p>00:26 ESOCast intro</p> <p>2. This is the ESOCast! Cutting-edge science and life behind the scenes at ESO, the European Southern Observatory. Exploring the ultimate frontier with our host Dr J, a.k.a. Dr Joe Liske.</p>	<p>ESOCast introduction</p>
<p>00:46 [Dr J]</p> <p>3. Hello and welcome to another episode of the ESOCast. Today we're going to follow around ESO staff astronomer Henri Boffin to find out what his work is like at the Paranal Observatory in Chile.</p> <p>Henri's work is exciting, but it's also challenging, because it involves travelling for thousands of kilometres between the duty stations and he has to adjust quite quickly between working during the day, like most people, to working night-time shifts at the telescope.</p> <p>When he's not at the observatory, Henri works at ESO's Santiago office. This is where he conducts his scientific research and where he meets colleagues from all over the world.</p>	<p>Celestial timelapse</p> <p>Boffin sequences</p> <p>ESO Vitacura office</p>

<p>01:25 [Narrator]</p> <p>4. Early morning in Santiago, the capital of Chile, and a taxi is driving the scientist to the airport, where he will fly to Antofagasta, some 1300 km north of Santiago.</p> <p>During the flight Henri takes the opportunity to check his work schedule for the forthcoming days or reads scientific papers.</p> <p>On arrival in Antofagasta, Henri and colleagues take the ESO bus to the Paranal Observatory. The first few kilometres of the two-hour ride follow the coastal road through Antofagasta, but soon the bus heads into the Atacama Desert, where a seemingly endless road awaits the passengers.</p> <p>Finally, after a long and tiring journey, Paranal comes into sight. Even for Henri, who frequently commutes to the Observatory, the arrival at this technological oasis, amidst the dry Atacama Desert, is spectacular.</p>	<p>Sequences of travel to Paranal</p> <p>Sequences of bus drive to Paranal</p> <p>Arrival at Paranal</p>
<p>02:47 [Dr J]</p> <p>5. After the long journey, Henri immediately heads over to the Residencia, which is his home-from-home while he is on duty at the Observatory.</p> <p>After lunch, Henri takes a quick peek at the remarkable sight of the VLT, which stands out on the summit of Paranal.</p> <p>Now, the coming night is going to be a so-called 'overlap night'. This is where Henri gets to adjust to working at night and where he is going to meet with his colleagues at the VLT control room to properly prepare for his shift. So, getting some sleep in the afternoon is essential.</p>	<p>Check-in at Residencia</p>
<p>03:23 [Narrator]</p> <p>6. After a refreshing sleep, and as the Sun begins to set, Henri meets his colleague Jonathan Smoker who will hand over his observational tasks.</p> <p>Several things need to be discussed in order to guarantee a smooth staff changeover, and the drive from the Residencia up to the control building of the VLT offers a great opportunity for the astronomers to talk business.</p> <p>The VLT consists of four Unit Telescopes and Henri and Jonathan take over the controls of Unit Telescope 1. They discuss upcoming observations and the status of the telescope and instruments until they are confident that everything has been set</p>	<p>Meeting of astronomers</p> <p>Drive to VLT control building</p> <p>Astronomers in control building</p>

<p>up perfectly.</p> <p>Once fully prepared for the night's observations, all Henri and Jonathan have to do is wait for darkness and enjoy the magnificent view from the platform of Paranal.</p>	<p>Paranal sunset</p>
<p>04:38 [Dr J]</p> <p>7. It's the next day, and Henri is ready to take over observations. After having slept until the late afternoon in the Residencia, he now prepares himself for his upcoming night shift.</p> <p>Dinner at the Residencia's canteen — or rather breakfast for Henri — gives him an opportunity to socialise with his colleagues before he heads off to the VLT control building.</p> <p>Tonight, Henri performs observations in service mode at the VLT Unit Telescope 1. In this mode, Henri and the telescope operator conduct observations that have been submitted remotely by astronomers from their home institutes from around the world.</p>	<p>Boffin prepares for work</p> <p>Dinner with astronomers</p> <p>VLT control room</p>
<p>05:17 [Narrator]</p> <p>8. Observations at the VLT call for the utmost concentration on the part of the astronomer and the telescope operator.</p> <p>Henri carefully follows the prepared observing programme and switches between the various instruments. Everything is planned to ensure the smooth running of the telescope, as observing time on this powerful telescope is a precious commodity.</p> <p>Before Henri can leave the control building at the end of his shift, the night report has to be completed with details of the observations.</p> <p>Now Henri can head back to the Residencia for a well-deserved daytime sleep.</p>	<p>Boffin during service observations</p> <p>Boffin produces "end of night" report</p>

<p>06:25 [Dr J]</p> <p>9. His schedule at Paranal is quite demanding, but Henri finds the time to fit in some exercise. The desert around the observatory is quite a harsh environment, but Henri is an experienced runner who is accustomed to the altitude and arid conditions.</p> <p>Later that day, Henri meets two visiting astronomers at the Residencia who have travelled to Chile to hunt for exoplanets using the VLT. Now, for tonight's observations, Henri will act as support astronomer. That means he's going to use his experience to help the visiting astronomers carry out their observations.</p>	<p>Boffin running</p> <p>Meeting with visiting astronomers</p>
<p>07:02 [Narrator]</p> <p>10. In their hunt for exoplanets, the visiting astronomers will look for the dimming of light as a planet moves behind its parent star. This technique can enable the detection of planetary atmospheres, but such observations are incredibly difficult and require large instruments. That's why the astronomers have come to Paranal, to use one of its 8.2-m telescopes.</p>	<p>Astronomers at control room</p>
<p>07:45 [Dr J]</p> <p>11. After several nights on Paranal, Henri has handed over his observing responsibilities to a colleague and now he is ready to fly back home to Santiago.</p>	<p>Boffin leaves Paranal</p>
<p>08:02 [Narrator]</p> <p>12. Back at ESO's Chilean administrative centre at Vitacura, Santiago. Henri switches back to daytime work and studies binary star systems.</p> <p>Working at Vitacura means that Henri can discuss his research with colleagues. The daily coffee break provides the perfect opportunity to share ideas about latest scientific results and findings. Such casual conversations among scientists can often lead to new and unexpected insights.</p>	<p>ESO Vitacura office</p> <p>Boffin at computer</p> <p>Science coffee</p>
<p>08:50 [Dr J]</p> <p>13. This is where we say goodbye to Henri and thank him for allowing us to be a fly on the wall during his work. Being an ESO astronomer is demanding, but it is also extremely rewarding, working on one of the most powerful ground-based telescopes in the world.</p> <p>This is Dr J signing off for the ESOcast. Join me</p>	<p>Boffin during work</p> <p>Paranal at sunset</p>

<p>again next time for another cosmic adventure.</p>	
<p>09:12 [Outro]</p>	<p>ESOCast is produced by ESO, the European Southern Observatory.</p> <p><i>ESO, the European Southern Observatory, is the pre-eminent intergovernmental science and technology organisation in astronomy designing, constructing and operating the world's most advanced ground-based telescopes.</i></p>

10:08
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