

Sailing from NZ to the Islands

Thoughts from SV Chameleon. aka Gulf Harbour Radio
David Sapiane BSc, March 2024

SV Chameleon looks at the following factors when considering when to leave NZ. The crew does not like a rough passage so sea conditions are as important as wind direction if she is going to come next time! Although there can be late April opportunities we do not leave before May 1st due to insurance considerations. These are the factors I consider when we are ready to set sail.

1. Model Forecasts or 'progs'. There are many to look at. Model presentations such as Buoy wx, Metvuw, and others mostly use GFS in their forecasts. The only real difference is their graphics. Use Windy or Predict wind for model options; my suggestion is to simplify things and just view GFS or ECMWF. However remember our often mentioned ditty: A weather model is only an idea based on incomplete initial data, using formulas of the atmosphere not fully understood. Rely only on them at your peril. In practice they can be fairly accurate for about 3 days while accuracy declines with time. A small initial error in computation compounds as time goes on. To help you judge accuracy compare the model forecast for day one, then look at actual conditions. Do they agree? They should. If not the progs will be doubtful. Also in practice, after 5 days and definitely 8 to 10 days you may just flip a coin.

2. Leaving after a cold front may be ok but examine what follows carefully. Chameleon will think twice if the next High is over 1030, and especially if the High is forecast to be stationary.

3. We look at the 500mb forecasts. While it's true that all models incorporate 500mb data it's wise to look at this feature as a standalone. Chameleon won't leave if the passage route puts her underneath the east of an upper trough's axis.

4. What does the model forecast for the arrival date? Is the weather acceptable? This is possibly the most important point. It's why GHR asks for your ETA.

5. Status of the MJO. which is a pulse of energy, that brings foul weather. Is the pulse coinciding with our arrival?

6. Compare NZ Met weather forecasts with the models. If different find out why.

7. Before departure ensure the model has the same scenario for the 2 or 3 days prior. If the model progs change radically every day you access them, delay and read a book. The reason is that the atmosphere has become unstable and the model is struggling.

8. I like to see the GFS and ECMWF models agreeing for the passage duration. The more they agree the more confidence you can have on what really happens.

Lets look at the 'cold front departure'. If the front is aggressive, residual sea conditions may not be pleasant. Chameleon's crew and head radio operator calls these 2 to 3 'bag days'. So it may pay to wait a day or so for the sea to settle. Be aware that secondary Lows may develop on the tail end of departing fronts, so look at your progs and Met Service closely. For those looking at upper levels

watch for possible shortwave developments at 500mb and 700mb. Ensure that these progs do not suggest upper trough development extending particularly to 20 degrees south. Also look at the Australian coast near Queensland for possible trough or Low formation. Overall be cognizant that Tasman depressions can be unpredictable.

Now for a few things about the Anticyclone or High that follows the Front. Be especially wary of leaving when the High is projected to have a central pressure over 1030. The little ditty, 'over 1030 the going gets dirty' is true. You'll find gale force conditions at the high's perimeter; the potential for depression formation on the equator-ward side; and depressions that have formed to the Highs east will intensify and exacerbate sea conditions. A little trick to estimate perimeter winds speed is to look at the last two digits of the High's central pressure as this will give you an estimate of the wind speed. eg 1035mb indicates 35kts. This is a rough rule of thumb only. You'll want to confirm that the High continues tracking eastward. If it remains stationary over or east of NZ the blocking action will cause oncoming troughs/fronts to become impeded and unpredictable. Depressions commonly form to the north or northwest of the block. A warning that this may happen is a polar dip in the isobars (isobars curve to the south, then curve north to continue the CCW movement). Finally, if the High is indeed moving make sure it's not moving too fast. The average speed of a High is about 21 kts, if more than that the next Front may overtake you sooner than you might like.

KEEP IN MIND

1. Some lows can spawn multiple troughs after the initial cold front
2. New Lows can spawn very quickly in the cold air just behind an existing low. These can surprise even professional forecasters.
3. Fronts travel 20 to 25kts or 8-10 degrees per day.
4. The new high will usually change shape, size and speed. The ridge of a High generally rotates, which changes the wind direction. This fact makes it important to look closely at your models. We like to work backwards, in that we want to know what our arrival conditions will be like, then track back to see passage conditions.

Now, April and May happen to be transition months. Tropical Depressions are quite possible because the sea surface temperature (SST) is still quite warm due to the lag as the sun's declination changes. This makes it imperative that you look at your models closely. Again we suggest GFS and ECMWF. We want you to understand that this passage is not trivial, even if usually it is easier than the trip south you've already done. A serious example of many is the June 1994 Storm which is proof that things can go bad very quickly. Over a 3 day period EPIRBS were set off by 16 yachts in trouble, twenty one people were rescued, and three lives and seven boats were lost; cats and monohulls. This is not mentioned to scare you but to hope you are paying attention to detail and not taking a cavalier view of the passage. Now for education purposes the ingredients for this tragedy were textbook. A High was sitting nicely with its center just south of NZ, BUT it had a very strong central pressure of 1036mb. The next day an upper level trough spawned a small low between Fiji and Vanuatu. There were warning

signs; the isobars of the high showed a polar dip and sailors underway saw 'mares tails' in the upper levels. And charts at 500mb further showed a very weak trough. The Depression developed quickly and moved toward NZ. The High remained stationary over NZ, 1034mb. This set up a tremendous squash zone on the passage route with the depression dropping to 986mb. All of the troubled yachts left just after a cold front passage and with a high building. All looked good to them.

One more thing regarding safety, we are seeing an alarming trend of monohulls carrying their dinghies on davits on ocean passages. Be aware that in heavy seas green water impacting downward creates a force of 1 ton per sq foot. Please consider stowing the dinghy securely on deck; it's safer there and lowers the center of gravity of the yacht. Once in the islands davits are fine. A last item, wave direction in a strong blow causes the sea to vary in direction by up to 50 degrees due to gusts. Winds above 30 kts in a fully developed sea can produce a wave height in feet equal to the wind speed in kts! Okay, enough of the ugly stuff. Most passages from NZ are not like this. They are crappy for about 2 days at the start. As you get further north the wind usually goes to the SE, the sea settles down, it gets warmer and life is good.

Most of you do not have internet access while on route but there are several options to use to gather weather information.

1. Contact Gulf Harbour Radio by email.
2. Gribs. We used a 3 x 3 grib size so that we could cover a wide area and several days with a reasonable sized download.
3. The Gulf Harbour Radio sked. Daily during passage times at 0515UTC. Look at your models when you follow the wx roundup at 0515UTC.
4. Weather products from Met Offices via Y2K. Make sure you are registered before you leave and practice getting this to make sure you format the request accurately.

A new high tech product that allows you to access emails and weather products is offered by Starlink. If you have the funds explore this option.

Lastly, a word on ENSO. We have been getting numerous questions about El Nino and La Nina. And many blogs are bleating on about it. Frankly it doesn't matter. At the time of this writing we are El Nino, but in future may turn ENSO Neutral, neither El Nino nor La Nina. But for the purposes of your 7 to 9 day passage in May or June, it matters not one wit where we are in the cycles. Your time is better spent paying attention to the short term progs. GHR will make ENSO a radio topic on one of our short weather lessons so stay tuned for that.

Gulf Harbour Radio wishes all of you a good passage.

If after you have done all your homework, considered the above, and made your decision but want to check something further then don't hesitate to email as I am happy to look after our supporters.

See you 1 May.

David and Patricia
ghradio@xtra.co.nz