

Royal Observatory, Greenwich: 350th Anniversary [B2]

Fondamentale per il suo ruolo nell'astronomia, nella navigazione e nel cronometraggio, questo osservatorio fondato nel 1675 rappresenta oggi un'occasione per conoscere la storia della scienza.

If you have heard of the London [borough](#) of Greenwich in south-east London it is probably in the context of its association with the [Prime Meridian](#), the imaginary line of 0° longitude that runs through the [borough](#), and that separates the Eastern from the Western Hemispheres. The Greenwich Meridian is the basis for Greenwich Mean Time (GMT). Until 1972, GMT served as the world's time standard, and it is still used in the UK and in some parts of the world today.

NAVIGATION

Greenwich is a green and more peaceful contrast to the [hubbub](#) of central London. It is famous for the Cutty Sark, the 19th-century clipper ship that is [grounded](#) here as a symbol of the [borough](#)'s maritime history. It is this connection to the [shipping industry](#) that gave rise to Greenwich Mean Time. [Getting your bearings](#) at sea was significantly more difficult in the past. At the time, many European countries used the stars to navigate their ships. However, while sailors could get a good idea of their positioning using [compasses](#) and other traditional instruments, this could still prove a challenge. Navigation was important not only to safeguard the lives of sailors, but as a means of finding faster and more profitable [trade routes](#). Astronomers realised that by creating better maps of the stars it would be easier for sailors [to work out](#) their longitude, and how far east or west they were situated.

ROYAL OBSERVATORY

The Royal Observatory in Greenwich has played a major role in the history of astronomy and navigation. The observatory dates back to 1675, and this year is its 350th anniversary. To find out more about the observatory and its role in maritime history, Speak Up contacted Dr. Louise Devoy, senior curator at the Royal Observatory, Greenwich. Devoy began by explaining why it was **well worth** taking the **twelve-minute train ride** from London to visit this historic institution. **Dr. Louise Devoy (English accent):** The Royal Observatory, Greenwich, is the historic home of the **Prime Meridian**, 0° longitude And it's also the place where Greenwich Mean Time was defined. So it's such a unique place that we're kind of familiar with from our clocks and our globes and maps and so on, but people are bit unsure... "What is it? What is there?" Actually, we have the historic site, you can go around the buildings to see where the astronomers lived and worked. We have fabulous views of the London skyline. We have a world-class collection of telescopes, clocks and scientific instruments. And we're also home to London's only planetarium. But I have to say, the main attraction for most people seems to be just to stand on that historic meridian — that line that you've seen on your maps and globes — and have one foot in the East and one foot in the West and just take that sort of ultimate selfie. So that's all good fun.

MILESTONES

We then asked Dr. Devoy to highlight a few important **milestones** that **stand out** along the course of the observatory's long history. **Dr. Louise Devoy:** There are two dates that really **stand out**. One is 1767. This is when the observatory first started to produce its nautical almanack, which **on the face of it** looks quite boring; it's a book full of numbers, it gives you the predicted position of the Moon, Sun and planets and various features. But this is the book that literally put Greenwich on the map, because this is what mariners were using at sea **to work out** their longitude, and people started to think about Greenwich as a place of reference. "Where am I, relative to Greenwich?" And so, by the time you get to sort of the late 1880s, over a century later, and there's this big decision like, "OK, so which meridian are we going to use? Because there are now lots of them, lots of

observatories, lots of meridians — let's choose one." Greenwich was the obvious choice because it was the one that most people were using already. So that one little book, that was reprinted every year and updated, just really sort of set the tone for thinking about longitude in Greenwich.

MAJOR EVENT

In 1852 a mechanical clock was installed at the observatory that was controlled by electric pulses released by a master clock. This clock revolutionised timekeeping, as it enabled clocks to be synchronised. Dr. Devoy talked more about how this small change brought about a major societal shift. **Dr. Louise Devoy:** The other date I think I'd say is 1852. This is when the Shepherd Motor Clock [officially called the Shepherd Gate Clock] was installed, which was quite significant technologically because it could send electric impulses via the telegraph network. So you can now keep clocks perfectly in sync with the observatory. So all these clocks around London, around the railway network, are all showing Greenwich Mean Time, GMT. Now, that may not sound like much, but again, this is such a huge social change because previously people had relied on local time. So, if you lived in the west, then you'd be a couple of minutes behind London or Greenwich time, if you lived in the east, you'd be a bit before. But now with the railways, it meant that everyone had to coordinate: "Let's all use the same time." We just take it for granted today that everyone in the country is using the same time, but this was a really important moment. And this clock really helped make that change.

HIDDEN TREASURES

We then asked Dr. Devoy if there were any hidden gems that visitors should keep an eye out for when visiting the observatory. **Dr. Louise Devoy:** I would recommend the camera obscura. This is a mirror that's mounted on top of the roof of one of the summer houses, and it projects the image of outside down through a lens onto a white table that's situated in a darkened room. You have to sort of go through a curtain to get in there and have a look. And the idea and the principle behind it is [are] actually quite ancient; it's been

around for hundreds of years, if not thousands. But I just love the fact that you're projecting this real live image onto a table, and when visitors come in and they see it, they think it's a video 'cause we're so used to seeing everything on a screen. And then you see like a red London bus scoot past or a riverboat, and then you realise, "Oh, gosh, no, this is real. These are real photons going into my eyes." That was used by astronomers and by artists for projecting images, and so on. The second one I'd recommend is the Hardy Regulator. This is a clock that people often miss because the pendulum is situated below the floorboards and the dial is very close to the floor, which sounds really odd, but it makes sense because it's situated by an instrument where the astronomers have to work in a pit, underneath the telescope. So actually being able to see that dial at eye level on the floor was actually really helpful. People walk past it every day and don't realise it's there, but this was a really important clock, especially for measuring time by the stars and then from that working out Greenwich Mean Time.

PLANNING YOUR VISIT

The Royal Observatory, Greenwich offers a wide array of experiences throughout the year, as Dr. Devoy explains. **Dr. Louise Devoy:** If you want to admire the view, then I'd recommend the summertime, when you get wonderful views, especially in the evenings. But I really like those crisp, clear winter nights, as well. At the moment, we're running our Evening with the Stars programme. And you can go behind the scenes at the observatory after dark, and you can meet our astronomers, you can look through some modern telescopes, so that they'll talk about what's in the sky at the moment, you can see a show, and then you can also go up into our famous Green Onion Dome if you've seen that on the skyline. And that's home to our historic Great Equatorial Telescope from 1893. So again, our astronomers can tell you all about the history and what it was used for and how it works.
www.rmg.co.uk/royal-observatory

Glossary

- **in sync** = sincronizzati
- **be a couple of minutes behind** = essere in ritardo
- **borough** = distretto
- **trade routes** = rotte commerciali
- **shift** = cambiamento
- **miss** = perdersi
- **running** = svolgere
- **to work out** = calcolare
- **milestones** = tappe fondamentali
- **take it for granted** = dare per scontato
- **wide array** = un'ampia gamma
- **grounded** = incagliato
- **it makes sense** = avere senso
- **Oh, gosh** = oh, cielo
- **Prime Meridian** = meridiano di Greenwich
- **on the face of it** = a prima vista
- **keep an eye out for** = stare attenti a
- **had relied on** = fare affidamento su
- **Getting your bearings** = orientarsi
- **compasses** = bussole
- **stand out** = distinguersi
- **odd** = strano
- **crisp** = fresco
- **Onion Dome** = cupola a bulbo
- **twelve-minute train ride** = viaggio in treno di dodici minuti
- **a bit before** = essere in anticipo
- **scoot past** = passare
- **released** = emettere
- **timekeeping** = misurazione del tempo
- **enabled** = rendere possibile, permettere
- **floorboards** = tavole
- **pit** = fossa
- **hubbub** = trambusto

- **shipping industry** = industria del trasporto navale
- **well worth** = valere la pena