

03 - Time Travellers in the Sky - October 2012

Have you ever wanted to travel through time? Back to the time of the First Fleet or even back as far as the ancient Egyptians? Well, it's easily done and no fantastic science fiction machines are needed.

Let's do it now. Step outside and find the two Pointer stars, just above the southern horizon. See the bottom star, Beta Centauri? You are now seeing that star exactly as it was (not how it looked from Earth) when Columbus discovered America in 1492. You are looking back 525 years into time. That's Time Travel.

A trick, you say? Not at all. Just as the sound of a starter's gun in the distance takes a finite time to reach us, so does light, only a lot faster. It travels at 300,000 km per second. Moonlight is $1\frac{1}{4}$ seconds old. The Sun's light takes 8.3 minutes to reach us. If the Sun ever went out, we wouldn't know for over 8 minutes.

Still not impressed? Okay, find Alpha Centauri, the top and brighter Pointer Star. The light you are seeing now left that star over 4 years ago during the 2008 Beijing Olympic Games. We call the distance light travels in one year a 'light-year'. So Alpha Centauri is 4.37 light-years away. And that's the closest star.

Everything else you see up there is much older. The fascinating thing about staring at the stars is that the further away you are seeing, the further back in time you are travelling. Orion is rising later this month and the left star on his belt, delta Orionis, is 2000 light-years away. That means you are seeing that star as it was when Jesus was born. The light left it then but we are only just seeing it now.

H G Wells, eat your heart out.