Tidal Streams and Interpolation

- 1. Tide direction and strength depends on your position, whether it is springs, neaps, or in between, and the time related to High Water at the Standard Port (Victoria)
- 2. Tidal stream information is in the Tidal Diamonds table on the chart, or a Tide Atlas, for each hour before and after High Water at the Standard Port.
- 3. First find the time of the High Water (UT) from the Standard Port tide table. Add the hour for BST if it is an unshaded area. Use the HW closest to the time of the passage.
- 4. Find the Range R between HW height and the closest Low Water height. Is it Springs or Neaps? Draw up a tide grid; enter the time of HW and the hours either side; then enter the half hours as below:



In this example the passage time starts at HW - $3\frac{1}{2}$ and finishes at HW - $2\frac{1}{2}$ ie HW - 3 hours

1. The tide diamond table shows for each hour the Direction (Set) of the tide stream in Degrees True (bold), the Spring rate in knots and the Neap rate. Tide Diamond



- 2. The tide atlas shows the direction as an arrow, you find its direction with your plotter. Rate is given as two numbers in tenths of a knot eg 12.23 where Spring Rate is 2.3 knots, Neap Rate is 1.2 knots.
- 3. If the range is at Springs or Neaps we can use the rates directly from the table. If not, we have to *interpolate* the rate using the 'Computation of Rates' Chart, as follows:





- 1. Find time of High Water, and heights of High and Low Water either side or your arrival time
- 2. Calculate Range = HW LW heights. Find if it is springs or neaps from the Range.(use solid or dashed curve)
- 3. Enter the HW time in the time line, and enter times before or after HW as required, toward the arrival time.
- 4. Enter HW and LW heights on the height scales, join these with a line.
- 5. Now find time at required height or height at arrival time.
- 6. Fall of tide = height at arrival time Low Water Height
- 7. Depth required = Fall of tide + Draught of boat + Clearance required

