

# ESOcast 121 Light: Star orbiting supermassive black hole proves Einstein right

<b>ESOcast Light 121</b>	
<b>[Visual starts]</b>	
<b>New ESOcast intro</b>	New ESOcast introduction Incl ESO logo
<b>Title: Star orbiting supermassive black hole suggests Einstein is right</b>	
1. Looks like Einstein was probably right again! <b>Effects</b> predicted by his general theory of relativity <b>are slightly changing the orbit of stars</b> very close to our Milky Way's centre.	
2. The culprit? The super-strong gravitational field of the <b>supermassive black hole</b> at the centre of our galaxy.	
3. New analysis of data from ESO's VLT <b>suggests for the first time</b> the very subtle effects of general relativity affecting a star orbiting a black hole.	
4. The Galactic Centre is <b>one of the best labs to test general relativity</b> .	
5. And things are about to get even more exciting! In 2018 one of the <b>stars will make a very close approach to the black hole</b> .  The VLT will be ready to observe the event with the <b>GRAVITY instrument</b> .	
<b>00:00</b> <b>[Outro]</b>	<i>Produced by ESO, the European Southern Observatory. Reaching new heights in Astronomy.</i>

