TOP OF THE CHARTS

IN THIS SERIES OF ARTICLES SO FAR WE'VE FOCUSED ON THE PRACTICAL ASPECTS OF THE RYA POWERBOAT LEVEL 2 ...

By Paul Glatzel

It's tempting to think of subjects like charts and tides as very much theory-type sessions, but they are as relevant to having fun on the water as being able to helm a RIB at higher speeds. OK, there are some places that we go boating (like the Med) where there's not much tide and outside the marina it is often very deep with no hazards, but most places (certainly in the UK) have shallow bits and the water goes up and down and moves around a bit, creating the potential for many embarrassing (and potentially dangerous) moments.

So how do tides affect us in our RIB when we are boating fairly close to shore and undertaking short coastal passages? The obvious effect is that the water goes up and down (we'll cover why and how later!), which could prevent us getting our RIB into the water at A. As we move from A to B the depth may not be sufficient and we may ground along the route – or not even be able to leave A. At B (perhaps an anchorage) we anchor, the water disappears and the RIB grounds. On soft sand next to a lovely beach this could be great – in a rocky area you could damage the hull and tubes. Getting back from B to A we could have the same set of issues again. The other effect is that the water moves horizontally and pushes us around. Against us, of course, it slows us down, with us it speeds us up, and from the side it pushes us off course. When fuel prices are high, if you are travelling a fair way slowly, then 'punching' against a few knots of tide is spending fuel for no gain – waiting an hour and getting

a free push from behind may save a few bob! Failing to factor in a sideways push may leave you thinking you are heading the correct way – indeed your boat heading is fine but you could be some way off your intended track and heading for that partially submerged rock ... Oops!

Tide moving around headlands and through constrictions can affect you too. You go round the headland when there is no

flow – a really smooth trip. You come back and the tide is running fast. It speeds up round the headland and the shallower depth kicks up waves. Worse still, wind is in the opposite direction – it could all be very uncomfortable and potentially dangerous.

So what causes tides? The Sun, Moon and Earth all interact to create two 'types' of tides – springs and neaps. Sun, Moon and Earth all 'pulling' the water on the earth together = springs. Springs are the highest highs and the lowest lows. The moon not pulling quite as hard = neaps. Neaps are not quite as high and not quite as low. All this occurs in a 28-day cycle: springs, seven days later neaps, seven days later springs, and so on. In between these there is a gradual transition from springs to neaps.

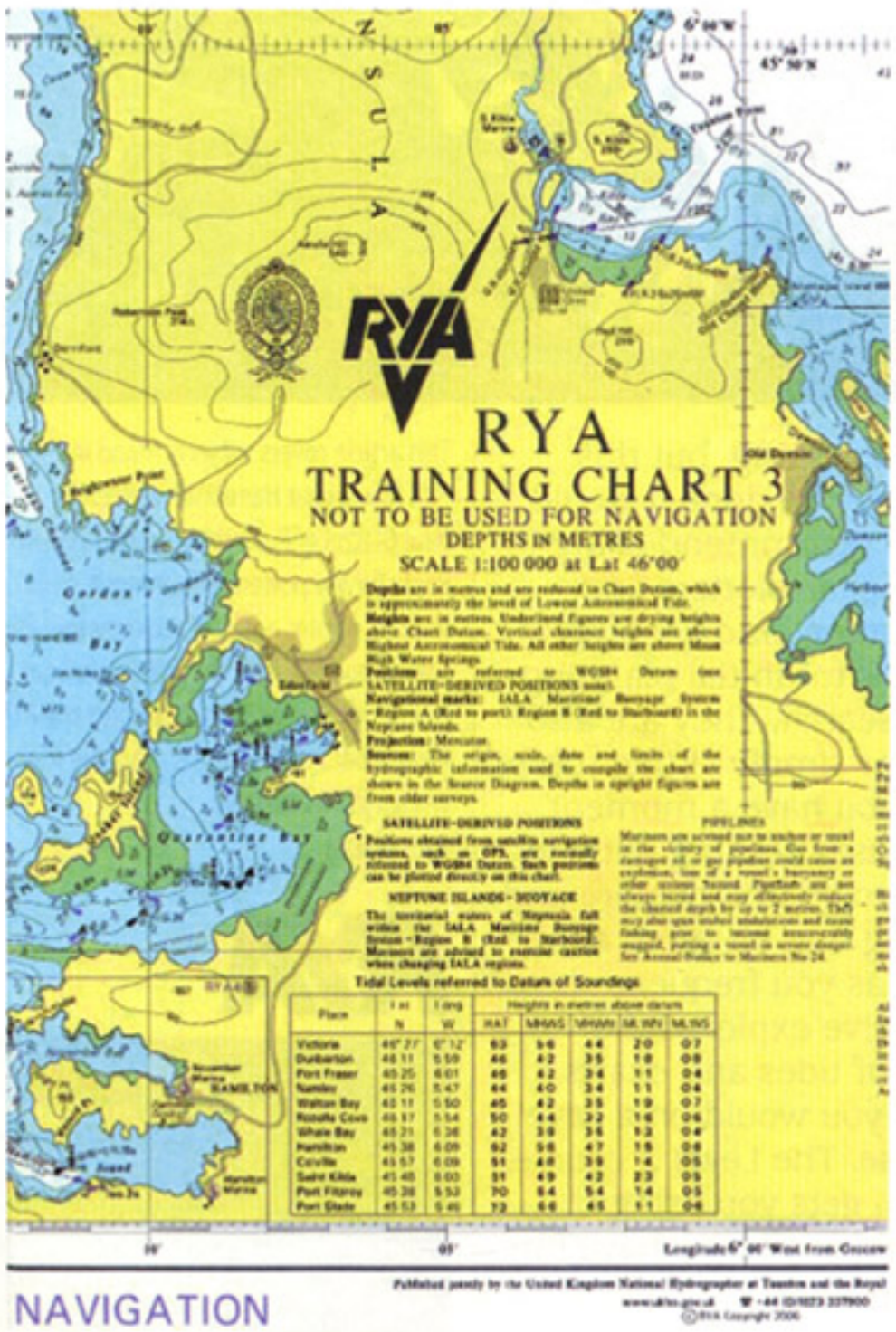
So where do we get tidal information from? In years gone by the process was a bit more complex than it is now. Nowadays I'd recommend two simple sources. Firstly check out EasyTide – www.easytide.co.uk – it's simple and visually very straightforward. You might also get tidal guides for your location that look very similar, or check out apps such as 'Marine Tides Planner 11' from Tucabo.

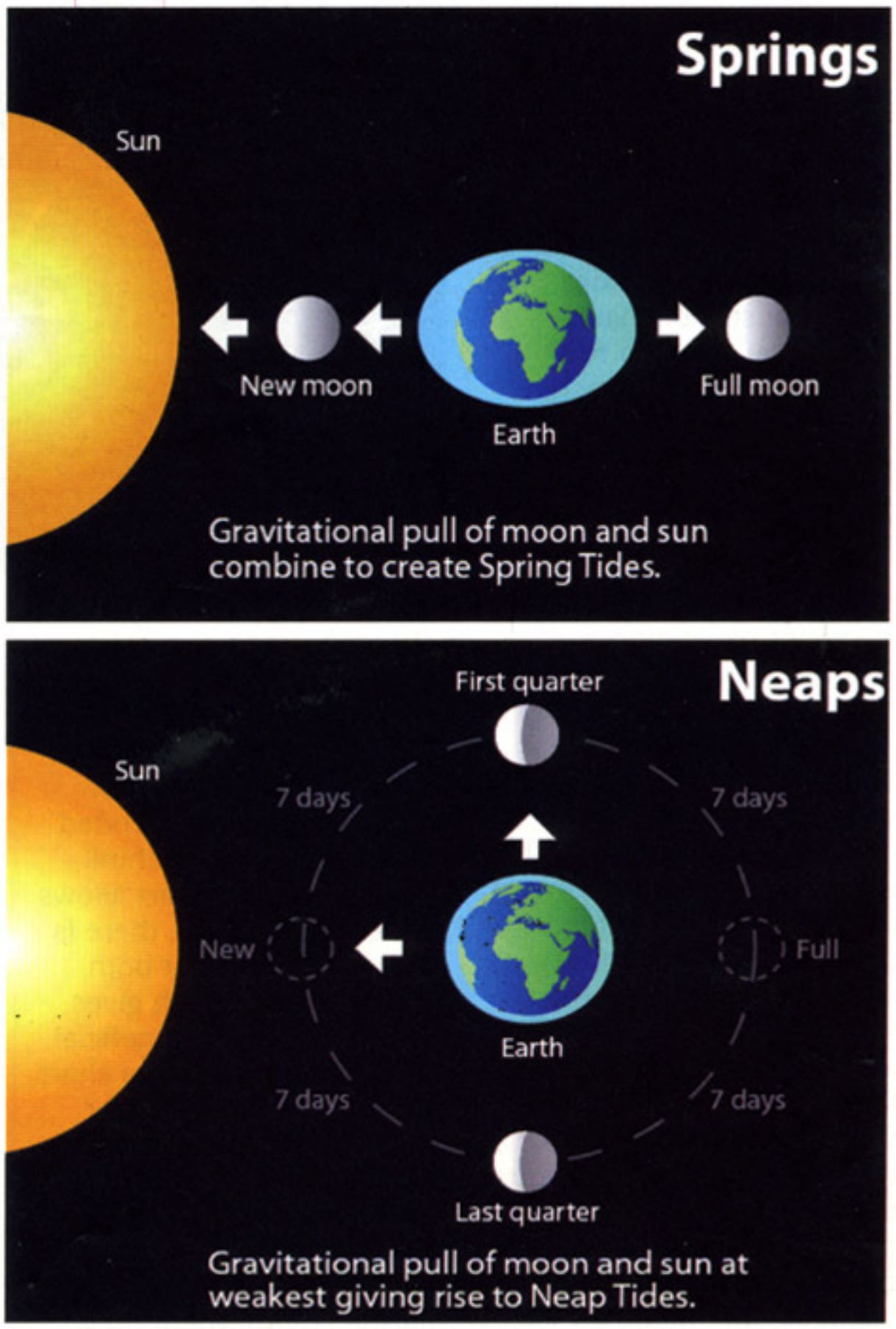
So you've sussed the basics of tides; how does this relate to charts? Firstly, what is a chart? Perhaps the simplest way is to think of it as a photo of the area you are boating in with loads of useful information but showing that area at its most dangerous – with the least amount of water you will be likely to ever experience there. So why have a chart? Let's think about a day out on the water. You are towing the RIB down to my area – Poole. A chart allows you to choose where to launch – it shows the slipways and the contact details for the various marinas and harbour authorities. It shows the areas of shallower and deeper water, so with the tidal height for the day you can add it on to the figures on the chart and determine whether you can get from A to B (and back when you want to!). The colours on the chart show you these deeper/shallower areas. On the chart shown, yellow is always land, green at the lowest level of tide is exposed land, and white and blue is always water. Remember, though, that you have to add the tidal height to the number to get the true depth of water or remaining exposed area.

There are loads of notes on the charts showing what you can and can't do and which bits you need to keep clear of. It shows where you can jet-ski and waterski, and it shows marinas and yacht clubs (and it gives the phone numbers and VHF channels for them) – good for stopping off at for a lunchtime refreshment. To avoid a hefty speeding ticket it shows you the speed limits in place across the harbour and when they are in force. You want to anchor? The chart shows you where you can/can't anchor but also shows you what the seabed consists of in the area you are thinking of – very useful!

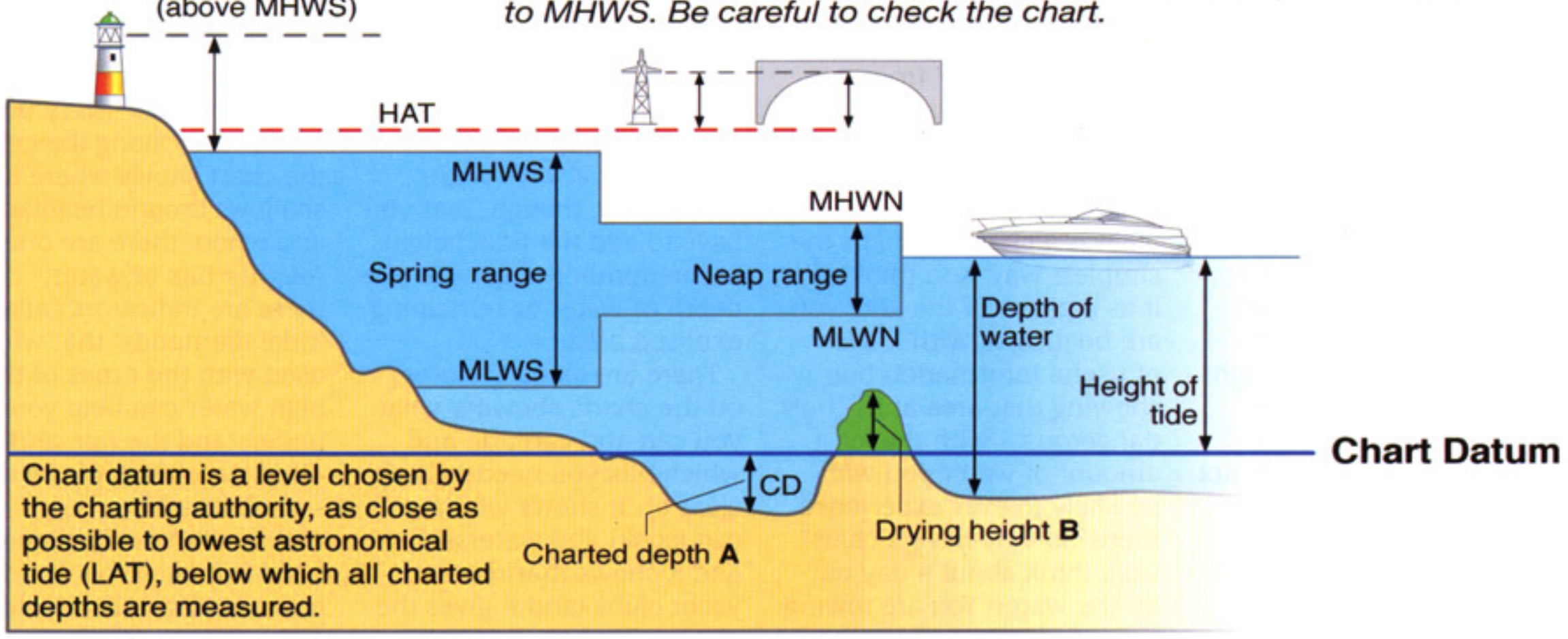
As you go along the coast the chart shows where it shallows around headlands and where there are often rougher bits of water; there are indicators called 'tidal diamonds' that when used with the times of the high water can help you understand the rate and direction of flow of the tide – useful stuff!

With all this information to hand it makes you wonder how you can survive without a chart – yet people do. Hopefully, by introducing just a fraction of the things a chart shows I've highlighted





Note - Highest Astronomical Tide ('HAT') is replacing MHWS as the reference level for clearances - e.g. bridges and overhead electrical cables- as this represents the 'worst case' high tide and therefore the least clearance. Many charts though still reference these clearances to MHWS. Be careful to check the chart.



the benefits of having one. This is not just from the point of view of safety, though: a boater who uses charts to understand their area will generally feel more confident about where they can go and therefore enjoy their ribbing even more.

So what sort of charts should you get for a RIB? Except for the very posh, larger RIBs, we tend to boat in a pretty hostile and wet environment, so what you choose has to be up to the job. Without doubt, nowadays the primary means of navigation is electronic and all but the smallest RIBs tend to be fitted with chartplotters. This is great, as generally speaking they are reliable and can stand the abuse that we tend to throw at them on RIBs. Chartplotter screens, though, are usually pretty small and it can be difficult to get a quick overview of an area and then scroll in to get real detail. This is why I always want to use traditional charts alongside electronic charts. A 'paper' chart won't fail and my brain can read 'scrolled in' and 'scrolled out' at almost the same time – it often gives a far better 'big picture'. If I'm navigating a harbour/coastline a chartplotter focuses on the craft, so it's more challenging to scan forward down my intended track to allow me to think ahead – a paper chart allows that easily. In short, there is a time and place for both, and the backup each gives the other is really beneficial.

So what of apps? The chart programs that you get for the iPad and Android tablets and phones are really useful and have their place too. Like anything electronic and not designed for a marine environment they need protecting, but this can easily be done. I would tend to recommend using proper chartplotters and charts afloat and keeping the apps for initial planning and research. They are also great for simply sitting there when you have a moment to kill just checking out new places to go and explore and learning that bit more about the areas you frequent.

So we've explored the basics of tides and charts just as you would on a Level 2 course. The Level 2 course, though, gets you using these skills afloat – have fun ribbing!

This article covers subjects found in the RYA Powerboat Handbook written by Paul Glatzel of Powerboat Training UK in Poole (www.powerboattraininguk.co.uk). Images, photos and text are copyright Paul Glatzel and the RYA. The RYA Powerboat Handbook was written to support the RYA Powerboat Scheme and is available from www.rya.org.uk/shop.

Paul Glatzel

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Want to develop your charts and tides knowledge beyond the Level 2 standard? Check out the RYA Essential Navigation & Seamanship course. You can do it over two days in a classroom, or now even online!