

Welcome to the CPS Glossary; a compilation of the glossaries from all of our course material. We hope you find it useful. Suggestions for additional words, or improvements to the definitions, are welcome. These should be sent to [Curriculum](#).

**(Use Ctrl + F to Search)**

## A

**Aback** (*à contre*): To have the wind on the forward side of the sails.

**Abaft** (*Sur l'arrière de*): In a direction towards the stern.

**Abeam** (*Droit par le travers*): On the beam; a direction at right angles to the keel.

**Aboard** (*À bord*): In or on board a vessel.

**About** (*virement*): See **Come About, Ready About**.

**Abreast** (*côte à côte*): Side by side.

**Adiabatic** (*adiabatique*): A process in which a change of pressure produces a change of temperature, without the application or removal of external heat.

**Adiabatic Lapse Rate** (*gradient adiabatique*): The rate of temperature change in air forced to move vertically.

**Admiralty Raster Chart Service** (*service du UKHO*): the department of the United Kingdom Hydrographic Office, which began producing charts for the British Royal Navy and then for commercial use in its own proprietary format, the ARCS format. These charts are updated weekly as needed.

**Adrift** (*dérive (à la)*): Unattached to shore or bottom, floating out of control.

**Advection** (*advection*): The horizontal movement of any atmospheric property by the motion of the air.

**Advection Fog** (*brouillard d'advection*): Fog caused by the transport of warm, moist air over a colder surface.

**Afloat** (*À flot*): A vessel wholly supported by water and off the bottom.

**Aft** (*Arrière*): At or towards the stern.

**Aground** (*échoué*): Touching or stuck on the bottom.

**Ahead** (*En avant*): In the direction of the vessel's head or bow.

**Ahoy** (*ahoy*). Term used in hailing a boat.

**Ahull** (*cape sèche*). See **Lie Ahull**.

**Aid to Navigation** (*Aide à la navigation*): A device or object, external to the vessel, located to assist safe

navigation; it may be man-made or natural.

**Air** (air): General term for the mixture of gases comprising the earth's atmosphere.

**Air Mass** (*masse d'air*): An extensive body of the atmosphere with comparable temperature and humidity. It may extend over an area of several million square kilometres and over a depth of several kilometres.

**Airfoil** (*surface portante*). A device designed to deflect an air stream thereby deriving energy from it. Examples: an aircraft wing, elevator or rudder, a kite, or a sail.

**Airfoil Draft** (*creux de la voile*). The maximum distance measured perpendicularly from the chord line to the sail. (Depth of sail.)

**AIS** (*SIA*): **See Automatic Identification System.**

**Alarm** (*alarme*): In radiotelephone, the signal transmitted to alert stations that a distress call and message are to follow.

**Alarms** (*alarmes*): In electronic navigation, audio or visual warnings that tell you that a target has entered or left a guard zone, that you are within a designated range of a target, or to alert you of a number of other possible events.

**Albedo** (*albédo*): The brightness of the earth as seen from space, due to the reflection of incoming sunlight from clouds, snowy areas and water surfaces.

**Alee** (*sous le vent*): To leeward, away from the wind.

**All Stations** (*toutes stations*): In radiotelephone, the words used to alert all radio stations that a message is to follow.

**Aloft** (*en haut*): Above deck, usually in the rigging.

**Alternating current** (AC) (*courant alternative*): Commonly refers to 110 volt current such as is used in household electricity and the power that docked boats typically receive at marinas. Some larger boats have their own generators that can supply AC power.

**Altitude difference** (*Différence de hauteur*) : **See Intercept.**

**Altitude** (*Hauteur*): Angular distance above the horizon measured along a vertical circle from the horizon to a celestial body.

**Alto** (*alto*): Height group prefix for middle clouds between 2,000m and 6,000m.

**Amidships**(*Au milieu du bateau*): In the middle of the ship, whether longitudinally or laterally.

**Amplitude** (*Amplitude*): (1) The magnitude of a voltage, current or power. (2) The arc measured along the observer's horizon between an observed (celestial) body on the horizon (or its vertical circle) and the observer's prime vertical.

**Anabatic Wind** (*vent anabatique*): Upslope wind caused by sun's heating in a confined valley.

**Analemma curve** (*Courbe analemme*) : A graduated scale of the declination of the sun and the equation of time for each day of the year. It is roughly a figure eight in shape and often located in the Torrid Zone on a terrestrial globe.

**Analog Display** (*écran analogue*): Method of presenting physical variables such as speed or direction, indicated by a pointer on a scale, usually a graduated dial.

**Anchor** (*Ancre*): A device designed to hold a ship in any desired location by temporarily attaching it to the seabed by means of a length of rope or chain.

**Anchor Bend** (*Noeud d'étalingure*): A bend used to fix an anchor to a rode without using a thimble and shackle.

**Anemometer** (*anémomètre*): Instrument for measuring the speed and direction of the wind.

**Aneroid Barometer** (*baromètre anéroïde*) : See **Barometer**.

**Angle of Attack** (*angle d'attaque*): The angle between the apparent wind and the sail, or the water flow and the rudder.

**Angle of cut** (*Angle d'intersection*): the angle at which two lines of position on a chart intersect.

**Angular distance** (*distance angulaire*): the size of an angle, measured in degrees and fractions of a degree.

**Anticlutler** (**Anti-clapotis**): see 'Clutter', which attenuates undesired reflections.

**Anticyclone** (*anticyclone*): A circulation of winds around a central region of high atmospheric pressure. Airflow around the centre of the anticyclone (or "High") is clockwise in the Northern Hemisphere; anticlockwise in the Southern Hemisphere.

**Apogee**(*Apogée*): The time when the moon is furthest from the earth.

**Apparent altitude** (*Hauteur apparente*): resulting value (Ha) after sextant altitude (Hs) is corrected for index error and dip.

**Apparent time** (*Heure apparente*): Time based on the rotation of the earth relative to the apparent (true) sun.

**Apparent Wind** (*Vent apparent*): The direction of the wind as it appears on board. It differs from the true wind direction, due to the vessel's motion.

**Arc** (*Arc*): (1) The discharge of electrical current across a gap. (2) Graduated scale of a marine sextant. (3) Part of a curved line, e.g. part of a circle.

**Arc to time** (*Arc en heure*): The converting of arc in degrees to time in hours (hh) minutes (mm) and seconds (ss).

**Aries** (*Ariès*): See **First Point of Aries**.

**Arctic Sea Smoke** (*brume arctique*): Haze in Arctic regions which reduces horizontal and oblique visibility, and which may extend to a height of about 10 km. It appears blue-grey when viewed away from the Sun, and reddish-brown toward it.

**Artificial horizon** (*Horizon artificiel*): A device such as a pan of dark oil used to provide a horizontal reference, when a true horizon is not available to take sights with a sextant.

**Aspect Ratio** (*allongement de la voile*): In general usage, the aspect ratio of a sail is taken to be the length of the luff to the length of the foot.

**Assumed latitude** (*Latitude présumée*): In some methods of sight reduction, the latitude at which an observer is assumed to be, for the calculation of the computed altitude (Hc).

**Assumed longitude** (*Longitude présumée*): In some methods of sight reduction, the longitude at which an observer is assumed to be, for the calculation of the computed altitude (Hc).

**Assumed position** (*Position présumée*): In some methods of sight reduction, a point on the surface of the earth near the DR (see dead reckoning) at which the observer is assumed to be, and for which the computed altitude (Hc) is determined

**Astern** (*sur l'arrière*): (1) in back of, or behind the boat. (2) The movement of a ship going backwards.

**Athwartships** (*Transversal*): Across the boat at right angles to the keel.

**Atmosphere** (*atmosphère*): The gaseous envelope surrounding the earth.

**Atmospheric Pressure** (*pression atmosphérique*): Force per unit area exerted by the atmosphere. At mean sea level, standard pressure is 1013.25 hectopascals (101.325 kilopascals).

**Attached Flow** (*écoulement laminaire*): The movement of particles along a surface, such as the flow of air particles along the leeward side of a sail.

**Augmentation** (*Augmentation*): The apparent increase in semi-diameter of a celestial body as its altitude increases, due to reduced distance from the observer.

**Automatic Identification System (AIS)** (*système automatisé d'identification*): A system that integrates GPS with ARPA (see **Automatic Radar Plotting Aid**) via short range radio. AIS broadcasts a vessel's identity, position and intended track. It also receives similar information from other vessels. This system is designed to prevent collisions.

**Automatic Radar Plotting Aid (ARPA)** (*aide radar au pointage automatique*): Also called MARPA and other similar names depending on the manufacturer and the unit's capability. A radar unit with this function will automatically track targets identified by the operator. A warning is provided if targets will pass too closely to the vessel. It also predicts the CPA and TCPA. See **Closest Point of Approach** and **Time of Closest Point of Approach**.

**Autopilot** (*pilote automatique*): an automatic steering device that may use GPS/chartplotter for direction information

**Auxiliary** (*Auxiliaire*): The engine of a sailboat; a sailboat with an auxiliary engine.

**Awash** (*À fleur d'eau*): Mostly under water, but not completely sub-merged.

**Aweigh** (*En suspension*): Position of an anchor when raised off the bottom of a body of water.

**Azimuth** (*Azimet*): The true direction of the vertical circle of an observed body, measured clockwise along the horizon from True North (0° to 360°).

**Azimuth angle** (*Angle d'azimet*): The computed direction of an observed body from a point on the horizon toward the elevated pole (north or south), measured along the horizon (eastward or westward) toward the vertical circle of the body.

## B

**Back** (*vent refusant*): (1) Change in the direction of the wind in a counter clockwise direction in the northern hemisphere, and a clockwise direction in the southern hemisphere; see **Veer**. (2) To cause to move backwards.

**Back bearing** (*relèvement sur l'arrière*) : a bearing taken on an object behind the vessel.

**Backing the Jib** (*border le foc à contre*): To hold the jib to windward.

**Backing Wind** (*vent refusant*): A wind whose direction changes progressively in a counter clockwise direction (e.g. W-SW-S-SE). The opposite of "veering". Note: wind direction is reported in degrees TRUE, and direction FROM

**Backstay** (*patara*): Part of standing rigging, usually a wire cable, that supports a mast from aft.

**Backwinded** (*vent à contre*): A sail is backwinded when another sail to leeward of it is trimmed so closely as to cause increased pressure on the lee side of the windward sail, thus causing the windward sail to bulge to windward.

**Baggywrinkle** (**Pompon anti-ragage / gaine anti-ragage**): Anti-chafe material made from old rope yarns woven between strands of marlin.

**Bail** (*écoper,anse*): (1) To remove water by scooping it out with a bucket. (2) A curved fitting for securing a line or a block to a spar.

**Balance** (*Équilibre*) : Where all forces are equal and the boat sails with a slight weather helm.

**Ballast** (*ballast, lest*): Added weight in a ship's bottom to provide stability and trim.

**Band** (*bandes*): A group of radio frequencies designated to a particular radio service.

**Bar (of hurricane)** (*barre d'un ouragan*): Black mass of cumulonimbus cloud and precipitation surrounding the eye of an approaching hurricane.

**Barber Hauler** (*barber hauler*): A trimming line for positioning the athwartship lead of the jib.

**Bare Poles** (*à sec de voile*): Under way with no sail set; usually in a heavy weather situation.

**Barograph** (*barographe*): A self-recording barometer. Several aneroid barometers are connected so as to constantly record, on a rotating drum, the daily changes of pressure of the atmosphere.

**Barometer** (*baromètre*): Instrument for measuring atmospheric pressure. Two basic types are (1) Mercury, in which air pressure causes the mercury level to rise or fall in a calibrated tube, and (2) Aneroid ("without fluid"), where the pressure changes lead to expansion or contraction of a flexible metal capsule.

**Batten** (*latte*): (1) a long, thin, wooden or plastic strip fitted in a narrow pocket in the leech of a sail, to keep the sail from curling. (2) Full length wooden strips let into the frames and covering the inside seam of adjacent planks in “batten seam” construction.

**Batten Car** (*chariot de latte*): Fittings attached at the inboard end of full length battens to reduce friction between the mast and the battens when the mainsail is being raised.

**Batten Pocket** (*gousset de latte*): An envelope-like enclosure stitched into the trailing edge of a sail to hold a batten.

**Batten-down** (*obstruer les ouvertures*): To close all deck openings.

**Beacon** (*balise*): A distinctive artificial structure erected as an aid to navigation.

**Beam** (*bau*): (1) the maximum width of a vessel. (2) A horizontal athwartship support for the deck.

**Beam Ends** (*Couché ou à flanc*): A boat heeled completely on her side.

**Beam Reach** (*largue*): Sailing with the wind at right angles to the vessel.

**Bear Off** (*abatter*): Steer away from the wind, shore or object: To steer on a new course farther off the wind.

**Bearing** (*relèvement*): (1) The direction in which an object lies with respect to a reference direction. (2) In radar, the angle measured from the top of the radar screen clockwise to an observed radar return. Typically, the bearing is relative, although it can be true or magnetic with external heading input.

**Bearing to Closest Point of Approach (BCPA)** (*gisement vers le point de rapprochement maximal*): The bearing from your boat to another when you are at CPA (See **Closest Point of Approach** and **Time of Closest Point of Approach**).

**Bearing, Collision** (*gisement de collision*): A series of bearings taken on a converging vessel in order to determine if a danger of collision exists.

**Bearing, Compass** (*relèvement compass*): A bearing relative to compass north.

**Bearing, Magnetic** (*relèvement magnétique*): A bearing relative to magnetic north.

**Bearing, Relative** (*gisement*): A bearing relative to the heading or bow of a vessel.

**Bearing Ring** (*anneau de vise*): A ring fitting over a compass and equipped with vanes, for observing compass bearings.

**Bearing, True** (*relèvement vrai*): A bearing relative to true north.

**Beat** (*naviguer au près*): (of sailing) A close-hauled course.

**Beating** (*louvoisement*): The procedure of sailing to windward by alternate tacks across the wind.

**Beaufort scale** (*Échelle de beaufort*): A numerical scale for estimating wind speeds from sea states, ranging from 0 (calm) to 12 (hurricane). Used for weather forecasts in some countries, and on pilot charts

**Becket** (*Ringot*): (1) An eye in the end of a block used for securing an end of a line. (2) An eye in the end of a line.

**Before the Wind** (*allure portante; au portant*): Sailing the same direction the wind blows; sailing downwind.

**Belay** (*amarrer*): To make fast a rope without knots by taking turns round a cleat or belaying pin.

**Below** (*Entrepont*): Beneath the deck.

**Bend** (*enverguer; abouter; frapper*): The operation of attaching sails to spars, or joining one rope to another or some object.

**Bifurcation Buoy** (*bouée de bifurcation*): A buoy marking where a channel divides.

**Bight** (*boucle*): An open or closed loop in a line.

**Bilge** (*fond de cale*): The lowest part of a boat's interior.

**Bilge keel** (1. *Quille de roulis*, 2. *Batteau à quilles jumelées*): (1) A keel fitted at the turn of the bilge where the bottom merges into the side. (2) Twin keels, similar to **bilgeboards**.

**Bilgeboards** (*derives de bouchain*): A pair of centerboards on either side of centreline.

**Binnacle** (*habitacle*): Pedestal in which a compass is mounted.

**Bitt** (*bollard*): a fitting or post for securing, usually on deck.

**Bitter End** (*étalingure de puits*): The inboard end of a line or rode (or chain or cable). The end made fast to the vessel, as opposed to the "working end" which may be attached to an anchor, cleat, or other vessel.

**Black ice** (*verglas*): Type of glazed frost (e.g. on roads or the superstructures of ships), caused when water falls on a surface that is below freezing temperature. The thin sheet of ice is rather dark in appearance and, unlike white hoar frost or rime, may be hard to see.

**Blanket** (*masqué*): (of sailing) to come between the wind and a sail so the sail is not full.

**BLIP** (*écho*): A target painted on a radar screen.

**Block** (*Poulie*): A sheave that rotates on a pin; a nautical pulley.

**Blooper** (*blooper*): A full sail set opposite a spinnaker.

**Board Boat** (*Youyou, dinghy à voile ou dériveur*): A small (car top) centreboard sailing dinghy with very low topsides and virtually no cockpit.

**Boat hook** (*Gaffe*): A pole with a hook on the end, used to reach into the water to catch buoys or other floating objects.

**Boat Wind** (*vent bateau*): The so-called wind produced by the movement of a boat through the water.

**Boatswain's Chair** (*chaise de gabier*): A seat made fast to a halyard for a person to sit on while working aloft (pronounced bo'sun's chair.)

**Bobstay** (*soubarbe*): A stay from the stem to the outer end of the bowsprit.

**Bollard** (*bollard*): a vertical piece of timber or iron to which a vessel may be moored.

**Boltrope** (*ralingue*): A rope sewn along the edge of a sail for reinforcement, to limit stretch, or to slide into a cove in the boom or mast to eliminate slides.

**Boom** (*bôme*): a spar attached to a mast or stay and supporting the foot of a sail.

**Boom Crutch** (*support de bôme*): A temporary support for the boom when the sail is not hoisted.

**Boom Vang** (*frein de bôme*): A tackle, usually running between the boom and deck, which removes twist from the sail by a downward pull on the boom.

**Boomkin** (*queue de mallet, arc-boutant, bout dehors*): A spar projecting aft of the stern with a boomkin stay to support a backstay.

**Bore** (*mascaret*): A pile up of tidal water through a narrow, shallow, river mouth which results in a surging wall of water upstream

**Bow** (*proue*): the fore part of a vessel where the planking curves to meet the stem.

**Bow line** (*pointe avant*): a docking line fastened at the bow.

**Bowline** (*noeud de chaise*): a knot tied in the end of a line to form a loop that will not slip.

**Bowline on a Bight** (*noeud de chaise double*): A knot that can be useful as a bosun's chair, for recovering a person overboard, or raising and lowering an outboard motor.

**Bowsprit** (*beaupré*): a spar projecting forward over the stem of a sailing craft.

**Breast line** (*Traversière*): a docking line fastened amidships.

**Bridge** (*Passerelle*): the location from which the movement of a boat is controlled.

**Bridle** (*Patte d'oie*): A length of line or wire rope with both ends secured (or with a secured loop), to the middle of which another line is attached.

**Brightwork** (*ferrures, boiserie vernie*): Polished metal fittings or varnished woodwork.

**Broach** (*se metre en travers*): (of sailing) An uncontrollable turn broadside to the sea, when running with the wind on the quarter.

**Broad on the beam** (*droit par le travers*): a direction at right angles to the keel.

**Broad on the bow** (*sur l'avant*): a direction at approximately 45°, port or starboard, from the ship's head.



**Broad on the quarter** (*sur la hanche*): a direction at approximately 135°, port or starboard, from the ship's head.

**Broad Reach** (*grand largue*): A point of sail with the wind more or less over either quarter.

**Brummel Hooks** (*Attaches Brummel*): Patented type of rigging devices that attach to each other easily and quickly, and remain secure even when under load.

**BSB Electronic Charts** (*cartes électroniques BSB*): most popular format of raster electronic navigational charts for recreational boating.

**Bulkhead** (*cloison*): A crosswise wall dividing a boat into compartments.

**Bulwark** (*pavois*): A portion of the hull extending above the deck.

**Buoy** (*bouée*): A floating mark anchored to the bottom, used as an aid to navigation.

**Buoyancy** (*force de flottabilité*): The upward force that keeps a boat floating.

**Burgee** (*Fanion / flamme*): A tapered flag with a device denoting a yachting organization.

**Buys Ballot's Law** (*Buys Ballot, règle de*): If you stand with your back to the wind in the Northern Hemisphere, the pressure will be lower to your left. Extend your arms and rotate 30 degrees clockwise on land. Your left arm will be pointing to the centre of the LOW. On open water, extend your arms and rotate 15 degrees clockwise to find the centre of the LOW. (The rule is reversed in the Southern Hemisphere).

**By the Lee** (*bôme au vent*): Sailing on a run with the wind on the same side as the main boom, leading to a risk of a sudden, unplanned, jibe.

## C

**Cabin** (*cabine*): a space in a vessel, partitioned off to provide accommodation or shelter.

**Cable** (*câble, câblée*): (1) A number of conductors individually insulated and bound as a group. (2) A heavy stranded conductor such as is used for battery connections. (3) A strong, heavy rope or chain used for mooring. (4) A unit of length equal to 600 feet.

**Call** (*appel*): In marine radio, the method used to establish contact with one or more stations.

**Call sign** (*indicative d'appel*): A vessel identifier issued with a radio station licence by Industry Canada.

**Cam Cleat** (*taquet coincideur*): A fitting which grips a rope in the teeth of two rotating cams.

**Camber** (*creux, cambrure*): (1) The horizontal curvature of a sail. (2) The vertical curvature of a deck as seen in cross section.

**Can buoy** (*bouée cylindrique*): A cylindrical buoy, floating end up.

**Canoe stern** (*poupe de canoe*): A pointed stern, having a shape similar to that of the end of a canoe.

**Capsize** (*chavirer*): To overturn a vessel by rolling.

**Cardinal buoy** (*bouée cardinal*): An aid to navigation which indicates the cardinal direction of safe water.

**Cardinal points** (*points cardinaux*) : The four main points of the compass: north, south, east, and west.

**Carry Away** (*casser soudainement*): To break free and become lost, said of gear that is stressed beyond its strength or its fastenings.

**Carry Her Way (to)** (*Erre*): The movement of a boat through the water as a result of momentum.

**Carvel** (*à franc bord*): Smooth-planked hull construction.

**Cast off** (*appareiller*): The operation of letting go a cable or line that secures a ship to a buoy, dock, or other ship, to permit getting under way.

**Cat's Paw** (*risée*): A small, isolated puff of wind that ripples the water surface only in a small area.

**Catamaran** (*catamaran*): a boat having twin hulls, with a space between, joined by a common deck.

**Cat-boat** (*cat-boat*): Sailboat with a mast stepped near the bow, and no jib.

**Caulk** (*produit de calfeutrage*): To fill a seam with a material to prevent leakage.

**CCG** (*GCC*): Canadian Coast Guard.

**CCGA** (*gcac*): Canadian Coast Guard Auxiliary.

**CCGR** (*SRGCC*): Canadian Coast Guard Radio.

**Celestial equator** (*Équateur astronomique*): A great circle located at the intersection of the extended plane of the earth's equator and the celestial sphere, thus 90° from the celestial poles. Declination of celestial bodies is measured from the celestial equator.

**Celestial horizon** (*Horizon astronomique*): A great circle at the intersection of an extended plane through the center of the earth and the celestial sphere, parallel to the observer's horizon and perpendicular to the zenith-nadir line.

**Celestial meridian** (*Méridien astronomique*): A great circle located at the intersection of the extended plane of an earth's meridian and the celestial sphere, passing through both celestial poles.

**Celestial poles** (*Pôles astronomiques*): The intersections of the axis of the earth with the celestial sphere; labeled Pn and Ps.

**Celestial sphere** (*Sphère astronomique*): An imaginary globe of infinite radius concentric with the earth, on which the stars seem to be fixed and the sun, moon, and planets appear to wander.

**Celestial triangle** (*Triangle astronomique*): A spherical triangle on the celestial sphere such as the navigational triangle.

**Centre of Buoyancy** (*centre de flottabilité*): The point through which the upward thrust of buoyancy on a hull is considered to act.

**Centre of Effort** (*centre d'effort de la voilure*): **Static**: the geometric centre of a single sail or the combined geometric centres of several sails. **Dynamic**: the point where all the lateral forces of the sails of a boat under sail could be concentrated, without changing their effect.

**Centre of gravity** (*centre de gravité*): The point through which the force of gravity produced by the vessel's mass can be considered to act; the point from which a body could be freely suspended without rotating in any direction.

**Centre of Lateral Resistance** (*centre de dérive*): **Static**: the centre of pressure of the forces on the hull of a boat. **Dynamic**: the point where all lateral forces acting on a hull moving through the water could be concentrated, without changing their effect.

**Centreboard** (*dérive pivotante*): a pivoted board that can be raised or lowered through a slot in the keel.

**Centreline** (*axe longitudinal*): The fore-and-aft line that runs along the exact centre of a boat.

**CG** (*gc*): Coast Guard.

**Chafe** (*raguage*): Wear on a sail, spar, or line. Prevented by chafing gear; sacrificial coverings, such as leather, cloth, or rubber.

**Chafing gear** (*anti-raguage*): covering for a line to protect it from abrading.

**Chain pipe** (*écubier de pont*): a pipe through the deck or hull, giving the anchor rode access to the chain locker (also called a hawse pipe).

**Chain Plate** (*cadène*): A metal strap on a sailboat, usually secured to hull structure or bulkhead, to which a shroud or stay is attached.

**Channel** (*voie*): A radio frequency that has been designated for a particular purpose.

**Chart** (*carte marine*): a map designed specifically use in nautical navigation.

**Chartplotter** (*lecteur de carte*): a graphic electronic device containing a GPS, chart information and the ability to show vessel information.

**Chart datum** (*zero des cartes*): (1) on charts of inland waters, the reference level for measuring all heights and depths; (2) on charts of coastal waters, the reference level below which depths are measured, above which heights of landforms in the intertidal zone are measured, and above and below which the tide is measured. Canadian tidal chart datum is the plane of Lowest Normal Tide (LNT), while US chart datum is the plane of Mean Lower Low Water (MLLW)

**Cheater** (*Trinquette*): A low-cut sail set below a high flying spinnaker.

**Cheek Block** (*joue de vache*): A block with one flat side so that it can be mounted on a spar or structure.

**Chine** (*bouchain*): The line marking the intersection of the bottom and sides of a boat.

**Chinook** (*Chinook*): A warm dry wind on the eastern side of the Rocky Mountains, the result of the adiabatic processes involved in its travel over the mountains; called the "snow eater" because the combination of its relatively high temperature and extremely low humidity causes rapid evaporation of the snow it passes over.

**Chock** (*chaumard*): (1) a deck fitting used to change the direction of tension of an anchor rode or mooring line; (2) a fitting designed to receive an object and hold it securely; e.g. anchor chocks

**Chronometer** (*Chronomètre*): A timepiece with a nearly constant rate or loss made especially to keep accurate time.

**CHS** (*SHC*): The Canadian Hydrographic Service: the federal agency that produces charts in Canada.

**Chute** (*foc ballon ou spinnaker*): Slang for spinnaker (it resembles a parachute).

**Circle of equal altitude** (*Cercle de hauteur égale*): A circle on the surface of the earth, from every point of which the altitude of a celestial body is the same at a given instant.

**Circle of position** (*Cercle de position*): Circular line of position determined by a distance from an object, point or celestial body.

**Circumpolar** (*Circumpolaire*): (of a celestial body) Revolving about the elevated pole without setting.

**Cirro** (*cirro*): Height group prefix for ice crystal clouds with bases above 6,000m.

**Civil twilight** (*Crépuscule civile*): The period of incomplete darkness when the upper limb of the sun is below the visible horizon and the centre of the sun is not more than 6° below the celestial horizon; useful in taking sights on stars or planets.

**Clam Cleat** (*coinceur*): A simple ridged 'V' groove that holds nylon and Dacron lines firmly, yet has no moving parts to break or seize. It allows the immediate release of the line by a short upward pull, on the free end.

**Class A** (*classe a*): A Digital Selective Calling (DSC) specification standard that meets all International Maritime Organization (IMO) Medium Frequency/Very High Frequency (MF/VHF) requirements for compulsorily fitted vessels over 300 Gross Registered Tons.

**Class B** (*classe B*): A DSC specification standard that meets IMO MF/VHF requirements for non-pleasure craft not required to have Class A equipment.

**Class C** (*classe C*): A DSC specification standard that is no longer approved.

**Class D** (*classe D*): A DSC specification standard that meets the minimum requirements VHF-DSC on non-pleasure craft not required to carry Class A or B equipment. (Not all Class D radios meet IMO requirements.)

**Claw Off** (*Se relever au vent d'une côte*): (of sailing) To beat off of a lee shore under difficult conditions.

**Clear Ahead** (*en route libre devant*): See **clear astern**.

**Clear Astern** (*dégagé sur l'arrière*): Sailing terms describing the relative positions of two boats close enough to each other to possibly restrict their manoeuvrability. A boat is *clear astern* of another when her hull and equipment in normal position are behind an imaginary line abeam from the aftermost point of the other's hull and equipment in normal position. The other boat is *clear ahead*. They *overlap* when neither is clear astern of the other or when a boat between them overlaps both.

**Cleat** (*taquet*): a fitting with two arms or horns to which lines are made fast.

**Clew** (*point d'écoute*): the after lower corner of a sail; on a spinnaker, the lower corner attached to the sheet.

**Clinker-built** (*contruction à clins*): Type of hull construction where the lower edge of each plank overlaps and is fastened to the upper edge of the plank below it. Also see **lapstrake**.

**Close aboard** (*côte à côte*): beside, close to, alongside.

**Close Reach** (*au largue*): The point of sail between close-hauled and beam reaching.

**Close Reefed** (*arise au maximum*): When all possible reefs have been taken in.

**Close-hauled** (*près serré*): Sailing as close as possible to the direction of the wind. Also, called on- or by-the-wind, or beating.

**Closest Point of Approach (CPA)** (*point de rapprochement maximal*): The closest distance two vessels will come to each other when both are under way, usually expressed in distance and relative bearing. See also **Automatic Radar Plotting Aid, Bearing to Closest Point of Approach** and **Time of Closest Point of Approach**.

**Cloud** (*nuage*): Accumulation of water drops, ice crystals, or a mixture of both, formed by the condensation of water vapour, with its base above the surface.

**Clove hitch** (*demi-clé, à capeler*): a knot used for a temporary fastening to a post or a rail.

**Club-footed Jib** (*foc baumé*): A jib with a boom.

**Clutter** (*fouillis d'échos*): Echoes from waves, rain etc. that produce spots on the screen. If severe, these interfere with targets. Anti-clutter controls such as Sensitivity Time Control and Fast Time Constant may help to reduce clutter.

**Coalescence** (*coalescence*): The merging together of smaller droplets, to create larger drops.

**Co-altitude** (*Co-hauteur*): Ninety degrees minus the altitude of a body above the celestial horizon; the same as zenith distance. The side of the navigational triangle between the zenith and the body, or between the AP or DR and the GP of the body.

**Coaming** (*hiloire*): A raised border above the deck around hatches and the cockpit.

**Coast station** (*station côtière*): A shore-based radio station operated by the Coast Guard, Rescue Coordination Centre, etc.

**Cockpit** (*cockpit*): An open space for the crew, lower than the deck.

**Co-declination** (*Co-déclinaison*): Ninety degrees minus the declination of a body, when declination and latitude have the same name: co-declination is the same as polar distance measured from the elevated pole; the side of the navigational triangle between the body or its GP and the elevated pole.

**Coil** (*lover*): To arrange a line in loops.

**Co-latitude** (*Co-latitude*): Ninety degrees minus the latitude of the observer. The side of the navigation triangle between the zenith, AP or DR and the elevated pole.

**Cold Front** (*front froid*): A transition zone where a cold air mass advances and replaces a warm air mass.

**Collision bearing** (*gisement de collision*): see bearing, collision.

**Come about** (*virer vent debout*): to turn the ship's head through the wind, changing from one tack to the other.

**Communication** (*communication*): The means of exchanging messages.

**Compact Flash** (*compact flash*): one of a few standards for removable storage cards for digital data that can be used with Personal Digital Assistants, cameras, GPS receivers and computers.

**Companionway** (*descente*): a stairway from one deck to another.

**Compass** (*compass*): an instrument for determining horizontal direction.

**Compass bearing** (*relèvement compass*): see bearing, compass.

**Compass course** (*Cap compas*): The course by boat's compass; the angle between the boat's keel and the north point of the compass card.

**Compass error** (*Erreur de compas*): the difference between any true direction and that indicated simultaneously by the compass: the combined effect of variation and deviation.

**Compass error** (*Erreur de compas*): the difference between any true direction and that indicated simultaneously by the compass: the combined effect of variation and deviation

**Compass north** (*nord compas*): the direction indicated as north by the compass.

**Compass Rose** (*rose du compas*): A graduated circle printed on a chart as a reference to show true and magnetic north

**Compensation** (*compensation*): the adjusting of a compass so as to remove or reduce deviation.

**Compulsory** (*obligatoire*): That which is required by law.

**Computed altitude** (*hauteur calculée*): Altitude of a body above the celestial horizon from a dead reckoning position (DR), an assumed position (AP), or a known position (KP) at a given time, as determined by computation, usually with the aid of a sight-reduction table or calculator.

**Computed course** (*Cap calculé*): Course computed from true north. Used principally in the Sailings.

**Con** (*naviguer à vue*): to steer the boat by direct observation of landmarks.

**Concentric** (*Concentrique*): Having a common centre, as for circles or spheres.

**Condensation** (*condensation*): The process whereby a vapour becomes a liquid. In the atmosphere, condensation appears in such forms as cloud, fog, dew and precipitation (see also **Latent Heat**).

**Condition of the sea** (*état de la mer*): state of agitation of the sea, due to the combined effects of wind and swell.

**Conditional Instability** (*Conditionnellement instable*): A state in which rising air remains stable until cooled to its dew point, but becomes unstable once condensation occurs.

**Conformal projection** (*Projection conforme*): A projection in which all angles around any point are correctly represented.

**Conical buoy** (*bouée de type cone*): a cone-shaped buoy, floating with the point up.

**Constant Pressure Level** (*niveau de pression constant*): The height above sea level at which a specific pressure exists.

**Constellation** (*Constellation*): One of the 88 recognized groups of fixed stars, or the region of the sky in which the group appears.

**Constrictor Knot** (*noeud constricteur*): A variation of the clove hitch; can be used as a semi-permanent whipping.

**Continuous refraction** (*Réfraction*): The refraction due to increasing density of air with decreasing altitude.

**Control** (*control*): Of radio, to command or direct communications: effected by the controlling station.

**Convection** (*convection*): The process whereby air rises because it is warmer (lighter) than its surroundings. Examples of convective clouds are cumulus and cumulonimbus.

**Convergence** (*convergence*): A net horizontal inflow of air which leads to rising of excess air in the centre, and a lowering of surface pressure, as seen commonly in depressions.

**Coordinated Universal Time** (*Temps universel coordonné*): The time scale provided by most broadcast time signals. For purposes of marine navigation it is equivalent to Greenwich Mean Time. GPS uses Coordinated Universal Time (UTC). See **Greenwich mean time (GMT)** and **Universal Time (UT)**.

**COP** (*CDP*): See **Circle of Position**

**Cordage** (*cordage*): A general term for all types of rope.

**Coriolis Effect** (*effet de Coriolis*): The apparent deflection of wind direction due to the rotation of the earth. The effect varies with the speed of the wind and also with latitude, being zero at the equator. The deflection is to the right in the Northern Hemisphere; to the left in the Southern Hemisphere.

**Correcting** (*correction de route*): the conversion of courses or bearings from compass to magnetic to true.

**COSPAS-SARSAT** (*cospas-sarsat*): An orbiting satellite system that that detects and locates emergency beacons activated by aircraft, ships and backcountry hikers in distress. It was established by Canada, France, the United States, and the former Soviet Union in 1979. It is operated jointly by the US and Russia.

**Cotter Pin** (*goupille fendue*): "A bendable, split pin used to prevent a nut and bolt, or other assembly, from loosening."

**Counter** (*voûte*) : Above water portion of the stern, extending back from the after end of the waterline.

**Counter Stern**(*arrière à voûte*): An overhanging stern.

**Course** (*route*): (1) the horizontal direction in which a boat is steered or intended to be steered (2) In GPS, the direction from a starting waypoint or location to a destination waypoint,

**Course Made Good** (*route sur le fond*): (1) The net direction in a straight line a boat has travelled, measured from a starting point to a destination, between two known positions or fixes. (2) In GPS: The bearing from an active waypoint (starting point) to a present position, independent of the path taken.

**Course over ground** (*Route parcourue*): Actual path of travel of a boat over the bottom. The preferred term for path of a boat with respect to the bottom is **track**.

**Course steered** (*Route barrée*): The direction in which a helmsman steers a boat when underway.

**Course-Up** (*route en haut*): A display mode in which the direction of travel is towards the top of a chartplotter or radar screen.

**Cove** (*gorge*): A groove or slot built into the boom or after edge of a mast.

**CPS** (*ecp*): Canadian Power and Sail Squadrons.

**Cradle** (*ber*): A fitted frame by which a boat is supported during storage or shipping.

**Craze** (*Craquelage*): To develop small cracks emanating outward from a central point.

**Cringle** (*oeillet, patte*): a rope or circular eye made on a metal or plastic thimble, used for fastening on the corner of a sail, awning or other canvas item.

**Critical table** (*Table à valeur intégrale*): A table in which values of the quantity to be found are tabulated for limiting values of the entering argument. No interpolation is required.

**Cross Track Error** (XTE) (*écart de route*): The direction and horizontal distance you are off a desired track; usually indicated by a GPS or chartplotter.

**Crown** (*diamant*): The point on an anchor where the shank joins the arms.

**Cuddy** (*rouf*) : A shelter cabin in a small boat.

**Cumulo** (cumulo) : group prefix for vertical clouds.

**Cunningham** (*cunnigham*): An arrangement of gear used to adjust the luff tension in a sail without using a halyard or moving the boom.

**Current** (*Courant*): (1) The horizontal movement of water, which may account for the difference between a dead reckoning position and a fix at the same time. (3) The movement of electrons through a conductor.

**Cursor** (*curseur*): A movable mark on a computer, or a boat's navigational display screen used to identify a location on the screen, mark a waypoint, measure distance or bearing etc.

**Cut** (*angle d'intersection*): The angle of intersection of the lines of position in a fix.

**Cutter** (*cotre*): A single-masted boat with mainsail and usually more than one headsail, with the mast stepped close to amidships (from 40 to 50% aft of the bow versus about 33% for a sloop).



**Cyclone** (*cyclone*): A roughly circular area of low pressure, around which the air flows in a counter-clockwise direction; also known as a “low” or “depression”. (In mid-latitudes, the term “extra-tropical cyclone” is sometimes used to distinguish from the smaller but more intense tropical cyclones).

## D

**Dagger board** (*derive sabre*): a non-pivoting drop board lowered vertically through a trunk, and through a slot in the keel.

**Danforth<sup>®</sup> Anchor** (*Danforth, ancre*): An anchor with long, pointed, hinged flukes with good holding power.

**Danger zone** (*zone de danger*): the sector extending from dead ahead to 22½° abaft the starboard beam, an arc of 112½° in all.

**Data** (*données*): Information or signals, usually in digital form.

**Datum** (*zero de la carte*): a reference point from which measurements are made; the zero point on a measurement scale (see **chart datum**, **datum for heights**, **horizontal datum**).

**Datum for heights** (*Référence des hauteurs*): the reference level above which heights (including overhead clearances) are measured on a chart (as a rule, in inland waters this is the same reference level as the chart datum, while in coastal waters this is the highest level that the tide normally reaches).

**Datum for soundings** (*Zéro des cartes*): See chart datum.

**Davit** (*bossoir*): Crane-like device for hoisting a small boat, anchor, or cargo.

**Day beacon** (*marque de jour*): Unlighted fixed aid to navigation.

**Daylight saving time** (*Heure avancée*): A variation of standard time in order to make better use of daylight, usually one hour later than standard time; also called Summer Time especially in Europe.

**Dead ahead** (*droit devant*) : directly ahead.

**Dead astern** (*directement derrière*): directly astern.

**Dead reckoning** (*l'estime*): the process of determining a vessel's position, using only knowledge of speed, elapsed time, course steered, and a point of departure. Any difference between the dead reckoning position and a fix for the same time indicates the combined effect of any current, wind and steering error.

**Dead reckoning track** (*Route à l'estime*): The intended course line of a vessel as plotted on a chart.

**Dead Run** (*vent arrière*): The point of sail on which a boat has the wind blowing straight over the stern.

**Deadhead** (*corps mort*): a log or heavy timber floating nearly vertical but with little of its bulk above the surface.

**Deadrise** (*angle de relevé de varangue*): The angle made by the horizontal plane of the keel to the boat bottom, usually expressed in inches for each foot of distance from the keel.

**Deadwood** (*massif*): the solid fore-and-aft timbering lying between the keel and hull proper.

**Deck** (*pont*): the horizontal platforms, in ships, separating compartments one above another.

**Deck Drain** (*Drain de cockpit*): Openings in the deck or cockpit to drain water overboard.

**Deck log** (*journal de bord*): a book in which the conduct of the vessel is recorded (see also **log**). This includes boat movement, position and important events.

**Declination** (*Déclinaison*): Angular distance of a celestial body north or south of the celestial equator; the arc of an hour circle between the celestial equator and a point on the celestial sphere.

**Degree** (*degree*): a unit of angular measurement, being one three-hundred-and-sixtieth (1/360) of a circle.

**Delamination** (*dé laminage*): a condition in which the layers of fibreglass separate from each other.

**Department of Defence** (DOD) (*département de la défense*): The U.S. Department of Defence which is the owner/operator of the Navstar Global Positioning System.

**Departure** (*Départ*): (1) an accurate fix or other known position on a chart from, which a course is laid. (2) Term used in the Sailings for distance made good to the east or west on any course expressed in nautical miles (p). Should not be confused with difference of longitudes (DLo).

**Deposition** (*condensation*): The transition of water vapour directly to ice without a liquid phase.

**Depressed pole** (*Pôle inférieur*): The celestial pole below the horizon; it is of contrary name to latitude.

**Depression** (*dépression*): see **Cyclone**.

**Depth sounder** (*Échosondeur*): An electronic device that uses the time lapse between a transmitted ultrasonic pulse and its received echo to determine the depth of water.

**Deviation** (*deviation*): the angular difference between magnetic north and compass north, caused by the effect of the boat's magnetic field upon its compass.

**Dew** (*rosée*): Water condensed onto objects on or near the ground, the temperature of which has fallen below the dew point of the adjacent air, due to radiation.

**Dew Point** (*point de rosée*): The temperature to which air must be cooled, in order to become saturated by the water vapour already present in the air.

**Difference of latitude** (*Différence de latitude*): The shorter arc of a meridian between the parallels of two places expressed in angular units. If the latitudes of the two places have the same name (N or S), it is the difference in the latitude values. If the latitudes have opposite names, it is the sum of the values.

**Difference of longitude** (*Différence de longitude*): The shorter arc of a parallel between the meridians of two places expressed in angular units. If the longitudes of the two places have the same name (E or W), difference of longitude (DLo) is the difference in the longitude values. If the longitudes have opposite names, DLo is the smaller of the sum of the two longitudes or 360° minus the sum. Numerical value does not change with a change in latitude. Do not confuse with departure (p).

**Differential Global Positioning System** (*système de positionnement différentiel*): A complementary local system which attempts to remove errors induced by ionospheric aberration and cancel any deliberate random errors in the

GPS public satellite signals, produced through Selective Availability, which the US could reintroduce in times of increased world tension.

**Digital Display** (*affichage numérique*): A number flashed on the display unit presenting a physical variable.

**Digital Nautical Chart** (*carte marine numérique*); a military electronic chart specification developed by the U.S. National Geospatial Intelligence Agency, and used by the NATO fleets.

**Digital Selective Calling** (*Appel numérique sélectif*): A dedicated, digital, semi-automatic calling system for establishing communication with selected radio stations utilizing VHF channel 70. With a DSC-enabled radio, the operator can signal selectively to another radio, or globally to all others. In the event of an emergency, the DSC radio, at the press of a button, automatically transmits a distress-coded digital signal along with its coordinates which are obtained from a connected or included GPS unit. The user must register the radio with Industry Canada in order to have the boat information associated with the radio.

**Dilution of Precision (DOP)** (*diminution de la précision*): The fixes obtained from a GPS are subject to varying degrees of accuracy depending upon the relative locations of the satellites overhead. The DOP is a good indicator of fix reliability.

**Dinghy** (*annexe*): a small, open, unballasted boat, propelled by oars, sail, or engine; a ship's small boat.

**Dip** (*Dépression*): The angle of depression of the visible sea horizon from the horizontal, due to the elevation of the eye above the sea level.

**Dip short** (*Dépression rapprochée*): A special technique for taking a sight on confined waters where the shoreline opposite the observer (which is closer than the natural horizon) is used as the horizon to measure the body's altitude; also referred to as "dip short of the horizon".

**Direct Current** (DC) (*courant continu*): The type of power obtained from batteries. Boaters often use the term DC to refer to 12 volt direct current, which is the most common voltage on smaller boats.

**Direction** (*sens*): is the position of one point relative to another without reference to the distance between them

**Direction of Relative Motion (DRM)** (*direction du mouvement relative*): The direction a target is moving across a radar screen. This is the result of the target's direction and speed relative to the boat's direction and speed.

**Discharge current** (*jet de décharge*): the water expelled by the propeller.

**Discontinuity** (*Discontinuité*): The surface between two transparent substances such as air and water or air and glass at which refraction occurs.

**Displacement** (*déplacement*): the weight of the volume of water displaced by a floating vessel.

**Displacement hull** (*coque à déplacement*): a hull that is supported solely by buoyancy at any speed.

**Display Unit** (*module d'affichage*): an electronic device that presents a visual presentation of the output from a radar, chartplotter, AIS or other unit.

**Distance** (*Distance*): The spatial separation of two points and the length of the line joining them. Navigators use nautical miles; see **nautical miles**.

**Distress Communication** (*communication de détresse*): (1) The type of communication used when a vessel is in 'grave and imminent danger' and requires 'immediate assistance'. (2) The radio traffic that follows a distress signal.

**Ditty Bag** (*nécessaire de marin*): A small bag for stowage, e.g., sewing kit, or small tools.

**Diurnal Tide** (*Marée diurne*) : A tide with one high and one low water per day

**Divergence** (*divergence*): Net outflow of air from a HIGH pressure centre.

**Dock** (*port, basin*): (1) an enclosed area of water in a harbour which can be used for mooring one or more vessels, particularly an area specifically dredged for this purpose; (2) the space between two wharves or piers, where one or more vessels can be secured; (3) a structure or group of structures built at the water's edge, to which a vessel can be secured.

**Docking** (*accostage*): the procedure for coming alongside and securing to a dock, wharf, or jetty.

**Dog Watch** (*petit quart*): A watch of half usual duration; used to stagger the watch periods from day to day.

**Doldrums** (*calmes équatoriaux*): A low pressure region on either side of the equator, renowned for light winds or calms and heavy tropical rainfall.

**Dolphin** (*duc d'albe*): a group of piles bound together.

**Dolphin Striker** (*arc-boutant de martingale*): A short spar fitted below a bowsprit, over which the bobstay is fitted.

**Dorade Vent** (*Manche à air*): A ventilator that does not permit water or spray to pass below with the fresh air.

**Double ender** (*navire amphidrome*): a boat having both a pointed bow and stern.

**Double sheet bend** (*noeud d'écoute double*): a knot that is used principally for joining two ropes of equal or different diameters, and is more secure than the ordinary sheet bend.

**Douse** (*affaler (amener, abaisser) rapidement*): To lower quickly.

**Downburst** (*rafale descendante*): Violent downdraft below a thunder- storm (see Microburst).

**Downhaul** (*halebaut*): A line or tackle used to exert a downward pull on a sail or spar.

**Downwind** (*aval du vent*): to leeward; the direction in which the wind is blowing.

**DR** (*estime*): see **dead reckoning**.

**DR position** (*Position estimée*): A position determined by dead reckoning. See dead reckoning.

**Draft** (also spelled draught) (*tirant d'eau*): the minimum depth of water required to float a vessel.

**Drag (of an anchor)** (*Chasser son ancre*) : The movement of an anchor over the bottom when it ceases to hol

**Drift** (*derive*): (1) the speed of a current; (2) material floating at random; (3) the distance a vessel is moved by current and/or wind; (4) to move idly without propulsive force of engine or sail.

**Drift angle** (*Sens*): The angular difference between the course steered and the course made good (CMG) between fixes.

**Drizzle** (*bruine*): Precipitation, usually from stratiform clouds, in the form of very small droplets which fall very slowly and sometimes cause reduced visibility.

**Drogue** (*trainard*): Sea anchor, or form of drag used to create resistance to movement.

**Dry adiabatic lapse rate** (*gradient adiabatique sec*): Adiabatic lapse rate of dry air with altitude.

**Dumb compass** (*taximètre*) : see **pelorus**.

**Duplex** (*duplex*): Use of two different radio frequencies for transmitting and receiving.

## E

**Earing** (*bosse*): A line that secures a cringle to the boom.

**Ease** (*chequer*): To let out a line gradually.

**Easterlies** (*Vents de l'est*): Belts of persistent easterly winds such as the trade winds and the polar easterlies.

**Ebb** (*jusant*): a current generally from the land towards the open ocean, associated with a falling tide.

**ECDIS** (*SEVCM*): Electronic Chart Display and Information System.

**Echo** (*écho*): One of several terms for the reflection of radar energy from an object and its subsequent display. The word is synonymous with blip and target.

**Echo Stretch** (*étirement de l'écho*): In radar, a control that 'stretches' the apparent size of a target to help monitor weaker targets.

**Echo Trail** (*trace d'écho*): An electronic function that stores, and simultaneously displays, returns from several subsequent radar scans, thereby showing the movement of objects relative to a vessel.

**Ecliptic** (*écliptique*): The apparent annual path of the sun among the stars; the intersection of the plane of the earth's orbit with the celestial sphere. This is a great circle of the celestial sphere inclined at an angle of about 23°27' to the celestial equator because the axis of rotation of the earth is not perpendicular to its orbit. This makes the sun seem to move north and south during the year and gives the earth its seasons.

**ECS** (*SCE*): Electronic Chart System — a generic term used for any systems other than ECDIS. See **ECDIS**

**Eddy** (*Tourbillon*): A small whirl or circling movement of a fluid such as air or water; may be embedded with a larger current.

**El Niño** (*El Niño*): A warm ocean current, associated with weakening of the trade winds, which flows eastward across the Pacific Ocean just south of the equator; creates catastrophic changes in weather patterns in areas which may be far from its source.

**Electrolytic Action** (*Électrolyse*): A plating and eroding action that occurs when dissimilar metals are immersed in an electrolyte such as salt water.

**Electronic Bearing Line (EBL)** (*gisement électronique*): An electronically generated line seen on a radar display screen, used to measure the relative bearing of objects.

**Electronic Navigational Chart (ENC)** (*carte électronique de navigation*): Any digital representation of a navigational chart, in either raster or vector format.

**Electronic Range and Bearing Line** (*portée et gisement électronique*): ERBL. A form of **Electronic Bearing Line (EBL)** and **Variable Range Marker (VRM)** that can originate from any point on a radar screen. Both EBL and VRM originate from the boat's position in the centre of the screen.

**Elevated pole** (*Pôle élevé*): The celestial pole above the horizon: it has the same name (N or S) as latitude.

**Ellipse** (*Ellipse*): An elongated circle. The curve formed when a cone or circular cylinder is cut across at an angle other than 90°.

**Embark** (*embarquer*): To go aboard.

**EP** (*PEC – position estimée corrigée*): See **Estimated Position**

**Ephemeris** (*Éphémérides*): A collection of tables or data showing the position of the planets or heavenly bodies for every day of a given period; also an astronomical almanac containing such tables.

**EPIRB** (*RLS*): Emergency Position Indicating Radio Beacon; a small transmitter operating on aircraft marine or satellite emergency channels, used in cases of distress.

**Equation of time** (*Équation du temps*): The amount of time by which the true sun leads or lags behind the mean sun at any instant.

**Equator** (*équateur*): the great circle whose plane is perpendicular to the polar axis, midway between the poles.

**Equilibrium** (*équilibre*): A state of balance.

**Estimated position** (*Position estimée corrigée*): Most probable position of a boat based on a single line of position (LOP), or based on incomplete or questionable data.

**Estimated Probable Error** (*erreur probable estimée*): A carefully considered and constantly updated allowance for the known inaccuracies that might be present in an electronic position display.

**Estimated Time Enroute** (*durée probable de route*): The calculated elapsed time that a boat should take to reach a desired destination based on its present heading and speed.

**Estimated Time of Arrival (ETA)** (*heure probable d'arrivée*): The calculated time at which a boat should reach the designated point, **waypoint** or destination based on its present heading and speed.

**Estimated Time of Departure (ETD)** (*heure probable de départ*): The time at which it is planned to leave a particular location.

**Evaporation** (*évaporation*): Process by which liquid water is changed to vapour (see also **Latent Heat**).

**Even Keel** (*assiette nulle*): A boat is on an even keel when it is floating level.

**Eye** (*oeil*) (of a hurricane): Central core of a tropical cyclone; cloudless, with light winds.

**Eye splice** (*oeil épissé*): a splice which forms a loop on the end of a line.

**Eye Wall** (*paroi de l'oeil*): Vertical shaft of cumulonimbus clouds surrounding the eye, containing the strongest winds in the storm.

**Eyelet** (*oillet*): A small grommet through which lacing is passed.

**Eye-of-the-Wind** (*lit du vent*): Directly upwind.

## F

**Fairlead** (*chaumard*): a ring or other fitting mounted aboard a boat, through which a line can be passed to help control it or change its direction.

**Fairway buoy** (*bouée de mi-chenal*): a buoy that marks a landfall, the entrance to a channel, or the centre of a channel.

**Fake Down** (*plet; affaler*): (1) To coil a line so that it will run free. (2) the mainsail may be faked or flaked down onto the boom.

**Fall** (*Garant*): The line in a tackle.

**Fall off** (*abattre*): the movement when a ship is steered or blown off course to leeward.

**Family (of depressions)** (*famille de dépressions*): A series of depressions building and dying in succession, along the same frontal wave.

**Family Radio Service (FRS)** (*SRF*): Very short range radios (approximately 2 km).

**Fast** (*1: Frapper; 2: longueur*): Secure: to make something fast is to secure it.

**Fast Time Constant (FTC)** (*constant de temps rapide*): A processing technique in a radar display whereby the effects of rain clutter on the display can be minimized.

**Fastenings** (*boulonnerie*): Screws or nails that are used to hold parts of a boat together.

**Fathom** (*brasse*): a unit of measure equal to six feet; used to describe depth of water or a length of rope or line.

**Fender** (*défense*): a device hung over the side of a vessel to protect the hull from other objects.

**Ferrel Cell** (*cellule de Ferrel*): A cell of global air circulation between 30° and 60° north and south of the equator.

**Fetch** (*course, fetch*): (1) The uninterrupted straight line distance over the water on which the wind may act to build wind waves. (2) To reach or arrive at a point, as in "She fetched the point."

**Fid** (*gros épissoir*): Tapered tool used in splicing (see **marlinespike**).

**Figure-eight knot (also called a figure-of-eight knot)** (*noeud en huit*): a stopper knot shaped like a figure-eight.

**Filling (of Low or depression)** (*remplissage d'une depression*): Increase of central pressure until low no longer exists.

**Fin Rudder** (*barre de gouvernail*): A rudder fastened directly to the after edge of a keel.

**First Point of Aries** (*Premier point d'Ariès*): The point where the declination of the sun is zero as it passes over the equator on the way northward at the beginning of spring (about 21 March). Also, the instant when the sun crosses the equator; Often called Aries. The same as the vernal equinox.

**Fisherman's Bend** (*noeud d'étalingure*): A knot used to connect a rode to an anchor.

**Fitting out** (*armer*): the process of readying a boat for use after a period of inactivity.

**Fix** (*point relevé*): an accurately known position found by taking new observations (including electronic or astronomical observations) without reference to previous known positions; it may be determined, among other things, by being close aboard a charted object, or from the intersection of two or more lines of position; or from astronomical observations.

**Flag** (*drapeau*): (1) The colours of a nation. (2) A rectangular piece of bunting, of any colour(s) or design, used for identification.

**Flake** (*plet; affaler*): See **Fake Down**.

**Flare** (*frégatage, fuse*): (1) the external concave curve of the bow of a ship; (2) a signal device to indicate distress or for other visual signals.

**Flash memory** (*mémoire flash*): A computer memory chip which can be reprogrammed from a personal computer without specialised devices, using a simple program or directly off the Internet.

**Float plan** (*plan de croisière*): see **trip plan**.

**Flood** (*flot*): a current generally from the open ocean towards the land, associated with a rising tide.

**Fluke** (*patte d'ancre*): the point of an anchor that catches the ground.

**Fluxgate compass** (*compass magnétométrique*): A form of compass with no moving parts – gives a digital readout. The sensing unit can be placed where there is little or no magnetic influence

**Fly** (*battant; guidon*): (1). A masthead wind pennant. (2) The horizontal length of a flag.

**Foehn Wind** (*vent de Foehn*): A warm, dry wind of the Swiss Alps, produced in the same manner as the Chinook.

**Fog** (*brouillard*): Cloud formed at the surface of the ground by the condensation of water vapour. Visibility is reduced, sometimes to zero, in fog.

**Following sea** (*houle de l'arrière*) : an overtaking wave that comes from astern.

**Foot** (*bordure*): the bottom edge of any sail or mast.



**Force** (*force*): (1) A mechanical push or pull. (2) An electromagnetic attraction or repulsion. (3) A unit of measure of wind velocity.

**Fore** (*Étrave avant*): Denoting at, near, or towards the bow.

**Fore-and-aft** (*avant-arrière*): lengthwise in the ship.

**Foredeck** (*pont avant*): that part of the deck before the bridge or foremast.

**Forefoot** (*brion*): the point where the stem meets the keel.

**Foreguy** (*retenue de tangon*): A line led from the foredeck to a spinnaker pole to limit its upward swing.

**Forepeak** (*coqueron avant*): A stowage compartment in the very forward part of the boat.

**Forereach** (*gagner au vent*): To carry way as a boat luffs into the wind.

**Fore-reaching** (*Erre*): the capacity of a boat to carry forward way, or coast due to its momentum.

**Foresail** (*misaine*): The sail set from a sailboat's foremast.

**Forestay** (*étais*): a wire mast support leading forward to the bow; the foremost stay.

**Forestay sail** (*tourmentain*): A sail, similar to a jib, set on the forestay.

**Fore-triangle** (*triangle avant*): the area formed between the masthead, the base of the mast at deck level, and the lower end of the forestay.

**Forward** (*avant*): a directional term indicating at, or towards, the bow.

**Foul** (*emmêler*): Jammed, entangled; not clear; being hindered or impeded.

**Foul Ground** (*fond dangereux*): Bottom that is unsuitable as an anchorage because holding qualities of an anchor are poor or obstructions exist.

**Founder** (*sombrier*): to fill with water and sink.

**Fractional Rig** (*gréement fractionné*): A sailboat with the jibstay attached to the mast at a point below the masthead.

**Frame** (*membrure*): Athwartship structural member (rib) that gives shape and stiffening to the hull and to which planking is attached.

**Freeboard** (*franc-bord*): the minimum vertical distance between the gunwale and the waterline.

**Freezing Rain** (*pluie verglaçante*): Precipitation which has remained liquid although falling through below-freezing regions. On striking frozen surfaces, this "super-cooled" rain freezes almost instantly to produce a smooth layer of ice.

**Freezing Spray** (*bruine verglaçante*): At sea, with below freezing temperatures, spray blowing from breaking waves can rapidly coat the decks and superstructure of vessels with a dangerous layer of ice.

**Frequency** (*fréquence*): (1) The number of Hertzian waves per second of an alternating current. (2) a radio frequency or channel used for communication.

**Front** (*front*): The line on a weather map denoting the surface boundary between masses of air of different characteristics.

**Frontal Surface** (*surface frontale*): The extension of the frontal interface above the surface.

**Frontogenesis** (*frontogénèse*): The initiation of a frontal system between two air masses

**Frost** (*gelée*): Formed when surface air is cooled below its dew point, when that dew point is below freezing. The transition is direct from vapour to ice crystals, bypassing the liquid stage, a process called “deposition”.

**Full and By** (*près bon plein*): Close-hauled with all sails full and drawing.

**Furl** (*ferler*): Gather and lash sails to a spar.

## G

**Gaff** (*corne, vergue*): a spar supporting the upper edge of a four-sided sail.

**Gaff Rig** (*gréement aurique*): Any sailboat with a four-sided mainsail.

**Gain** (*gain*): In radar, the increase in level of a signal, power or strength, as a result of electronic amplification; a control that adjusts the sensitivity of the radar receiver.

**GALILEO** (*Galileo*): the developing European Union satellite system.

**Galley** (*coquerie*): Area where food is stored and cooked; nautical kitchen.

**Gallows** (*support dome ou de gui*): A frame to hold the boom when the mainsail is down or is being reefed.

**Gasket** (*garcette*): A strip of cloth or line used to secure a furled sail to a boom, (also, stop).

**Gear** (*Équipement*): General name for all non-permanent nautical equipment, including crew’s clothing and personal effects.

**Gelcoat** (*Gelcoat*): The outside color coat used in fiberglass construction.

**Genoa** (*génois*): A large overlapping headsail.

**Geographical position** (*Point géographique*): A point on the earth’s surface directly under a body; the point on the earth’s surface on a line from the centre of the earth to a body.

**Geoidal horizon** (*Horizon géoïdal*): The intersection of the celestial sphere and a horizontal plane tangent to the earth at the observer’s position.

**Geometric Dilution of Precision** (*réduction de la précision géométrique*): An assessment of the possible inaccuracy in a GPS fix, due to the poor angular relationship between the satellites being used to obtain the fix.

**Geometrical horizon** (*Horizon géométrique*): Intersection of the celestial sphere and a cone tangent to the surface of the earth with the apex at the eye of the observer.

**Ghosting** (*ghosting*): Sailing in very light winds.

**Gimbal** (*cardan*): Mounting supports permitting an object, such as the compass, to remain level when the boat heels.

**GIS** (*système d'information géographique*): **Geographic Information System**. A system of computers and software for collecting, holding, assessing the integrity of, correcting, manipulating, analyzing, and graphically displaying data which are spatially referenced to the earth.

**Give-way** (*non privilégié*): to keep out of the way of another vessel.

**Global Positioning System** (GPS) (*Système mondial de positionnement*): a satellite navigation system established and operated by the United States Department of Defense, used not only by the US military but also by recreational boaters and other civilians worldwide.

**GLONASS** (*GLONASS*): The Russian Global Positioning System.

**GMDSS** (*SMDSM*): Global Maritime Distress and Safety System. Part of the International Maritime Organization (IMO) system to define radio procedures.

**Go About** (*virer de bord vent devant*): (of sailing) to tack or come about.

**Gooseneck** (*vit de mulet*): A mechanism used to attach a boom to a mast. To be effective it must permit the unattached end of the boom to swing in any direction without restraint.

**Goosewing Jibe** (*empennage chinois*): A jibe in which either the top or bottom of the sail has failed to jibe with the rest of the sail.

**GPS 2D Mode** (*2D*): A GPS is operating in the 2 dimensional mode when it has insufficient satellite information to calculate the altitude of the GPS antenna.

**GPS 3D Mode** (*3D*): A GPS is operating in the 3 dimensional mode when it is tracking enough satellites to calculate the altitude of the GPS antenna.

**Gradient Wind** (*vent de gradient*): Wind flowing from high to low pressure; the steeper the gradient, the faster the wind.

**Graticule** (*Graticule*): The network of lines representing parallels and meridians on a map, chart or plotting sheet.

**Graupel** (*neige roulée*): An ice crystal, surrounded by minute droplets of supercooled water that have frozen to it on impact, as it fell through the cloud - sometimes called soft hail.

**Great Circle** (*Grand cercle*): a circle inscribed on the earth's surface, whose plane passes through the earth's centre.

**Great circle chart** (*Carte de grand cercle*): a gnomonic-projection chart on which great circles appear as straight lines.

**Greenwich apparent time** (*Heure apparente de Greenwich*): Local apparent time at the Greenwich meridian. The time represented by the angle at the celestial pole between the lower branch of the Greenwich celestial meridian and the hour circle of the apparent (true) sun.

**Greenwich hour angle** (*Angle horaire de Greenwich*): The angular distance of the hour circle of a body westward from the celestial meridian of Greenwich measured from 0° to 360° along the celestial equator. GHA values for the sun, moon, planets, and stars are tabulated in the Nautical Almanac.

**Greenwich Mean Time** (*heure moyenne de Greenwich*): Zone time at the Greenwich meridian (1) in celestial navigation, the Greenwich hour angle of the mean sun expressed in time units plus 12 hours. Equivalent to Coordinated Universal Time UTC. (2) The time (UTC) normally used in all radio telecommunications. The letter "Z" is an accepted abbreviation for UTC. See **Coordinated Universal Time (UTC)** and **Universal Time**

**Greenwich meridian** (*Méridien de Greenwich*): The meridian through Greenwich, England, serving as the prime meridian and the reference meridian for Greenwich Mean Time.

**Greenwich sidereal time** (*Heure sidérale de Greenwich*): Local sidereal time at the Greenwich meridian; represented by the angle from the upper branch of the Greenwich celestial meridian westerly to the hour circle of the vernal equinox.

**Grommet** (*oeillet*): A metal ring fitted into a hole in a sail or in canvas. See **Cringle**.

**Gross ton** (*tonne anglaise*): a unit used to measure the capacity of a vessel, equal to 100 cubic feet or approximately 2.83 cubic metres (also called a gross registered ton or a register ton).

**Ground** (*échouer*): to touch the bottom or shore.

**Ground tackle** (*appareaux de mouillage, grément du mouillage*): a collective term embracing all the gear used for anchoring.

**GRS** (*service de radio general*): **General Radio Service**, commonly known as Citizen's Band Radio.

**GRT** (*TJB*): Gross Registered Tons.

**Guard Zone** (*zone de protection*): A selectable portion of a radar display. When a radar return enters or leaves this zone, an alarm is provided to the boater.

**Gudgeon** (*femelot*). A metal eye and matching pin used to mount a rudder on the sternpost or the transom of a boat.

**Gulf Stream** (*Gulf stream ou Courant du golfe*): A well-defined, narrow, swift-moving, warm ocean current flowing from close along the Florida coast northeasterly along the continental slope off Cape Hatteras, then east of the Grand Banks to become the North Atlantic Current.

**Gunwale** (*lisse de plat-bord*): the upper edge of the hull (Pronounced "gunn'el").

**Gust** (*rafale*): A sudden, but brief, increase in wind speed (see also **Squall**).

**Guy** (*bras*): The control line connected to the tack (windward clew) of a spinnaker.

**Gybe** (*empanner, virer lof pout log*): see **jibe**.

**Gyro compass** (*compas gyroscopique*): a non-magnetic gyroscopic instrument used as a compass. Usually set to indicate either true or magnetic north: not influenced by magnetic fields or nearby metallic masses

## H

**Hack watch** (*Chronomètre d'observation*): A watch used for timing observations of celestial bodies.

**Hadley Cell** (*cellules de Hadley*): A cell of global air circulation in both hemispheres between the equator and 30° north and south.

**Hail** (*grêle*): Precipitation in the form of balls or irregular lumps of ice. Hail can fall only from thunderstorm clouds, where the immense upcurrents occasionally produce hailstones of softball size.

**Half hitch** (*demi-clé*): the simplest knot, usually part of another knot.

**Halyard** (*drisse*): a rope used for hoisting sails, spars, and flags.

**Hand** (*matelot; affaler*): (1) A member of the crew. (2) To lower a sail.

**Hank** (*mousqueton*): a ring fitting used to bend the forward edge (luff) of a sail to a stay.

**Hard Alee** (*Virer*): The command given when the helmsman pushes the tiller to leeward to tack.

**Hard chine** (*coque à bouchains vifs*): a chine with a sharp angle to it.

**Hard Over** (*barre haute*): To put the helm over as far as possible.

**Harden** (*étarquer*): To haul the sheets in and sail closer to the wind.

**Hatch** (*écoutille*): an opening in the deck for access to the interior.

**Hatch cover** (*capot d'écoutille*): a cover for a hatch or hatchway.

**Hatchway** (*Écoutille*): an opening in the deck, with a ladder leading below.

**Haul** (*haler*): (1) The wind hauls when it draws more ahead. (2) To pull on a line.

**Hawse pipe** (*écubier de pont*): see **chain pipe**.

**Haze** (*brume légère ou sèche*): A reduction of visibility caused by the presence of dry particles (e.g., smoke and/or dust) in the air; frequently experienced in anticyclonic conditions, with light winds.

**Hc** (*Hc – hauteur calculée*): The calculated altitude of a celestial body.

**Head** (*envergure, point de drisse, tête, toilette*): (1) the bow of the ship; (2) the upper corner of a triangular sail, or the upper edge of a four-sided sail; (3) a shipboard toilet.

**Head Off** (*abattre*): Head away from the wind, bear off.

**Head Up** (*loffer ou lofer*): To sail closer to the wind.

**Header** (*vent refusant*): A wind that shifts more ahead of a boat sailing close-hauled, forcing it to change course to avoid pinching or luffing; usually a good time to tack.

**Heading** (*cap instantané*): The direction in which a vessel's bow is pointing at any specific instant.

**Heading Line** (*ligne de foi*): A line displayed on a radar screen to show the ship's heading. Typically it appears at an azimuth of 000°. It may also be shown as the actual true or magnetic heading of the vessel depending on other electronics available.

**Heading Sensor** (*détecteur cap*): a device such as a fluxgate compass or GPS connected to a radar unit to provide heading information.

**Headsail** (*voile avant*): Any sail flown forward of the mast.

**Headstay** (*étais*): Alternative term for forestay, a jibstay.

**Head-Up** (*cap en haut*): the commonest radar display mode. The top of the screen represents the bow of the boat. All bearings are relative to the bow.

**Headway** (*erre en avant*): motion through the water in a forward direction.

**Heave** (*tangier, hisser*) (1) The rise and fall of a boat due to wave action. (2) To pull on a line to tighten it. (3) To throw an object.

**Heave To** (*mettre à la cape*): To bring a boat into a position where there is little or no headway, usually with the bow into the wind or current, by use of sails or engine.

**Heaving Line** (*ligne d'attrape*): A light line used for throwing.

**Hectopascal** (*hectopascal*): A standard unit of atmospheric pressure equivalent to 0.1 kilopascals.

**Heel** (*gîter, talon*): (1) of a boat, to lean over due to the wind, waves or uneven loading; (2) the bottom of a mast that is mortised into the step or keel.

**Height of eye** (*Hauteur des yeux*): The vertical distance from the surface of the water to the observer's eye when taking a sight with a sextant.

**Height of Tide** (*Hauteur de la marée*): The vertical distance between the surface of the sea and chart datum

**Helm** (*barre ou roue*): (1) a vessel's steering apparatus; (2) the angle of the tiller to a vessel's centreline to hold the vessel on course; e.g., lee helm or weather helm.

**Helmsman** (*Barreur*): The person who steers the boat.

**High** (*haute pression*): see **Anticyclone**.

**High Aspect** (*grand allongement*): Having much greater height than width.

**High Frequency radio (HF)** (*haute fréquence*): From 3 MHz to 30 MHz.

**High Water** (*pleine mer*): The highest level reached by any rising tide.

**Higher High Water** (*pleine mer supérieure*): The higher of the two high tides of any tidal day.

**Higher Low Water** (*pleine mer inférieure*): The higher of the two low waters of any tidal day

**Hiking Out** (*rappel*): Moving a crew's weight outside the boat to the windward side. The technique is used on small boats to decrease the heeling angle.

**Hitch** (*clé*): A knot used to secure a rope fast to another rope or to other object.

**Ho** (*Ho – hauteur observée*): The observed altitude of a celestial body, with all appropriate corrections applied.

**Hogged** (*arqué*): Describes a boat whose bow and stern have sagged.

**Hoist** (*hisser*): (1) to raise, lift, or haul up; (2) the height of a sail; (3) a string of signal flags; (4) the vertical dimension of a flag next to the mast or halyard.

**Horizon** (*Horizon*): The line where earth and sky appear to meet, or a line resembling or approximating such a line, and the projection of this line upon the celestial sphere. There are several kinds of horizons. See **artificial horizon**, **geometrical horizon**, **sensible horizon**, and **visible horizon**.

**Horizontal Beam width (HBW)** (*largeur horizontale du faisceau*): The angular width (the angle between half-power levels) of radar energy transmitted in a horizontal plane.

**Horizontal datum** (*horizontale de reference*): a reference point used for establishing the latitude and longitude grid system on topographic maps and nautical charts (not in any way related to chart datum).

**Horizontal Dilution of Precision** (*diminution horizontale de la precision*): An assessment of the possible inaccuracy in a GPS fix due to the poor relative placement, in the horizontal plane, of the received satellites being used to calculate the fix.

**Horizontal parallax** (*Parallaxe horizontale*): The parallax of a body – usually the moon- when it is on the celestial horizon.

**Horse Latitudes** (*calmes tropicaux*): Regions of high pressure at approximately 30° north and south of the equator, which produce generally, settled weather and light winds

**Hour angle** (*Angle horaire*): The angular distance from a celestial meridian to an hour circle of a celestial body, measured westward through 360° along the parallel of declination. Designated local or Greenwich according to the reference meridian. Called sidereal hour angle if measured from the hour circle of the vernal equinox or first point of Aries to the hour circle of a body.

**Hour circle** (*Cercle horaire*): A great circle through the celestial poles and a point or body on the celestial sphere. Moves with the celestial sphere; whereas a celestial meridian remains fixed with respect to the earth.

**Hull** (*coque*): The body of a vessel from the keel to the deck line.

**Hull speed** (*vitesse de coque ou de careen*): the maximum speed at which a displacement hull can be driven.

**Humidity** (*humidité*): The state of the atmosphere with regard to water vapour.

**Hurricane** (*ouragan*): A severe tropical cyclone with winds of 65 kn or higher.

**Hydrofoil** (*hydroptère*): (1) A device designed to deflect a water stream thereby generating a force from it (e.g. rudder, keel, centreboard). (2) A vessel designed to have its hull raised clear of the water when moving at high speed by hydrofoils extended below the hull on struts.

**Hygrometer** (*hygromètre*): An instrument to measure humidity in the air.

**Hypothermia** (*hypothermie*): a condition in which the body core temperature drops to a dangerous level.

## I

**IC** (*IC*): Industry Canada; a department of the Canadian Federal Government.

**IC** (*IC – correction de l'erreur instrumentale*): See **Index Correction**.

**Ice** (*glace*): Water in its solid state.

**Ice Pellets** (*grésil*): Precipitation of transparent particles of ice which are spherical or irregular, consisting of snow encased in a thin layer of ice which have formed from the freezing of droplets intercepted by pellets or water resulting from the partial melting of pellets.

**IE** (*IE – erreur instrumentale*): See **Index Error**.

**IMO** (*OMI*): International Maritime Organization.

**Impeller** (*pompe à palettes*): A rotor or wheel with blades mechanically driven to pump water or propel objects through water or other fluids or by the action of fluid flowing past it.

**Index Correction** (*IC – correction de l'erreur instrumentale*): Correction applied to a sextant reading to compensate for the sextant index error.

**Index Error** (*IE – erreur instrumentale*): Error in a sextant reading caused by sextant misalignment.

**In irons** (*bout au vent*): the state of a sailboat that is lying head to wind, has no way on, and will not fall off on either tack.

**Inboard** (*intérieur*): inside the hull of a boat; in or toward the middle of a boat

**Inches of mercury** (*Pouces de mercure*): A unit of barometric pressure measurement related to the height of the column in a mercurial barometer, usually ranging from 27,00 and 31,00 inches reduced to sea level. 1 inch Hg = 25,40005 millimeters Hg 1 inch Hg = 33,86395 millibars.

**Index correction** (*Correction de l'erreur instrumentale*): Correction applied to a sextant reading (Hs) to compensate for the sextant index error.

**Index error** (*Erreur instrumentale*): Error in a sextant reading caused by sextant misalignment resulting in the sextant reading being larger or smaller than the true value.

**INMARSAT**(*INMARSAT*): International Maritime Satellite Organization.



**Instability** (*instabilité*): A condition of the atmosphere in which a vertically displaced air “parcel” will continue to move in its original direction, once the displacing force is removed. A basic cause of the vertical development cloud types (cumulus, cumulonimbus, etc.).

**Intended track** (*Route souhaitée*): Intended or expected direction of travel of a boat over the bottom with consideration given to current effects.

**Intercept** (*Écart*): The difference in minutes of arc or nautical miles between computed altitude (Hc) and observed altitude (Ho) of a celestial body, representing the difference in length of the radii of the computed and observed circles of altitude. Labeled T (toward) if observed altitude is greater, A (away) if computed altitude is greater. Also called altitude difference and altitude intercept.

**Interference Rejection** (*rejet des interférences*): Rejection of unwanted signals received from other marine radar units on the same frequency which are operating nearby, and causing undesirable interference patterns on a boat’s radar display.

**International Date Line** (*Ligne de changement de date*): The boundary between the -12 and +12 time zones, corresponding approximately with the 180<sup>th</sup> meridian. The date immediately to the west of the line is one day later than the date immediately to the east of that line.

**Intertidal zone** (*zone intertidale*): the area of the shoreline between high and low tide levels.

**Intertropical Convergence Zone** (*zone de convergence inter-tropicale*): A low pressure region slightly north of the equator, into which the trade winds of both hemispheres converge. Ranges seasonally slightly north and south of its central location.

**Inversion** (*inversion*): More correctly known as “temperature inversion”. This occurs when warm air sits over cold air, possibly trapping moisture and pollutants in the surface air layer. **Marine Inversion**: A temperature inversion created by the cooling of a warm air mass from below by the cool lakes on spring and summer days.

**Isobar** (*isobare*): A line on a weather map joining points of equal mean sea level barometric pressure.

**Isobath** (*isobathe*): a line on a map connecting points of equal underwater depth.

**Isophase light** (*feu isophase*): a light with equal intervals of light and darkness.

**Isogonics lines** (*Lignes isogones*): Lines on a chart that connect points of equal magnetic variation.

**ITU** (*UIT*): The International Telecommunication Union. The international organization established to provide standardized communication procedures and practices, frequency allocations and radio regulations.

## J

**Jack Stay** (*contre-étau*): A stay that runs forward from the masthead over a jumper strut and back to the mast to stiffen the upper portion of a fractional-rigged mast.

**jack wire/line** (*ligne de vie*): a line from the cockpit to the foredeck, firmly attached on both ends, to permit a crew member’s safety harness lanyard hook to have uninterrupted fore-and-aft travel.

**Jet Streams** (*courant-jet*): Narrow currents or “tubes” of fast- moving air at upper levels of the troposphere. They are the boundaries of marked temperature differences, and can produce winds in excess of 200 kn.

**Jetty** (*digue, jetée*): (1) a breakwater; (2) a structure built out from the water's edge, roughly at right angles to the shoreline, to which a vessel can be secured.

**Jib** (*foc*): A sail, usually triangular and sometimes quadrilateral, set on a stay forward of the mast.

**Jib Downhaul** (*affaleur*): A line from the head of a jib to a block near the tack and then leading aft. Used to douse the jib without going forward.

**Jibe** (*empanner*): the manoeuvre in which a sail is swung from one tack to the other, through a following wind.

**Jib-headed (Sail)** (*jib-headed*): A triangular sail.

**Jibstay** (*draille de foc*): The forwardmost stay supporting the mast, extending from the bow or bowsprit to the upper part of the mast.

**Jiffy Reefing** (*pris de ris rapide*): A method of reducing the area of a sail by means of downhauls led through reef cringles in the sail, and through fairleads on the boom to winches or cleats.

**Jigger** (*tapecul*): The mizzenmast or mizzen.

**Jumper Strut** (*guignol*): Horizontal strut on the forward side of the mast to which the jumper stay is attached to keep the upper part of the mast straight.

**Jury Rig** (*gréement de fortune*): Makeshift repair or substitute.

## K

**Katabatic Winds** (*vents catabatiques*): Downslope winds of cold, dense air.

**Kedge** (*déhaler sur ancre*): (1) to free a grounded craft by hauling her off against an anchor set to seaward; (2) a type of anchor.

**Keel** (*quille*): (1) on a sailing vessel, an underwater member, designed to resist lateral movement; (2) the principal fore-and-aft structural member of a framed hull, the hull's backbone.

**Kellet** (*marguerite*): a heavy weight attached in the length of the anchor rode to reduce the angle of pull at the anchor (also called a sentinel).

**Ketch** (*ketch*): A two-masted sailboat with the after mast stepped forward of the rudder post.

**KHz** (*khz*): kilohertz (1000 Hertz).

**Kilopascal** (*kilopascal*): A standard unit of pressure, equal to 10 hectopascals. 1 hectopascal (hPa)  $\equiv$  100 Pa  $\equiv$  1 bar; 1 kilopascal (kPa)  $\equiv$  1000; Pa  $\equiv$  10 hPa  $\equiv$  10 mbar.

**Knee** (*gousset*): a structural item which provides stiffening at the junction of two other structural components.

**Knockdown** (*couché*): the state of a sailing vessel which is heeled over with her sails in the water.

**Knot** (*noeud, clé, boucle, tour*): (1) a unit of speed equal to one nautical mile (1 852 metres) per hour; (2) the tucks and loops in a line used to fasten it to an object or to itself.

## L

**Labelling** (*pointage*): the entering of information on a chart, relating to plotted lines or points.

**Lake Effect Snow** (*neige d'effet de lac*): Heavy snow deposited on the lee shores of large lakes; frequently exists in a narrow band only.

**LAN** (*réseau local*): **Local Area Network**, connecting computers in a building, or over short geographic distances.  
**See WAN**

**Land/Lake Breeze** (*brise de terre*): This coastal breeze blows from the land to the sea, lake or river, and usually occurs at night when the temperature of the water is often warmer than the nearby land. The water heats the air above, which rises and is replaced by cooler air from the land. (See also sea breeze).

**Lanyard** (*cordon*): Short line used as a handle, or to secure an object.

**Lapse Rate (gradient)** (*Gradient thermique*): The rate of temperature change with height. (1) Environmental Lapse Rate: this occurs in the standard atmosphere without any external forces. The rate is variable, but in the standard atmosphere, it is 6.5°C/km. (2) For air that is being moved vertically, there are two lapse rates: (a) The dry adiabatic lapse for air that is unsaturated is a constant 10°C/km. (b) Air that is forced to move and is saturated has a lapse rate that varies greatly with temperature

**Lapstrake** (*Bordage à clin*): Type of hull construction with overlapping planks, clinker built.

**Large Tides** (*Marée de vive-eau*): (Can) Large ranging tides associated with new and full moons

**Latent Heat** (*chaleur latente*): Energy released or absorbed by the changes of state of water between vapour, liquid and solid.

**Lateral buoyage system** (*réseau de bouées laterals*): a buoyage system in which different coloured buoys are used to mark the sides of a channel.

**Lateral Plane** (*plan de derive*): Any surface or appendage that serves to inhibit lateral motion of a boat through the water.

**Latitude** (*latitude*): the angular distance of any point on the earth's surface north or south of the equator, as measured at the earth's centre.

**Lay a mark** (*faire route vers une marque, bordée (2) commettre*): (1) To lay a mark, as in a sailboat race, is to be able to reach it in a single tack, close-hauled. (2) the lay of a line is the direction in which its strands are twisted.

**Lay To** (*commettre*): To lie without headway either to a sea anchor or to lines streamed over the side, or merely drifting (lying ahull).

**Lazarette** (*Cambuse*): Storage compartment in stern of boat.

**Lazy Jacks** (*étouffoir de grand-voile*): The name given to part of the rigging on a sail boat, the purpose of which is to ease sail handling. They enable the rapid dropping of a sail attached to a mast and boom by guiding it into the sailbag. The lazy jacks, usually on each side of the sail, are rigged between the mast and the top of the sailbag attached to the boom or the boom itself.

**Leach**: See **leech**.

**Leading mark** (*marque d'alignement*): a landmark ahead of the boat a helmsman can steer toward and maintain a course.

**Lee Shore** (*terre sous le vent*): A shore onto which wind or current can force a boat; the shore to leeward of a boat.

**Lee side** (*bord sous le vent*): the side opposite to the direction from which the wind blows.

**Leeboards** (*derive latérale d'un bateau*): large boards suspended over the side of a vessel. The lee one is lowered to reduce leeway.

**Leech** (*chute*): the after edge of a fore-and-aft sail.

**Leech line** (*nerf de chute*): A light line sewn through the tabling in the leech of a sail used to control leech flutter.

**Leehelm** (*barre au vent*): A condition of balance that requires the tiller to be held to leeward to keep a boat on a straight course.

**Leeside** (*bord sous le vent*): (1) The side away or opposite that from which the wind blows. (2) An area sheltered from the wind.

**Leeward** (*sous le vent*): away from the wind.

**Leeway** (*Dérive due au vent*): (1) Sideways movement of a boat through the water caused by wind. (2) The angular difference due to wind between the true course steered and the true course over ground.

**Leg** (*bordée, étape*): (1) The distance covered on one tack when sailing to windward. (2) On a race course, the course between two successive marks.

**Lenticularis** (*nuage lenticulaire*): A type of altocumulus cloud which is lens-shaped; usually forms in the lee wave downwind of high ground

**Lever Arm** (*levier*): The distance through which a force acts.

**License** (*licence*): For marine radio, a document that all radio stations in Canada may obtain which specifies the call sign assigned to the station, the assigned frequencies, type of radio equipment authorized and any special conditions under which the station should be operated.

**Lie Ahull** (*mettre à la cape*): To lie without headway, more or less broadside to the wind, with no sail set, drifting freely. A means of coping with heavy weather.

**Lie To**: See **Heave To**.

**Lifejacket** (*gilet de sauvetage*): A personal flotation device that will turn an unconscious person face up in the water.

**Lifeline** (*filière*): a plastic-coated wire rigged to stanchions around the periphery of the deck, to help keep personnel aboard.

**Lift** (*portance ou poussée vélique*): (1) A force generated on the leeward side of a sail by air passing over the airfoil shape. It is the force which drives a sailboat. (2) When sailing close-hauled, a wind that shifts aft to allow a change of course toward the wind direction.

**Light Sails** (*voile haute*): Sails made of lightweight fabric for use in light wind.

**Light station** (*station de phare*): a major structure built on land, which has a light, and may include other aids to navigation such as a radiobeacon or fog signal.

**Light wind** (*vent léger*): Wind with a speed of less than 15 knots, as defined by Environment Canada.

**Lightning** (*éclair*): In a thunderstorm, the discharge of electricity from cloud to cloud, between charged areas of an individual cloud, or from clouds to ground.

**Limber holes** (*anguillers*): drainage holes through a frame or floor timber at the bottom of the bilge.

**Line** (*cordage*): rope being used aboard a boat.

**Line of position** (*Droite de position*): (1) A line on which a vessel is known to be. The line is usually plotted on a chart. (2) A visual or electronic reference line from or toward a known navigational aid or celestial object.

**Line Squall** (*ligne de grains*): A line of squalls and thunderstorms forming in the warm air ahead of, and parallel with, a vigorous cold front. Especially notable for strong gusts and pronounced wind veer as the squall line passes through. Also called "squall line".

**Line Stopper** (*taquet autocoinceur*): A clamp-type device that contains a cam for securing a line. It can be released quickly.

**Liquid Crystal Display (LCD)** (*Affichage à cristaux liquides*): A digital display that uses liquid crystal cells, such as are used in computer displays, watches, etc.

**List** (*gîte*): the tilting of a vessel to one side due to flooding, improper loading, or cargo shifting.

**LOA** (*longueur hors tout*): Length Over All.

**Local apparent noon** (*Midi local apparent*): The instant at which the apparent (true) sun is over the upper branch of the local meridian. The time of sun's maximum altitude at the observer's location.

**Local apparent time** (*Heure locale apparente*): The angle at the celestial pole between the lower branch of the local celestial meridian and the hour circle of the apparent (true) sun.

**Local celestial meridian** (*Méridien astronomique local*): The celestial meridian passing through the observer's zenith.

**Local hour angle** (*Angle horaire local*): The angular distance of the hour circle of a celestial body measured westward from the celestial meridian of the observer, measured from 0° to 360° along the parallel of declination.

**Local mean time** (*Heure locale moyenne*): The time based on the mean sun with reference to the local celestial meridian (not the zone meridian).

**Local sidereal time** (*Heure locale sidérale*): Local hour angle of the first point of Aries (vernal equinox) expressed in time units: the angle at the celestial pole between the upper branch of the local celestial meridian and the hour circle of the vernal equinox. LST is LHA of Aries expressed in time units.

**Locker** (*équipet*): a cupboard, chest, or cabinet.

**Log** (*Loch*): 1) An instrument to measure distance or speed through the water. 2) A book in which all matters pertaining to a vessel's navigation are recorded. (3) (of a boat), to accomplish a speed or distance (she logged 18 knots); (4) to record an incident in the log book (log it).

**Log book** (*Journal de bord*): See **deck log** and **log**.

**Lollipop** (*suçon*): A radar display of a waypoint. This is shown on the radar screen as a circle (the candy) and the bearing line forms the stick. The data is obtained from a connected chartplotter.

**Long splice** (*épissure longue*): a joining splice that does not increase the diameter of the line.

**Longitude** (*Longitude*): Angular distance on the earth's surface measured east or west from the prime meridian (000°) which extends through Greenwich, England.

**Loom** (*émerger –visibilité*): The glow of a light which may be below the horizon, caused by reflection by solid particles in the air.

**Loose Footed** (*voile à bordure libre*): A sail that is attached to the boom only at the tack and clew.

**LORAN** (*LORAN*): **Long Range Navigation** system. Now decommissioned.

**Low** (*basse pression*): Region of the atmosphere where the pressures are low, relative to those in the surrounding region at the same level. In the Northern Hemisphere, winds around a low move in a counter-clockwise fashion.

**Low water** (*basse mer*): The lowest level reached by any falling tide.

**Lower branch** (*Branche inférieure*): The half of the observer's meridian measured from pole to pole passing through the nadir of the observer.

**Lower High Water** (*basse mer supérieure*): The lower of the two high waters of any tidal day.

**Lower limb** (*Limbe inférieur*): The lower part of the circumference of the sun or moon.

**Lower Low Water** (*basse mer inférieure*): The lower of the two low waters of any tidal day.

**Lubber's line** (*ligne de foi*): the reference line of a compass.

**Luff** (*loffer, lofer, guidant*): (1) the forward edge of a fore-and-aft sail. (2) To alter course towards the wind. (3) To head so close to the wind that the sails flutter.

**Luff Wire** (*ralingue*): A piece of wire rope sewn into the leading edge of a jib.

**Luffing** (*faseyement*): the trembling or fluttering of the luff of a sail that is improperly set.

**Lunar Day** (*Jour lunaire*): The interval of time between two successive crossings of the earth's meridian by the moon (roughly 24 hours and 50 minutes)

**LWL** (*ligne de flottaison*): Load waterline; the length of a vessel from bow to stern at the waterline.

## M

**Mackerel Sky** (*ciel pommel *): A formation of cirrocumulus cloud which resembles the scales on a fish's back, or the ripples in the sand on a beach. Occasionally, the same name is given to altocumulus.

**Magnetic bearing** (*rel vement magn tique*): see **bearing, magnetic**.

**Magnetic compass** (*compass magn tique*): a directional instrument, actuated by the earth's magnetic field.

**Magnetic north** (*nord magn tique*): the north direction indicated by an isolated magnetic compass for which the deviation is nil.

**Magnetic pole** (*p le magn tique*): one of the two geographical areas, north and south, where the earth's magnetic field enters or leaves the earth.

**Magnetron** (magn tron): The heart of a radar generator; an electronic device that creates a radar pulse at the desired frequency.

**Magnitude** (*Magnitude*): Relative brightness of a celestial body; the smaller the number indicating magnitude, the brighter the body. Negative values are smaller than positive numbers and indicate brighter bodies, e.g. Venus, the brightest planet has a magnitude of about -4.0.

**Mainsail** (*grande-voile*): A boat's principal sail, set aft of mainmast.

**Mainsheet** (* coute de grande-voile*): A line which controls the mainsail.

**Man OverBoard** (*homme   la mer*): A feature of GPS, and other electronic navigational receivers, which stores a boat's current position at a press of the MOB or Mark button. This enables the vessel to be steered back to the original position. It assists in the retrieval of a crew member who has fallen overboard.

**Manoeuvring Board** (*feuille de tra age radar*): Despite its name, in practice the board is a sheet of paper with a compass rose drawn on it. It is used to calculate relative positions.

**Marconi Rig** (*gr ement bermudien*): A rig having a three-sided or jib-headed mainsail.

**MAREP Programme** (*programme MAREP*): A VHF and computer link between CPS boaters, the Canadian Coast Guard and the Atmospheric Environment Service. Weather reports from members can be used to help update current forecasts and also provide information for the issue of severe weather warnings.

**Mares' Tails** (*queues de cheval*): A cirrus cloud formation resembling feathery horses' tails.

**Maritime Mobile Service** (*service mobile maritime*): The radiotelecommunication service used by all vessels internationally.

**Mark** (*Marque*): Any object required by sailing instructions to be passed by a boat on a specified side. Its anchor line and objects attached temporarily or accidentally are not part of it.

**Marline** (*merlin*): A small cord composed of two strands, loosely twisted, used for winding around rope and cable.

**Marlinespike** (*matelotage, petit épissoir*): (1) an adjective applied to seamanship, embracing the art of shaping and working lines; (2) a pointed tool used for working with lines.

**MASA** (*MASA*): The Japanese Satellite differential GPS equivalent to the **Wide Area Augmentation System** (WAAS).

**Mast** (*mât*): A vertical spar on which sails are set.

**Masting** (*Mâture*): The act or process of putting a mast or masts into a vessel

**Mast Step** (*emplature*): Fitting into which the butt of the mast sits.

**Mast Tang** (*Tenon*): See **Tang**

**Masthead** (*tête de mât*): The top of the mast.

**Masthead Rig** (*gréement en tête de mât*): A sailboat with the jibstay attached to the top of the mast.

**Mat** (*mat*): Fibreglass material formed of irregular chopped filaments of glass.

**Maximum Draft** (*creux maximal*): The greatest amount of fullness in a sail.

**Mayday** (*mayday*): the international radiotelephone distress signal.

**Mayday** (*mayday*): The keyword used in radio transmissions to signify that a distress situation is in effect.

**Mayday Relay** (*mayday relay*): The keyword used by a second station to relay a distress call and message from a vessel in distress.

**Mean Sea Level** (*niveau moyen de la mer*): A reference level to which all barometric pressure readings are adjusted.

**Mean sun** (*Soleil moyen*): An imaginary sun appearing to travel westward around the celestial equator at a uniform rate equal to the average rate of the true sun.

**Mean time** (*Heure moyenne*): Time based on the mean sun as it appears to move westward during the day. Variations of mean time are the time that is normally kept in everyday life.

**Mercator** (*Mercator*): a cylindrical chart projection.

**Meridian** (*méridien*): an imaginary great circle on the surface of the earth joining the north and south geographic poles

**Meridian angle** (*Angle du méridien*) : The angular distance measured east or west (whichever distance is shorter) through 180° between the upper branch of the local celestial meridian and the hour circle of a celestial body: Labelled E or W.

**Meridian transit** (*Passage au méridien*): The passage of a celestial body across a celestial meridian, usually that of the observer.



**Meridional difference** (*Différence méridionale*): The difference in meridional parts between two given latitudes expressed in minutes of arc.

**Meridional parts** (*Parties méridionales*): The length of the arc of a meridian between the equator and a given parallel of latitude on a Mercator chart, expressed in units of one minute of longitude at the equator.

**Messenger** (*cable de retour*): A light line used to haul a heavier working line.

**Metre** (*metre*): a unit of length in the metric system.

**MF** (*MF*): Medium Frequency (300 KHz – 3000 KHz).

**MF-DSC** (*MF-ASN*): Medium Frequency Digital Selective Calling.

**MHz** (*MHz*): A measure of frequency defined as one million Hertz (cycles) per second.

**MHz** (*MHz*): Megahertz (1000 KHz).

**Microburst** (*microrafale descendante*): A strong downdraft that induces an outburst of damaging winds on or near the surface of the earth. The outflow at the surface is less than 4 km across, with peak winds lasting only 2 to 5 minutes

**Microphone** (*micro, mike*): The apparatus attached to a radio which converts sound waves to electrical impulses.

**Microsecond** (*microseconde*): A measure of time defined as one one-millionth of a second.

**Microwave** (*micro-onde*): A range of frequencies, generally considered those above about 1000 MHz.

**Mid-channel buoy** (*bouée de mi-chenal*): see **fairway buoy**.

**Mid-latitude** (*Latitude moyenne*): The middle latitude; half the sum of the latitudes of two places on the same side of the equator. Also the sailing that uses Mid-Latitude to determine DLo from departure.

**Millibar** (*millibar*): A standard unit of atmospheric pressure, being phased out in favour of hectopascals (1 mb = 1hPa).

**Mini Automatic Radar Plotting Aid** (*mini aide radar au pointage automatique*): MARPA. A version of ARPA designed for smaller boats.

**Minus tide** (*Marée négative*): A time when the tide falls below chart datum

**Minute** (*minute*): (1) of arc: one-sixtieth of a degree; (2) of time: one-sixtieth of an hour.

**Mist** (*brume*): Suspension in the air of microscopic water droplets or wet hygroscopic particles. It produces, generally, a thin, greyish veil over the landscape; it reduces visibility to three to six kilometres.

**Mixed, Mainly Diurnal Tide** (*Marée mixte, surtout diurne (MD)*): A tide in which occasionally there is only one high and one low water a day; at other times there are two large inequalities in height and time

**Mixed, Mainly Semi-diurnal Tide** (*Marée mixte, surtout semi-diurne (MSD)*): A tide with two high waters and two low waters with inequalities in height

**Mizzen** (artimon): The fore-and-aft sail set on the mizzenmast. Also, called a **jigger**.

**Mizzen Staysail** (*foc d'artimon*): A triangular sail set from the mizzen masthead to the deck forward of that mast.

**MMSI** (*NISMM*): Maritime Mobile Service Identity (MMSI). A unique number assigned to an individual marine radio and owner used for communicating over DSC (Digital Selective Calling).

**MMSI** (*numéro ISMM*): **M**aritime **M**obile **S**ervice **I**dentify, Used in marine radios to identify a particular boat ; issued to vessels whose radios include DSC, for use during DSC operations.

**Moderate wind** (*vent modéré*): winds with a speed in the range of 15 to 19 knots as defined by the Environment Canada.

**Modification** (*modification*): The changes induced in an air mass as it moves away from its source.

**Moment** (*moment*): A force acting through a distance that tends to cause rotation.

**Monsoon** (*Mousson*): A seasonal change in wind direction, usually bringing either torrential rains or drought.

**Mooring** (*coffre d'amarrage*): a permanently anchored buoy to which a ship can be secured without using her own ground tackle.

**Most Probable Position** (*Position probable*): Best estimate of present position, considering all sources of positional data – e.g. updated DR position, set and drift, leeway etc. – when reliable fixes are unavailable.

## N

**Nadir** (*Nadir*): The point on the celestial sphere directly below the observer or 180° from the zenith.

**National Marine Electronics Association (NMEA)** (*National Marine Electronics Association*): the protocol for data transfer between marine electronics devices, typically navigational.

**Nautical Almanac** (*Almanach nautique*): A yearly publication tabulating the position of celestial bodies and other astronomical data useful to marine navigators.

**Nautical Data International** (*Nautical Data International*): A company that produces electronic charts in Canada.

**Nautical mile** (*mille marin ou nautique*): a unit of distance defined as 1852 metres, equivalent to the length of one minute of latitude. It is equal to about 1.15 statute miles or 6076.1 feet.

**Nautical twilight** (*crépuscule nautique*): The period of incomplete darkness when the upper limb of the sun is below the visible horizon and the centre of the sun is not more than 12° below the celestial horizon. Nautical twilight (NT) before sunrise generally marks the beginning of the period of time when sextant observations can be made; NT after sunset generally marks the end of the useful sextant observation period.

**Navigational aid** (*aides de navigation*): an apparatus on board a boat that will assist in navigating (e.g., the compass, a depth sounder, a GPS receiver).

**Navigational triangle** (*Triangle de navigation*): The spherical triangle solved in computing altitude and azimuth in great circle problems. It may be on the celestial sphere or the terrestrial sphere (the earth). Its sides are parts of great circles; its vertices are the poles, zenith, and body on the celestial sphere and the pole, observer, and geographical position on the terrestrial sphere. A variation of the latter is used to solve great circle sailing problems.

**NAVSTAR** (*NAVSTAR*): The US Military nickname for the GPS.

**NAVTEX receiver** (*NAVTEX*): A radio receiver operating on 518 KHz designed to receive marine safety information, navigation and weather warnings, and search and rescue alerts.

**Neap tide** (*Marée de morte-eau*): A low ranging tide associated with the moon at first and third quarters

**NMEA** (*NMEA*) : **N**ational **M**arine **E**lectronics **A**ssociation. The US marine electronics industry's standard setting and monitoring group.

**NOAA** (*NOAA*): **N**autical **O**ceanic and **A**tmospheric **A**dministration: the organization that produces charts in the US.

**North American Datum (NAD)** (*point d'origine en Amérique du Nord*): the original standard "point of reference" for all North American maps and charts and the dimensions of the sphere of the earth that are to be used to produce them. The numerical suffix depicts the publication year of the standard. The current standard is NAD1983. (Compatible with WGS1984).

**North Atlantic current** (*Courant de l'Atlantique Nord*): A continuation of the Gulf Stream from the vicinity of the Grand Banks, as a broad slow-moving drift of comparatively warm water toward the British Isles and the Iberian Peninsula.

**North Geographic pole** (*pôle Nord géographique*): see **True North Pole**.

**North-Up** (*nord en haut*): A display mode in which true north is always at the top of an electronic screen. See also '**Heading Sensor**', '**Course-Up**', '**Head-Up**'.

**Notices to Mariners** (*avis aux navigateurs*): a federal government publication that contains all corrections, additions, and updates to information relating to navigable waterways.

**Notices to Mariners (NOTMAR)** (*avis aux navigateurs*): Updates to Canadian charts: available from <http://www.notmangc.ca>.

**Nun buoy** (*bouée conique*): a buoy in the shape of a truncated cone, with the tapering end pointing upwards (the United States counterpart to a Canadian conical buoy).

## O

**Oblate spheroid** (*Sphéroïde oblate*): A sphere flattened or depressed at the poles – such as the earth.

**Observed altitude** (*Hauteur observée*): Sextant altitude after all corrections have been applied.

**Occlusion** (*occlusion*): The term used when the cold front of a depression catches up with the warm front, squeezing the warm sector clear of the surface.

**Occulting Light** (*feu à occultations*): a steady light with eclipses, bright longer than dark.

**Off The Wind** (*loin du vent*): Sailing on a reach or run.

**Offing** (*large*): A position on the sea at a safe distance from land.

**Offset** (*décalage*): for radar, the capability to move the radar centre toward any edge of the display to show more area in one direction.

**Offshore** (*hauturière*): (1) A direction away from the shore, such as offshore wind. (2) At a distance from a coast where there are no land marks for reference.

**On the Wind** (*plus près serré*): Close-hauled.

**Onshore** (*vers les côtes*): Towards the shore, from seaward, as onshore wind.

**Operator** (*conducteur*): the person in effective charge and control of a pleasure craft, and who is responsible for the pleasure craft.

**Orographic Lift** (*ascendance orographique*): Air forced to ascend the slope of a topographic feature.

**Osmosis** (*osmose*): a condition in which water penetrates the gelcoat of a fibreglass hull and causes damage, especially when it freezes.

**Outboard** (*hors bord, vers l'extérieur*): (1) outside a vessel and attached to it; (2) farther towards a vessel's side.

**Outhaul** (*bosse d'empointure, hale-dehors, bosse d'écoute*): Device or line used to tension the foot of a sail.

**Ozone** (*ozone*): (O<sub>3</sub>) A molecule of oxygen containing three, instead of two, atoms.

**Ozone Layer** (*couche d'ozone*): Layer of ozone in the stratosphere that absorbs most of the dangerous ultraviolet radiation in sunlight.

## P

**Painter** (*corde halage, bosse*): a towline or securing line for a dinghy or other small boat.

**Palm** (*paumelle*): Leather glove-like device used as a thimble to push a needle through a line or a sail.

**Pan Pan** (*Pan Pan*): The keyword used to signify an Urgency situation and that a station is about to transmit a message concerning the 'safety of a vessel, aircraft, or vehicle or the safety of a person'.

**Parallactic angle** (*Angle parallactique*): The internal angle of the navigational triangle at the celestial body – i.e. the angle between the hour circle and the vertical circle.

**Parallax** (*Parallaxe*): The difference in the apparent direction of a celestial body when viewed from a point on the earth's surface as compared to viewing it from the centre of the earth.

**Parallel of latitude** (*parallèle de latitude*): an imaginary line on the surface of the earth, parallel to the plane of the equator. It connects all points of equal latitude.

**Pay Off** (*laisser porter*): To head away from the wind.

**Pay Out** (*choquer*): Slacken or let out a line gradually.

**Peak** (*pic*): (1) The corner of a gaff-headed sail formed by the head and the leech. (2) The aft end of a gaff to which the peak of a gaff sail is set.

**Pelorus** (*alidade*): a non-magnetic sighting instrument used for taking bearings, having a calibrated 360-degree card and two sighting vanes.

**Pendant** (*itaque, pantoire*): Short rope serving as an extension of a line, chain, or cable with descriptive name based on use; e.g. mooring pendant. (Usually pronounced "pen'ant")

**Pennant** (*fanion*): A tapering flag.

**Perigee** (*Périgée*): The time when the moon is closest to the earth

**Personal Computer Memory Card International Association** (*association internationale de cartes de mémoire pour ordinateurs personnels*): the body setting standards for flash memory cards to be added to personal computers, cameras and PDAs.

**Personal Digital Assistant (PDA)** (*assistant numérique personnel*): a small personal computer capable of being held in one hand, usually used for scheduling, e-mail or voice communications, but capable of running PC-like programs and chartplotters.

**Personal Flotation Device** (*vêtement de flottaison individual*) : A flotation device that will not turn an unconscious person face up in the water.

**Personal watercraft** (PWC) (*motomarine*): a small, waterjet-driven boat with no cockpit.

**PFD** : See **personal flotation device**.

**Phonetic alphabet** (*alphabet phonétique*): The international method of spelling to be used when communications may be difficult. This method should be used when communicating a radio station's name.

**Pier** (*jetée*): a structure built out from the water's edge, roughly at right angles to the shoreline, to which a vessel can be secured.

**Pile** (*pilot ou pilotis*): a log or timber driven vertically and firmly into the bottom.

**Pillar buoy** (*bouée tourelle ou à charpente*): a very large structural buoy that may have a light, bell, or whistle.

**Pilot chart** (*Carte pilote*): A planning chart of a major ocean area published by the National Geospatial Intelligence Agency (NGA), formerly the National Imagery and Mapping Agency. In graphic form, it provides averages of weather, waves, ice, and other marine data gathered over many years to aid the navigator.

**Pinch** (*déventer*): To sail too close to the wind.

**Pintle** (*aiguillot*): See **Gudgeon**.

**Piston Hanks** (*mousqueton à piston*): A hank with a spring-loaded plunger sewn to the luff of a sail and used to attach the sail to a stay.

**Pitch** (*pas, tangage*): (1) the theoretical distance a propeller would move ahead with one revolution. (2) The up-and-down motion of the bow and stern of a vessel.

**Pitching** (*tangage*): Oscillation around the transverse axis; the rising and falling of the bow in waves.

**Pitchpole** (*sancir*): to overturn, end over end.

**Pixel** (*pixel*): A single element (a small square or rectangle) used to draw the picture on an electronic screen. Resolution is measured in terms of how many pixels are used both horizontally and vertically, e.g., 800 x 600.

**Plane sailing** (*Parcours*): Method of computing courses, distances, and positions by treating the earth as a flat surface and applying plane trigonometry. See **sailings**.

**Planing** (*planage*): the action of a vessel when it rises over its own bow wave and skims over the surface of the water, due to the dynamic forces of motion.

**Planing hull** (*coque planante*): a hull of such a shape as to be capable of planing.

**Pleasure craft** (*embarkation de plaisance*): a boat, a ship, a vessel, or any other description of watercraft that is used exclusively for pleasure, and does not carry passengers or goods for hire, reward, remuneration, or any object of profit.

**Plot** (*tracer*): to draw lines on a chart, indicating bearings, courses, and positions.

**Plow Anchor** (*Ancre charrue*): An anchor shaped like a farmer's plow.

**Point** (*point*): (1) to sail more closely to the wind; (2) 11/4° of the compass.

**Polar Cell** (*cellule polaire*): A cell of global air circulation in both hemispheres between 60° and the north and south poles.

**Polar distance** (*Distance polaire*): The angular distance from the observer's elevated pole to the parallel of declination of a body. See **co-declination**.

**Polar Easterlies** (*vent d'est polaires*): Cold air flowing out from the poles, as deflected by Coriolis effect.

**Polar Front** (*front polaire*): The demarcation line extending around the earth, between polar air to the north and warmer air to the south.

**Polar high** (*anticyclone polaire*) : anticyclones formed when air in the global circulation cools and descends near the poles.

**Polyconic** (*polyconique*): A chart projection using a series of tangent cones.

**Polypropylene** (*polypropylene*) : a synthetic material made into lines that float.

**Pooped** (*coup d'acculage*): said of a vessel when a wave breaks over her stern.

**Port** (*bâbord, orifice, port*): (1) The left side of boat when facing the bow. (2) Toward the left. (3) An opening in a boat's side, (e.g., port light). (4) A harbour.

**Port tack** (*bâbord amure*): when the wind is coming over the port side of a boat under sail.

**Porthole** (*hublot*): An opening on a vessel's side for light and air.

**Position** (*position*): a vessel's location at a particular time.

**Pram** (*prame norvégienne*): Flat-bottomed dinghy with blunt bow.

**Precipitation** (*précipitations*): A general term for any type of falling moisture—rain, snow, hail, etc.

**Precision Positioning Service** (*service de positionnement précis*): That portion of the GPS which provides the US military, and other allied armed forces with high accuracy unadulterated, but encrypted, positioning signals.

**Pressure** (*pression*): Force per unit area. For weather, this refers to the weight of the air, or the force exerted by the surrounding atmosphere in hectopascals.

**Pressure Gradient** (*gradient de pression*): The change in pressure with horizontal distance. The gradient, as shown by the spacing of the isobars, will determine the flow of air—the steeper the gradient, the faster the flow, thus the stronger the wind.

**Pressure Tendency** (*tendance barométrique*): The rate of change of pressure with time, at a given locality. A rising or falling tendency is usually of more significance than the actual barometer reading, especially with rapid changes.

**Prevailing Westerlies** (*vents d'ouest dominants*): The predominantly westerly winds of the temperate zones.

**Prevailing Wind** (*vent dominant*): A wind that consistently blows from one direction more than from any other; usually refers to the predominant wind over a region irrespective of local effects.

**Preventer** (*retenue de bôme*): A line run forward from the boom to a deck fitting to prevent accidental jibes.

**Prime meridian** (*premier méridien*): the meridian of longitude that passes through Greenwich, England (Lo000°). It is also called the zero meridian, which is used as a reference line from which longitude east and west is measured. See: **Greenwich meridian**.

**Prime vertical** (*Cercle de l'observateur*): The vertical circle that passes through the observer's zenith and the east and west points of the horizon.

**Priority** (*priorité*): The order in which radio communications may proceed.

**Profane language** (*langage offensant*): Language which is offensive and blasphemous.

**Propeller** (*hélice*): the rotating screw of a vessel by which she is forced through the water.

**Psychrometer** (*psychromètre*): Instrument for determining dew point and relative humidity of the air; portable form is called a sling psychrometer.

**Puff** (*risée*): A short gust of wind.

**Pulpit** (*balcon avant*): a raised railing at the bow to prevent crew from falling overboard.

**Pulse** (*impulsion*): Of radar, a rapid change in voltage from one level to another and back to the original level. Typically radar pulses last only a few millionths of a second.

**Pulse Length** (*longueur d'impulsion*): (1) The time duration of one pulse of radio frequency energy. (2) the time duration of a change in voltage from one level to another and back to the original level.

**Pulse Repetition Interval (PRI)** (*intervalle de répétition des impulsions*): The time interval between successive pulses transmitted by a radar system.

**Pushpit** (*balcon arrière*): a raised railing at the stern, to prevent crew from falling overboard.

**PWC** (*motomarine*): see **personal watercraft**.

## Q

**Quadrant** (*quadrant*): The casting on a rudder head for connection to the steering gear.

**Quarter** (*hanche*): After part of a boat's side, e.g., port quarter; the direction 45° abaft the beam.

**Quasi-stationary Highs** (*Anticyclone quasi-stationnaire*): Anticyclones in the 30° latitude regions which migrate north and south slightly with the seasons. (also semi-permanent highs.)

## R

**R.P.M.** (*TR/min*): Revolutions per minute.

**Race** (*raz*): A swift current near a headland separating two bays.

**RACON** (*balise radar*): RADar beaCON. A beacon marking a buoy or some location by broadcasting a signal when it has been 'Interrogated' by a radar signal; sends out a Morse code letter for positive identification.

**RADAR** (*RADAR*): (**RA**dio **D**etection **A**nd **R**anging) the acronym for using radio waves to measure distance, bearing and detection of vessels and land masses.

**Radar Horizon** (*Horizon radar*): the distance a radar unit can 'see'. Radar can see about 5% further than humans and about 15% further than the true horizon.

**Radiation** (*rayonnement*): The process of energy transfer in wave form, with or without the necessity of a transmitting medium.

**Radiation Fog** (*brouillard de rayonnement*) : Fog caused when the lower layers of the air are cooled to dew point, by contact with a surface which is radiating its heat back into space after sunset. In a complete calm, only dew will form, but with a light breeze, the resultant mixing will create a shallow layer of fog.

**Radio direction finder (RDF)** (*radiorepérage*): A type of electronic equipment used to obtain bearings from radio signals.

**Radio Frequency** (*radiofréquence*):(RF). A measure of how fast a particular electromagnetic radiation oscillates: also refers to radio waves.



**Radio operator** (*opérateur radio*): The person certified and authorized to transmit and receive radio communications of a radio station.

**Radio Procedures** (*procedures*): The order and the precise method of conducting radio communications according to **International Telecommunications Union** regulations.

**Radio Silence** (*silence radio*): While a distress situation is in progress, all stations must maintain radio silence, unless they are involved in distress traffic.

**Radiosonde** (*radiosonde*): A small radio transmitter carried aloft by a balloon, reporting vertical soundings of the temperature, pressure and humidity of the atmosphere.

**Radiotelephone** (*radiotéléphone*): a communication system wherein the voice is transmitted on radio waves.

**Radome** (*radôme*): A non-metallic dome covering the components of a radar scanner unit, primarily for weather protection. The dome also provides protection from tangling in the rigging on a sailboat.

**Rain Clutter** (*fouillis de pluie*): An electronic circuit designed to reduce the effects of radar energy reflected from rain.

**Rake** (*Quête*): The slope from the vertical, in the fore-and-aft direction, of a mast, transom, or deckhouse.

**Range** (*alignement, amplitude*): (1) two aids to navigation which, when seen to be in line (i.e., seen to be in transit), establish a line of position; (2) the difference in height between consecutive high and low tides. (3) The distance to a radar target.

**Range Resolution** (*pouvoir séparateur radial*): The distance by which two radar returns must be separated in order to be distinguished by the system when the returns are on the same bearing.

**Range Rings** (*cercles de distance*): the circles drawn by a radar unit on its screen to measure distances from a boat's location.

**Raster Chart** (*carte matricielle*): an electronic reproduction of a scanned image of a paper chart

**Rawinsonde** (*sonde radiovent*): A radiosonde with wind measuring equipment and a radar reflector to enable more accurate tracking of the device. (GPS rawinsonde will ensure even greater accuracy.)

**RCC** (*centre de coordination des opérations de sauvetage*): **Rescue Coordination Centre**.

**RCDS** (*système d'affichage de cartes matricielles*): **Raster Chart Display System**. A set of performance standards for raster charts used in commercial applications.

**Reach** (*barrer aux allures portantes, portée*): (1) A point of sail between close-hauled and a run. (2) A distance, or fetch.

**Reacher** (*reacher*): A light-weight jib used for reaching.

**Reaching** (*travers, vent de travers*): sailing with the wind approximately on the beam.

**Ready About** (*prêt à virer*): The helmsman's warning that he intends to tack.

**Reciprocal** (*réciproque*): a 180-degree difference in direction; the opposite or reverse course or bearing.

**Recurvature** (*recourbement*): The veering of a hurricane's path, usually from westerly or southwesterly to northerly or even northeasterly, as it leaves the trade wind belt.

**Reef** (*ris, récif*): (1) to reduce or shorten sail; (2) a rocky bottom formation close to the surface of the water.

**Reef Knot** (*noeud plat*): a knot for joining the two ends of a line that goes around something, such as a bundle, or the bunched canvas of a reefed sail.

**Reef points** (*garcettes de ris*): short lines attached in a row on each side of the sail for tying down the reefed portion of the sail.

**Reeve** (*capeler*): To pass a line through a block.

**Reference port** (*Port / Station de référence*): A location for which predictions of tidal information are published in the form of daily tables of times of heights of low and high water

**Reference station** (*Port / station de référence de courant*): A location for which predictions of tidal information are published in the form of daily tables of maximum rates and times of turns for currents

**Reflection** (*Réflexion*): The phenomenon of sound, light or electromagnetic waves being bounced at an angle off a surface.

**Refraction** (*Réfraction*): An optical phenomenon in which light is bent at an angle when passing from one medium to another. Light bends toward the normal when entering a denser medium. An example is the focusing of light rays by a camera lens.

**Relative Bearing** (*gisement*): The direction of an object with respect to the bow of a boat. It is independent of the compass direction of the object. See **Bearing, Relative**

**Relative Humidity** (*Humidité relative*): The ratio between the amount of water vapour actually present in the air, to the amount it could hold at saturation at that temperature.

**Relative wind** (*vent relative*): see **apparent wind**.

**Resolution** (*résolution*): The ability of a radar unit to show two objects that are close to each other as separate targets, rather than have them merge into a single blip.

**Return** (*retour*): A reflection of a transmitted radar pulse from an object: also called an echo, intruder, target or contact.

**Reverse** (*marche arrière*): go astern.

**Rhumb line** (*Loxodromie*): A straight line on a Mercator chart intersecting all meridians at the same angle.

**Ridge** (*crête*): An elongated atmospheric area of relatively high pressure, extending from the centre of a high pressure region; the opposite of a trough.

**Rig** (*gréer, gréement*): (1) To prepare a boat for sailing. (2) An arrangement of spars and sails (e.g., as on a sloop).

**Rigging** (*gréement*): an inclusive term for all the wires and lines used to support masts and to control spars and sails.

**Right ascension** (*Ascension droite*): An angular measurement used by astronomers to locate stars measured eastward from the first point of Aries from 0° through 360° (24 hours).

**Righting Arm** (*bras de levier de redressement*): The horizontal distance between the vertical line through the centre of buoyancy and the vertical line through the centre of gravity.

**Righting Moment** (*moment du couple de redressement*): The righting arm multiplied by the yacht's displacement.

**Rime** (*givre*): A light coating of ice caused by the freezing on impact of very small droplets of supercooled water. Usually forms on the windward side of objects.

**Rip** (*ride*): see **Tide Rip**

**Roach** (*rond de la chute*): The part of a sail that extends beyond a straight line from the head to the clew.

**ROC(M)** (*certificate restraint d'opérateur (maritime)*): **R**estricted **O**perator's **C**ertificate (**M**aritime).

**Rode** (*câblot*): a line and/or chain attaching the anchor to the boat.

**Roller Furling** (*enrouleur*): Reducing the area of a jib by rolling it around its luff wire.

**Roller Reefing** (*prise de tours*): Reducing the area of a sail by rolling it around the boom.

**Rolling** (*roulis*): Oscillation of a boat around a longitudinal axis.

**Rolling Hitch** (*noeud de bosse*): A useful hitch for attaching a line to a post or to another taut line.

**Rope** (*cordage*). Cordage made of natural or synthetic fibres; can be made of steel wire.

**Rope Clutch** (*taquet autocoinceur*): Line stoppers or rope clutches operate on a cam and lever principle. They take the load off of the winch, freeing the winch for use with a different line. They enable one winch to service several lines. See **Line Stopper**.

**Rosby Waves** (*ondes de Rossby*): Meandering, long wave patterns of westerly air flow in the upper troposphere.

**Round Turn** (*tour mort*): A complete turn of line around a cleat, bitt, or post.

**Rudder** (*gouvernail*): the underwater portion of the steering mechanism, usually a flat piece of wood or metal.

**Rudder Post** (*longeron de gouverne de direction*): The shaft to which the rudder blade is attached. The tiller or other steering apparatus is affixed to the other end.

**Rules of the road** (*règles de route*): rules governing the safe operation of boats on the water.

**Running** (*courir large*): sailing with the wind almost directly behind the boat.

**Running a Range** (*suivre un alignement*): to operate a vessel along a range, either man-made or natural

**Running Backstay** (*bastaque*): Stays that counteract forces from an inner forestay; must be tended as boat tacks or jibes.

**Running fix** (*point transporté*): a position determined by the use of bearings that have an appreciable time difference between them.

**Running lights** (*feux de route*): lights required under the Collision Regulations when a boat is under way.

**Running rigging** (*gréement courant*): all rigging used in hoisting, lowering, and trimming the sails and in handling the spars, centreboard, etc.

## S

**Safety communications** (*communication de sécurité*): The transmission of messages dealing with hazards to navigation and meteorological information.

**Safety Harness** (*harnais de sécurité*): Webbed belt-based assembly that, when attached to the vessel with a tether, physically connects you to the boat to prevent you from falling overboard or being separated from the boat.

**Saffir-Simpson Scale** (*échelle Saffir-Simpson*): Method of assessing hurricane strength by degree of damage caused, rather than by actual wind velocity; numerical scale from 1 to 5 (mild to catastrophic damage).

**Sail cover** (*Taud de voile*): a cover, usually for a mainsail, used to protect the sail when it is furled on the boom.

**Sail Slides** (*coulisseau*): Metal or plastic fasteners attached to the edge of a sail and that ride on a track on the mast or boom.

**Sail Slugs** (*coulisseau*): Small metal or plastic cylinders sewn to the edge of a sail which fit into a spar cove to attach the sail to the spar.

**Sail Twist** (*vrillage*): Tendency for the top of a fore-and-aft sail to sag farther to leeward than the foot of the sail.

**Sailboard** (*planche à voile*): surfboard with a boom, sail, dagger board, and fixed rudder, sailed by one person standing up (also called a windsurfer).

**Sailing Off** (*laisser porter*): An intentional change of course away from the wind.

**Sailing Plan** (*plan de route*): The itinerary for a cruise; it is filed with someone ashore.

**Sailings** (*Parcours*): Mathematical solutions of navigational problems involving course, distance, difference in latitude, difference in longitude, and departure.

**SAR** (*Recherche et sauvetage*): Search and Rescue.

**SART** (*SART*): Search and Rescue Transponder.

**Satellite navigation** (*naviguer par satellite*): see Global Positioning System (GPS).

**Saturated Adiabatic Lapse Rate** (*gradient adiabatique de l'air saturé*): Rate of change of temperature with altitude, in saturated air in vertical motion.

**Saturation** (*saturation*): The condition in which air holds as much water vapour as is possible at that temperature and pressure.

**S-Band** (*bande S*): radio waves that have a 10 centimetre wavelength; often used at airports and may be used on large ships; the frequency is about 3,000 MHz. See also X-Band.

**SC-101** (*SC-101*): A U.S. specification standard for Digital Selective Calling.

**Scale** (*échelle*): of a chart, the ratio of the distance on a chart to distance on the earth's surface (for instance, a scale of 1:80 000 indicates that one centimetre on the chart represents a distance of 80 000 centimetres on the earth's surface).

**Scanner Unit** (*module de balyage*): The component of a radar system containing the radar transmitter, receiver, antenna, motor and other electronic components needed to transmit and receive radar energy.

**Schooner** (*schooner*): A vessel with two or more masts rigged fore-and-aft, with the forward mast being shorter or equal in height to the aft mast.

**Scope** (*touée*): the ratio of the length of anchor rode to the distance from chock to the bottom.

**Screen** (*écran*): the part of a radar or other electronic unit on which pictures appear. Some screens are cathode ray tubes (CRT) and some are Liquid Crystal Displays (LCD).

**Scud** (*fractostratus, fuir*): (1) Thin, low, fast-moving clouds. (2) To run off before a strong wind.

**Scull** (*godille*): To propel a boat with a single oar at the stern or with the rudder.

**Scupper** (*dalot*): An opening in the rail or bulwark to permit water to drain overboard.

**SD** (*SD*): Secure Digital, a format of removable digital storage media for PDAs, etc.

**Sea** (*État de la mer*): A system of waves that are still being blown by the wind force that created them. Usually irregular and choppy, unlike swell.

**Sea Anchor** (*ancre flottante*): A drag-producing device, usually cone shaped, used to slow a boat's movement.

**Sea Breeze** (*brise de mer*): An onshore breeze—one that blows from over the water towards the shore, caused by the more rapid heating of the land in the daytime, with resulting rising air currents over the land and an inflow of air from the sea to replace it.

**Sea Clutter** (*fouillis de mer*): The appearance on a radar display screen of signals reflected from the tops of waves in choppy seas.

**Sea Return** (*fouillis de mer*): (See **Sea Clutter**).

**Sea Room** (*mer libre*): Navigable water sufficient for safe manoeuvring.

**Seacock** (*Vanne de coque*): a shut-off on a through-hull fitting.

**Seakindly** (*Tenir la mer*): Describes a boat with easy motion.

**Seamanship** (*Matelotage*): The art of operating a ship or boat.

**Search and Rescue Transpondeur (SART)** (*transpondeur de recherche et de sauvetage*): A portable radar beacon to help search and rescuers find distressed vessels.

**Seaworthy** (*apte à prendre la mer*): Said of a boat that is in fit condition to go to sea.

**Secondary port** (*Port / station secondaire*) : A location for which the time and height of high and low water are published relative to a reference port

**Secondary station** (*Port / station secondaire de courant*): A location for which time difference and rate factors are published relative to a tidal reference port.

**Secure** (*arimer*): to make fast (tie up).

**Security** (*sécurité*): The radio keyword used to indicate that a Safety message is to follow.

**Seelonce** (*silence*): The international radio word for **Silence**.

**Seiche** (*seiche*): The oscillation of water in a lake that follows a wind set-up. It slowly subsides over one to two days. (See **set-up**)

**Seize** (*brider*): To bind by many wrappings of small line.

**Seizing** (*à traduire*): Small stuff for binding.

**Selective Availability** (*disponibilité selective*): The feature of the GPS which allows the US Department of Defence to "selectively" introduce errors into the GPS signals received by non-military users, for "security reasons". It was "zeroed" by order of President Clinton on the first of May 2000, but it can be reintroduced during times of international crisis without prior warning.

**Self-rescue** (*autosauveteur*): when a boat is righted, bailed clear of water, boarded and operated in the normal manner by its crew without outside assistance.

**Self-tending** (*autovireur*): A sail that will change position by itself during a tack or jibe.

**Semi-diameter** (*Semi-diamètre*): One half the diameter of an observed celestial body measured in minutes of arc.

**Semi-displacement hull** (*coque à semi-déplacement*): a hull that performs partly as a displacement hull and partly as a planing hull.

**Semi-diurnal** (*Semi-diurne*): A tide with two high waters and two low waters daily of approximately the same height

**Sensible horizon** (*Horizon sensible*): The circle formed on the celestial sphere by the intersection of a horizontal plane through the eye of the observer perpendicular to zenith-nadir line.

**Sentinel** (*marguerite*): see **kellet**.

**Separation** (*décrochage, separation*): Detachment of air in a smooth laminar flow from the leeward side of a sail. See **Stall**.

**Set** (*direction du courant, à traduire, crocher une ancre*): (1) the direction in which a current flows; (2) the angular relationship of the sails to the wind; (3) to dig an anchor firmly into the bottom.

**Set-up** (*transfert*): The process whereby strong winds blowing down the length of a lake cause water to “pile up” at the downwind end, raising water levels there, and lowering them at the upwind end of the lake.

**Sextant** (*Sextant*): A precision hand held instrument used to measure angles to a high degree of accuracy; e.g. altitude angles of celestial bodies, heights of objects and horizontal angles between objects.

**Sextant altitude** (*Hauteur de sextant*): The angle indicated by a sextant before corrections are applied.

**Shackle** (*manille*): A U-shaped metal device with removable pin used to connect a sail, chain, line, or fitting.

**Shadow** (*ombre*): When a radar beam strikes one object, another object behind the first is said to be shadowed by it.

**Sheave** (*réa*): A wheel within a block or pulley, whose outer rim is grooved to receive a line.

**Sheepshank** (*noeud de jambe de chien*): A knot used to temporarily shorten a line.

**Sheer** (*tonture, embardée*): (1) the shape of a deckline as seen from a point abeam; (2) a wide swing “off course”.

**Sheet** (*écoute*): a line used to control the trim of a sail.

**Sheet bend** (*noeud d'écoute*): a knot used principally for joining two ropes of equal or different diameters (see also **double sheet bend**).

**Shift** (*passez*): Used in radio communication to indicate a change to another VHF channel.

**Ship station** (*station de navire*): A mobile radio station.

**Ship's Heading Line** (*ligne de foi*): A line displayed on a radar screen to show the ship's heading. Typically it appears at an azimuth of 000°. It may also be shown at the actual true or magnetic heading of the vessel, depending on other electronics available.

**Ship-to-shore** (*navire à côte*): The radio communication link between a ship station and a shore station.

**Shoal** (*haut-fond*): a shallow area in a body of water.

**Shoal draft** (*faible tirant d'eau*): (also spelled shoal draught) as applied to a boat, one that is suitable for use in shallow water.

**Short splice** (*épissure courte*): a joining splice that increases the diameter of a line.

**Showers** (*averses*): Precipitation from clouds of vertical development. Usually of short duration, starting and stopping quickly.

**Shroud** (*hauban*): part of the “standing rigging”, providing athwartships support for the mast (usually wire).

**Shroud Roller** (*gaine d'hauban*): A tube installed on the shrouds and designed to turn freely in order to minimize chafing of the sheets and sails.

**Side lobe** (*Lobe secondaire*): Energy emitted from a radar antenna other than that from the main lobe, much smaller in power level than the main lobe.

**Sidereal hour angle** (*Angle horaire sidéral*): The angular distance of the hour circle of a celestial body measured westward from the hour circle of the vernal equinox or Aries, measured from 0° to 360° along the parallel of declination.

**Sidereal time** (*Heure sidérale*): Time based on the rotation of the earth relative to the first point of Aries: may be designated as Greenwich or local according to the reference meridian.

**Sight** (*Visée*): A sextant observation of altitude of a celestial body.

**Sight reduction** (*Calculs astronomiques d'une visée*): The process of converting a celestial sight to a line of position (LOP), using appropriate Nautical Almanac data

**Signal** (*signal*): (1) an action made by visual or auditory means to attract attention or convey a message. (2) An electrical variation of either a continuous or non-continuous nature, which can be interpreted as information. (3) In radio, the transmission of a designated international word that alerts stations that a specific call and message are to follow.

**Simplex** (*simplex*): Use of a single frequency for both transmitting and receiving. See **Duplex**

**Skeg** (*aileron, talonnière*): a projection aft of the keel or deadwood under the propeller.

**Skip zone** (*zone de silence*): the area where no radio signal is received, between the outer limit of reception of ground waves and the inner limit of reception of sky waves.

**Skipper** (*chef de bord*): the individual who is in command of a vessel.

**Slack water** (*étale*): (also called turn) the moment when there is no horizontal motion of the water and the current is turning: that is, the moment when the current has ceased to ebb and is about to flood, or the moment when the current has ceased to flood and is about to ebb.

**Sleep** (*sommeil*): a standby mode of a radar transmitter or other electronic device designed to save power.

**Slew** (*pivoter*): **(verb)** To rotate about some point in the object. **(noun)** The position of an object that has slewed.

**Slides** (*coulisseaux*): fittings secured to the luff (forward edge) of a sail and sliding in a track, to hold the sail against the mast.

**Slipped Reef Knot** (*Noeud plat gansé*): A reef knot that can be untied very quickly and easily.



**Sloop** (*sloop*): Single-masted sailboat with the mast stepped less than 40% of boat length aft of the bow and setting a mainsail and one or more triangular headsails.

**Slot Effect** (*effet de couloir*): The effect on air flow between two sails, caused by the mutual interaction of the sails.

**Slow Time Constant** (STC) (French?) : A radar filter control, used to reduce the interference caused by nearby waves (sea clutter) reflecting the radar beam back to the antenna.

**Slugs** (*mousqueton*): Sail slugs are used to secure mains or mizzens to their spars. They are short segments of cylindrical rod, plastic or stainless, attached outboard of the luff (and foot, if so rigged) and inserted in the slot of the spar.

**Small stuff** (*Ficelle*): cordage less than 6 millimetres in diameter.

**Smog** (*smog*): Once explained as a compound of smoke and fog, it is more accurately defined as a mixture of chemical pollutants, created by the sun's reaction on the exhaust gases of vehicles and industrial processes. Ozone is also present.

**Snap Shackle** (*mousqueton à ressort*): A shackle with a retractable spring-loaded pin.

**Snatch Block** (*galoche*). A block with a hinged hook that can be opened to receive or release a line.

**Snow** (*neige*): Precipitation in the form of ice crystals. Largest snowflakes occur at temperatures slightly below freezing, when the ice crystals stick together more.

**Snub** (*Freiner une manœuvre*): To stop a line running out by taking a turn around a bitt or cleat.

**Soft chine** (*Coque en forme*): a rounded **chine**.

**SOLAS** (*SOLAS*): International Convention for **Safety of Life at Sea**. Refers to the 1974 *International Convention for Safety of Life at Sea Convention*, a treaty that governs the minimum standards of construction, operation, and equipment of merchant ships which are consistent with safety.

**Solstice** (*Solstice*): The point on the ecliptic at which the sun reaches maximum declination: farthest north at summer solstice (about 21 June) or farthest south at winter solstice (about 22 December) of the celestial equator. Also the instant at which the sun reaches one of the solstices.

**Soundings** (*sonde*): measurements of the depth of the water.

**South Geographic Pole** (*pôle Sud géographique*): see **True South Pole**.

**Spade Rudder** (*gouvernail suspend*): A rudder attached to the boat only by its stock.

**Spanish Bowline** (*bouline espagnole*): A double looped knot that can be used to lift a person.

**Spar** (*espar*): Any shaft or pole used for the attachment of a sail, such as the mast, boom, yard, or sprit.

**Spar buoy** (*bouée de type espar*): an anchored, floating spar used as an aid to navigation.

**Spectrum Management** (*gestion du spectre*): The division of Industry Canada responsible for regulating and licensing radio frequencies.

**Speed** (*vitesse*): the rate of a boat's motion through the water, disregarding the effects of wind and current

**Speed Gradient** (*Gradient de vitesse ou cisaillement*): A marked difference in speed between two adjacent winds.

**Speed made good** (*Vitesse sur le fond*): The resultant boat speed from a point of departure to a point of arrival, found by dividing the distance along the track made good by the time taken to travel that distance

**Speed of advance** (*Vitesse de progression*): Intended or expected speed along the track.

**Speed over the ground** (*Vitesse instantanée*): Actual speed being achieved relative to the ground.

**Spilling** (*perdre du vent*): a technique to make a sail ineffective by causing it to lose its wind.

**Spinnaker** (*spi*): A large, headsail set forward of the headstay and used when reaching or running.

**Spinnaker Net** (*filet à spi*): A web of light line hung in the foretriangle

**Spiral Rain Bands** (*bandes de pluie en spirales*): Bands of cloud and precipitation, increasing in height and intensity as they spiral in toward the eye of a hurricane.

**Splice** (*épissure*): Joining lines by interweaving the strands.

**Spreader** (*barre de fleche*): A strut fitted to the side of the mast to hold one or more shrouds away from the mast.

**Spring line** (*garde*): a docking line leading either fore or aft.

**Spring Tides** (*Marée de vive-eau*): (US) large ranging tides associated with new and full moons

**Spritsail** (*voile à livarde*): A quadrilateral sail with its upper aft corner held by a shaft that extends from the mast diagonally across the sail to the corner.

**Squall** (*grain*): An atmospheric phenomenon characterized by an abrupt and large increase of wind speed within minutes, which then suddenly diminishes. Squalls are usually associated with thunderstorms, and as such are often accompanied by heavy showers, thunder, and lightning.

**Square knot** (*noeud plat*): see **reef knot**.

**Square sail** (*voile carrée*): A quadrilateral sail set from a yard on square rigged boats, that is most efficient when sailing down wind.

**SSB** (*blu*): Single Side Band.

**Stability** (*stabilité*): (1) A state of the atmosphere in which the air resists vertical displacement. Warm air over cold will lead to stability. (2) the tendency of a vessel to right itself after heeling.

**Staff** (*digon*): a mast used to hoist flags upon.

**Stall** (*décrocher*): The condition that arises when the airfoil (sail) or hydrofoil (rudder) is turned too far off and the flow of air or water separates from the foil; there is no longer an attached flow.

**Stanchion** (*chandelier*): A vertical post or column used to support a deck or cabin top.

**Stand** (*étale de mare*): the moment when there is no vertical motion of the water and the tide is turning: that is, the moment when the tide has ceased to fall and is about to rise (low-water stand), or the moment when the tide has ceased to rise and is about to fall (high-water stand).

**Stand on** (*priorité, privilégié*): to maintain course and speed.

**Standard Positioning Service** (*service normal de positionnement*): That portion of the GPS made available to the public-at-large but subject to the Selective Availability degradation of accuracy in the interests of US national security.

**Standard time** (*Heure normale*): The legal established time for a given geographical area ashore often used with adjectives such as Eastern Standard Time (EST).

**Standby** (*veille*): (1) Placing of a radar transmitter in an inactive mode, but ready for immediate use. (2) a radio instruction not to transmit, but to listen on the frequency for a further transmission that will be forthcoming.

**Standing Part** (*dormant*): The part of a rope that is made fast.

**Standing rigging** (*gréement dormant*): the fixed and permanent rigging, such as shrouds and stays.

**Stand-On vessel** (*navire privilégié*): A term, from the Navigation Rules, used to describe the vessel that continues its course in the same direction at the same speed during a crossing or overtaking situation, unless a collision appears imminent.

**Starboard** (*tribord*): a vessel's right-hand side when facing forward.

**Starboard tack** (*tribord amures*): when the wind is coming over the starboard side of a boat under sail.

**Stationary Front** (*front stationnaire*): The surface boundary between warm and cold air masses in which the cold air is neither advancing, nor retreating.

**Statute Mile** (*mille terrestre*): Used on land, and on USA inland (freshwater) navigation and Intracoastal Waterways. A statute mile is 0.87 nautical miles, or 1,609 metres, or 1,760 yards. See also **Nautical Mile**.

**Stay** (*étai, draille*): an item of standing rigging, providing fore-and-aft support for a mast.

**Staysail** (*trinquette*): A fore-and-aft triangular sail normally set upon a stay other than the headstay or jibstay.

**Steam Fog** (*brouillard d'évaporation*): Fog formed by evaporation from a warm water surface, saturating overlying very cold air; also called Arctic sea smoke.

**Steer** (*barrer*): to direct the course of a vessel by the use of the wheel or tiller.

**Steerage way** (*erre pour gouverner*): movement through the water fast enough to enable a vessel to respond to the rudder.

**Stem** (*étrave*): the foremost member forming the bow of a vessel and joining the keel at its lower end.

**Stemhead** (*Tige d'étrave*): The top of the timber that forms the bow of the boat.

**Stemhead Fitting** (*Davier d'étrave*): A metal casting made to fit over the top of a stemhead.

**Stern** (*poupe*): the extreme after part of a vessel.

**Stern line** (*amarre de pointe arrière*): a docking line fastened at the stern.

**Stern way** (*faire marche arrière*): backward motion of a vessel.

**Stiff** (*stable*): (of a boat) quick to right itself, having a rapid period of roll, and great early stability (see also **tender**).

**Stock** (*Jas*): The crossbar of an anchor.

**Stop** (*raban*): Strap, line, or shock cord used to lash a rolled sail.

**Stopper knot** (*noeud d'arrêt*): a knot in the end of a line to prevent it running through a block.

**Storm Jib** (*tourmentin*): A very small, strongly built jib used in heavy weather.

**Storm Surge** (*raz de mare*): A mound of ocean water drawn up by the centre of a hurricane, and driven by the storm's high winds; this can cause enormous waves and widespread damage as it reaches land, especially if it arrives at a time of abnormally high tide.

**Storm Swell** (*houle de tempête*): A long swell developing from the wind waves of a hurricane; moves rapidly in advance of the storm centre, and leads to distinctive change in the interval of breakers on shore.

**Storm Trysail** (*voile de cape*): A small, strongly built sail used in place of the mainsail in storm conditions.

**Stow** (*arrimer*): To put something in its proper place.

**Strand** (*échouer, batture estran, ou zone intertidale*): (1) To drive a vessel ashore or aground. (2) One of the lays of a rope (the wound yarns or fibers that are woven with other strands to make a rope).

**Stratosphere** (*stratosphère*): The next layer of the atmosphere beyond the troposphere, from which it is separated by the tropopause. It extends to 50 to 60 km, and contains the ozone layer in its upper reaches.

**Stringer** (*serre*): A fore-and-aft structural member of a hull.

**Strip chart** (*carte d'itinéraire*): a large scale chart covering a waterway, designed principally for pleasure craft and printed in a long, narrow form.

**Strobe light** (*feu stroboscopique*): high intensity flashing emergency light.

**Strong winds** (*vent fort*): winds with sustained speeds in the range of 20 to 33 knots (as defined by the Atmospheric Environment Service of the federal Department of the Environment).

**Strut** (*support d'arbre*): an outboard support for a propeller shaft.

**Sublimation** (*sublimation*): The transition of ice to water vapour, without going through the liquid state.

**Sunrise** (*Lever de soleil*): The crossing of the visible horizon by the upper limb of the rising sun: also the time when this occurs.

**Sunset** (*Coucher de soleil*): The crossing of the visible horizon by the upper limb of the setting sun: also the time when this occurs.

**Supercooled Water** (*surfusion*) : Water which remains liquid at temperatures below freezing. In this unnatural state, it will freeze on impact with any cold surface.

**Superfluous communications** (*communication superflue*): Excessive and/or unnecessary communications.

**Swamp** (*inonder*): to fill a boat with water.

**Sweat Up** (*Étarquer*): To tighten a line as much as possible.

**Sweep** (*balayage*): a single rotation of a radar's antenna typically taking about 3 seconds. This results in a 'sweep' of the screen that re-paints an updated picture on the screen.

**Switch and answer** (*passez et répondez*): A radio request to change to a specific channel and respond to the call.

**Switch to** (*passez à*): A radio request to change to a specific channel.

**Synoptic Observations** (*synoptique*): Weather observations taken simultaneously at a specific hour, at selected stations around the world. They begin at 0000 UTC (Universal Coordinated Time, or GMT) and are taken at 6 hour intervals after that. Synoptic observations are used to construct the weather map

**Systematic Wind** (*Vent systématique*): A wind created by flow from one air mass into another as opposed to wind created by localized heating and cooling.

## T

**Tabernacle** (*tabernacle*): A hinge at the base of a mast; permits lowering the mast.

**Tack** (*amure, point d'amure, virer vent debout*): (1) a vessel sailing and under way, but not "in irons", is always on either a port or a starboard tack, the name being that of the windward side (if the wind is coming over the sailboat's port side, she is on a port tack, and if it is coming over the starboard side, she is on a starboard tack) (noun); (2) the lower forward corner of a fore-and-aft sail (noun); (3) to come about (verb).

**Tackle** (*palan*): An arrangement of line and blocks used to provide increased mechanical advantage.

**Taffrail** (*couronnement*): The bulwark or rail across the stern of a vessel.

**Tail** (*embraquer*): To haul on a sheet around a winch being cranked by another crew member.

**Take way off** (*Casser l'erre*): to halt the motion of a vessel.

**Tallboy** (*Litron*): A tall narrow sail set close to leeward of the main, usually when a spinnaker is set.

**Tang** (*latte de capelage*): A metal strap used to attach standing rigging to the masts.

**Target** (*cible*): A radar return of a vessel painted on a radar screen: especially one tracked by radar units that incorporate ARPA, MARPA and similarly named functions. See **ARPA, MARPA, Return**

**Telltale** (*pennon*): A wind direction indicator made of a bit of cloth, or other light material.

**Temperature** (*température*): Commonly described as the degree of “hotness” of a body. Can be measured with a thermometer; two standard scales are the Celsius(C), where water boils at 100°C, and ice melts at 0°C, and the Fahrenheit(F), where boiling water indicates 212°F, and melting ice shows 32°F.

**Tender** (*volage, annexe*): (1) (of a boat) to right itself slowly, a slow period of roll, and little early stability (see also **stiff**); (2) a small boat attached temporarily to a larger one.

**Tephigram** (*téphigramme*): A multiple graph so calibrated that it can be used to forecast cloud base, height, type, and precipitation, based on reports from rawinsondes and other upper air sources.

**Thermal Expansion** (*dilatation thermique*): Physical property of a material by which it expands as it is heated. Conversely, it contracts as it cools.

**Thimble** (*cosse*): A grooved metal loop, around which a rope or wire rope may be spliced, thus making the spliced eye more resistant to chafing.

**Throat** (*machoire de corne*): Upper forward corner of a quadrilateral fore-and-aft sail.

**Thrust** (*poussée*): the force applied by the propeller.

**Thunderstorm** (*orage*): A storm involving extreme vertical development, leading to cumulonimbus cloud, and producing heavy, shower-type precipitation, occasion ally of hail. Other hazards are lightning and very strong, gusty winds which lead to waves and bad visibility in blowing spray.

**Thwart** (*banc de nage*): (1) A transverse seat in a boat. (2) a transverse structural element

**Thwartships** (*Par le travers*): At right angles to the fore-and-aft line (see **Athwartship**).

**Tidal current** (*courant de mare*): current due to tidal action.

**Tidal datum** (*niveau de reference marégraphique*): (1) Unless otherwise stated, this is the same as chart datum for a given locality. (2) A plane below which the tide will seldom fall. See **Chart Datum**

**Tide** (*marée*): the vertical rise and fall of water caused by the gravitational pull of the moon and sun.

**Tide rip** (*contre-courant de mare*): a confused, tumbling surface condition, typically caused by a tidal current passing over an irregular bottom or by different currents interacting with each other.

**Tiller** (*barre, barre franche*): a handle attached to the upper end of the rudder post for steering.

**Time** (*Heure*): (1) The instant of the day reckoned by the position of a celestial reference point such as the mean sun relative to a reference celestial meridian. (2) A measure of the elapsed time interval between two events.

**Time diagram** (*Graphique horaire*): A diagram in which the celestial equator, as viewed from the south celestial pole, is represented by a circle and the hour circles are represented by radial lines.

**Time of Closest Point of Approach (TCPA)** (*heure au point de rapprochement maximal*): The estimated time at which two vessels will come closest to each other. See also **ARPA**, **BCPA** and **MARPA**.

**Time to arc** (*Heure en arc*): The converting of time in hours (hh) minutes (mm) and seconds (ss) to arc in degrees.

**Time To Go** (*temps jusqu'au prochain point ou destination*): The time predicted as remaining until an event of interest occurs, such as arriving at a waypoint etc. The electronic display usually "counts down".

**Time zone** (*Fuseau horaire*): A zone, usually 15° of longitude wide, in which the same time is kept throughout.

**Title Block** (*cartouche*): An area of the chart where important information about it is shown..

**Toggle** (*chape cardan*): A U-shaped fitting linking a turnbuckle with a chainplate; it permits movement so the turnbuckle is not bent when the stay is pulled out of line. Also, a small wooden crosspiece at the end of a line, passed through an eye or loop of another line as when bending a flag onto a halyard.

**Topping Lift** (*balancine*): A line used to support a boom end and/or a spinnaker pole.

**Topsides** (*oeuvres mortes*): the sides of a hull between the water line and the gunwale.

**Tornado** (*tornado*): A violently rotating column of air, in contact with the surface, suspended from a cumulonimbus cloud, and often (but not always) visible as a funnel cloud.

**Track** (*tracé*): (1). A metal piece on the after edge of a mast or top of a boom on which sail slides run. (2), a metal strip on deck for cars with blocks for adjusting sheet leads. (3) The actual path of a vessel over the ground. (4) For GPS receiver, a series of points (defined by latitude, longitude, and time) that shows a history of where a boat has been.

**Track Error** (*écart de route*): A now rarely used term to indicate the amount of "error" in angle or distance you are "off track" from the desired course. See **XTE**.

**Trackball** (*boule de commande*): a control panel device designed as a ball configuration and activated by a manual rotating motion to control features shown on an electronic display: behaves similarly to a computer mouse.

**Trade winds** (*Vent d'alizée*): Circumferential bands of surface winds flowing from the horse-latitude highs toward the low-pressure doldrums at the equator. These winds are deflected westward (making them easterly) by the Coriolis Effect. Trade winds occur in both hemispheres between 30° and 0° latitude.

**Traffic** (*traffic*): Radio communication between stations.

**Trail** (*piste*): a solid or dotted line, or a series of blips on an electronic screen, that marks the path traced by a boat or boats.

**Transducer** (*transducteur*): Element of a depth sounder that translates electromagnetic pulses into ultrasonic pulses and vice versa. Usually, contains a barium titanate crystal.

**Transit** (*Passage*): The passage of a celestial body across a celestial meridian. See **Meridian transit**.

**Transmit** (*transmettre*): The issuance of radio waves used in communication.

**Transmit switch** (*interrupteur de transmission*): The device attached to a microphone that, when depressed, allows the operator to transmit radio waves.

**Transmitter** (*émetteur*): that portion of a radar or radio unit that generates radio waves.

**Transom** (*tableau*): the transverse part of the hull closing off the stern of a vessel.

**Transponder** (*transpondeur*): A radio transceiver that automatically responds to a radar signal.

**Trapeze** (*trapeze*): A line from the mast that can be used by the crewman of a small boat to suspend himself outboard of the boat, thereby increasing the stability of the boat.

**Traveller** (*barre d'écoute*) A sail-positioning system composed of a track on which slides a car, attached to blocks, to permit positioning sheet leads under load.

**Traverse** (*Route équivalente*): A series of directions and distances such as those taken by a sailboat tacking to reach a destination windward.

**Traverse Sailing** (*Parcours par route équivalente*): A method of determining course and distance made good by a traverse.

**Trim** (*régler les voiles, allure, assiette*): (1) the set of a sail (noun); (2) the fore-and-aft or athwartship attitude of a vessel, with respect to the waterline (noun); (3) to adjust the set of the sails (verb); (4) to alter the fore-and-aft or athwartship balance of the vessel (verb).

**Trimaran** (*trimaran*): a boat with three hulls joined with a common deck.

**Trip plan** (*plan de croisière*): the itinerary for a cruise; it is filed with someone ashore.

**Tropical Cyclone** (*cyclone tropical*): A violent low pressure storm of the tropics.

**Tropical Depression** (*depression tropicale*): A closed circulation low pressure area of tropical origin, with winds of 20 kn to 34 kn.

**Tropical Disturbance** (*perturbation tropicale*): A moving group of thunderstorms in the tropics, which has maintained its identity for 24 hours.

**Tropical Storm** (*tempête tropicale*): A tropical cyclone with sustained winds of 35 kn to 63 kn

**Tropopause** (*tropopause*): The transition between the troposphere and the stratosphere [with a lapse rate of 0](#).

**Troposphere** (*troposphère*): The lowest major division of the atmosphere, varying in depth from 16 km at the equator, to 8 km at the poles. Temperature decreases with height throughout the troposphere, which also contains the majority of the water vapour which is the source of our weather.

**Trough** (*creux barométrique*): An elongated area of relatively low pressure, extending from the centre of a low pressure region. It is the opposite of a ridge.

**TROWAL** (*vallée d'air chaud en altitude*): Trough of warm air aloft. Similar in structure to an occlusion, but with no temperature change at the surface (Note different symbol on weather charts).

**Truck** (*tête de mât*): a cap that fits over the head of a mast. It may have sheaves for halyards.

**True bearing** (*relèvement vrai*): see **bearing, true**.

**True Course** (*route vraie*): In radar, the actual course of a boat compared to the ground. The radar screen depicts relative motion of targets rather than true course.



**True North** (*nord vrai*): the direction to the true north pole.

**True North Pole** (*pôle Nord vrai*): the point at which the earth's axis intersects the earth's surface in the northern hemisphere (called also north geographic pole).

**True South Pole** (*pôle Sud vrai*): the point at which the earth's axis intersects the earth's surface in the southern hemisphere (called also south geographic pole).

**True Speed** (*vitesse vraie*): In radar, the actual speed of a boat or target over the ground. Radar depicts an object's speed relative to a boat rather than true speed.

**True wind** (*vent vrai*): the direction and velocity of the wind as observed from a stationary point.

**Tsunami** (*Tsunami*): A shallow but extremely fast wave, which does not attain great height until it reaches the shallows; formed by a seismic disturbance below the ocean. (This is not to be confused with the storm surge associated with a hurricane.)

**Turn** (*renverse*): see **slack water**.

**Turnbuckle** (*ridoir*): A tension-adjusting device for tightening wire rigging or cable, composed of threaded rods inside a threaded barrel.

**Turning block** (*poulie de renvoie, de rappel*): A block used to change the direction of a line, such as a sheet or halyard, to make hauling more convenient.

**Twilight** (*crépuscule*): The period of incomplete darkness following sunset or preceding sunrise. See civil twilight and nautical twilight.

**Two Block** (*poulie avec taquet ou coinqueur; à bloc*): (1) A tackle that has been pulled to bring the blocks together. (2) A halyard that has been hoisted all the way.

**Typhoon** (*typhon*): A tropical cyclone in the North Pacific Ocean, with winds in excess of 64 kn.

## U

**Uncorrecting** (*adaptation*): the conversion of courses or bearings from true to magnetic to compass.

**Under Bare Poles** (*à sec*): Sailing (under way) with no sail set and being driven only by the force of the wind on hull, spars, and rigging, usually a heavy weather precaution.

**Under Power** (*à minimum de puissance*): Any boat, including sailboats, being propelled by an engine even though sail may be set.

**Under way** (*faisant route*): not at anchor, aground, or made fast to shore.

**Undocking** (*larguer les amarres*): the manoeuvre to leave a dock, wharf, or jetty.

**Universal Coordinated Time (UTC)** (*temps universel coordonné*): Internationally used time standard based on International Atomic Time with leap seconds added at irregular intervals : equivalent to Greenwich Mean Time.

**Universal time** (*Heure universelle*): Mean time based on the rotation of the earth determined from astronomical observations. Used in the Nautical Almanac for tabulation of GHA and declination of celestial

bodies. For purposes of marine navigation, equivalent to Greenwich mean time (GMT). See **Coordinated Universal Time (UTC)** and **Greenwich mean time (GMT)**.

**Unship** (*Retirer; detacher; débarquer*): To remove an object from its regular place of use.

**Unstable** (*instability*): A turbulent, convective state in the atmosphere, resulting from a rapid decrease in air temperature with altitude.

**Unstable Wave** (*onde instable*): Wave on a frontal surface, having a critical wavelength which may lead to frontogenesis.

**Upper Air Chart** (*carte de l'air en altitude*): Based on reports from rawinsondes and high-flying aircraft, these are coordinated with surface weather plots to create an in-depth picture of the weather.

**Upper branch** (*Branche supérieure*): That half of a meridian or celestial meridian from pole to pole which passes through a place or its zenith.

**Upper limb** (*Limbe supérieur*): The upper part of the circumference of the sun or moon.

**Urgency communications** (*communication d'urgence*): The traffic that follows the Urgency keyword 'Pan Pan'.

**URL** (*URL*): Uniform resource locator; an address on the Internet.

**UT** (*UT - heure universelle*): See **UTC**

**UTC** (*UTC – heure universelle coordonnée*): Coordinated Universal Time; The primary time standard by which the world regulates clocks and time. For most purposes UTC is synonymous with Greenwich Mean Time, but GMT is no longer precisely defined by the scientific community. May be referred to as ZULU time.

**UTM** (*quadrillage UTM*): **Universal Transverse Mercator Grid**. Grid system used on topographical charts instead of latitude and longitude.

## V

**Vang** (*palan de garde ou de retenue*): A line or purchase used to assist in positioning a boom or gaff.

**Variable Range Marker (VRM)** (*marqueurs de distance variable*): A movable ring on a radar display screen, which can be varied in its position by means of a trackball or rotating control. The mark placed over a return allows the range to be determined and displayed.

**Variation** (*déclinaison*): the angular difference between true north and magnetic north.

**Vector** (*vecteur*): A quantity that has both magnitude and direction, commonly represented by an arrow. The length of the arrow represents the magnitude; the direction in which the arrow flies represents the direction in which the quantity acts.

**Vector Chart** (*carte vectorielle*): and electronic chart based on digitized information from a paper chart

**Veer** (*adonner, haler*): A change of wind direction in a clockwise direction (e.g., from west to northwest to north): the opposite of “backing”. Note: Wind direction is always reported as the direction from which the wind is blowing.

**Velocity Made Good** (*vitesse efficace*): The speed the vessel is making directly towards a particular destination such as a selected waypoint.

**Vernal equinox** (*Équinoxe vernal*): See **first point of Aries**.

**Vernier** (*Vernier*): A short auxiliary scale alongside the graduated scale of a marine sextant to allow precise reading of fractions of a minute.

**Vertical Beam width** (*largeur vertical du faisceau*): The angular width (the angle between half-power intensities) of radar energy transmitted in the vertical plane.

**Vertical circle** (*Cercle vertical*): A great circle of the celestial sphere running through the observer’s zenith and nadir in a plane perpendicular to the horizon. See **prime vertical**.

**VHF** (*VHF*): **Very High Frequency** (30 MHz – 300 MHz).

**VHF-DSC** (*VHF-DSC*): **Very High Frequency Digital Selective Calling**.

**Visibility** (*visibilité*): The extreme horizontal distance at which prominent objects can be seen and identified by the unaided eye.

**Visible horizon** (*Horizon visible*): The line where earth and sky appear to meet.

## W

**WAAS** (*WAAS*): **Wide Area Augmentation System**. A system developed by the US Federal Aviation Agency to provide extremely accurate GPS signals for aircraft navigation. Precision coverage extends from Hawaii to Puerto Rico and Mexico to some of the southern parts of Canada and about 100+ miles out to sea around most of the continent.

**Wake** (*sillage*): the disturbed column of water around and behind a moving boat , which is set into motion by the passage of the boat.

**WAN** (*WAN*) : **Wide Area Network**, connecting computers between distant locations (possibly other cities or countries). See **LAN**

**Warm Front** (*front chaud*): The surface boundary between warm and cold air where the warm air is replacing retreating cold air.

**Warm Sector** (*secteur chaud*): In a frontal depression, the warm air between the warm and cold fronts. The weather at both warm and cold fronts is actually dependent on the characteristics of the air in the warm sector.

**Warp** (*Déhaler; traînard*): (1) To manoeuvre a boat by hauling on a line fastened to a fixed object such as a cleat, pile, bollard or anchor. (2) The line used in warping. (3) A line streamed behind a boat to slow it down.

**Wash** (*houache, remous*): Turbulent flow of water left by a moving boat or as a result of a boat’s turning propeller(s). Also, the rush or sweeping of waves on a bank, shore, or vessel.

**Watch** (*Veille/Quart/Montre*): (1) In weather advisories, a bulletin indicating that a hazardous condition such as a tornado or flash flood may develop. (2) A period of time during which a crew member is on duty. (3) A portable mechanical or electronic device for measuring time.

**Watch Time** (*Heure de la montre*): The hour of the day as indicated by a watch or clock; usually expressed in 24-hour time or a 12-hour cycle and labeled AM or PM.

**Water Vapour** (*vapeur d'eau*): A gas. The vapour stage of water. Present in all atmospheric air.

**Waterline** (*ligne de flottaison*): means the waterline at the recommended maximum gross load capacity.

**Waterline Length** (*longueur à la ligne de flottaison*): The measurement along the waterline from the point where the bow touches the water to the point where the stern emerges from the water.

**Waterspout** (*trombe*): May be a tornado which is passing over water. More common is a waterspout which occurs below a fast-building cumulus or towering cumulus cloud. Although much less destructive than the tornado, this type is still not to be ignored because the core winds can still be dangerous to smaller vessels.

**Wave in the Easterlies** (*ondes dans les vents d'est*): Basically, an imperfection in the smooth flow of the trades near the equator; must be watched, since it may eventually develop into a hurricane.

**Way**(*Erre*): Movement of a vessel through the water, such as headway, sternway or leeway.

**Waypoint** (*point de route*): any location which can be defined by its coordinates and stored within an electronic navigation system.

**Wear** (*empanner*): Change tacks by jibing instead of tacking.

**Weather** (*météo, côté au vent*): (1) The condition of the atmosphere at any given time and place. (2) The windward side.

**Weather Helm** (*barre dessous, ardent*): A condition of imbalance that requires the tiller to be held to weather to keep the boat on a straight course.

**Weather Map** (*carte météo*): A map produced in the Weather Office by plotting data received from many observing stations. The observations are made simultaneously at set times ("synoptics"), and the results are analyzed to produce the forecasts.

**Weather warning** (*avertissement météo*) : Message about currently occurring or imminent severe or hazardous weather.

**Weather watch** (*veille météo*): message about conditions which are conducive to the development of severe or hazardous weather in a zone.

**Weatheradio Canada** (*Radio-Météo Canada*): Provides the most up to date warning and forecast available; transmits marine and other weather in repeated cycles, on dedicated VHF frequencies.

**Well-Found** (*Bien équipé*): Having all necessary equipment on board, in good condition.

**Wetted Surface** (*surface mouillée*): The portion of a vessel's exterior which is in contact with the water.

**WGS84** (*WGS84*): the World Geodetic System **1984** datum, used as a standard for the GPS, and equivalent to the NAD 83 datum.

**Wharf** (*quai*): a structure built at the water's edge, parallel to or at an angle to the shoreline, to which a vessel can be secured.

**Wheel** (*roue*): The steering wheel or sometimes the propeller.

**Whip** (*surlier*): To bind the end of a rope with light line.

**Whipping** (*surliere*): a wrapping of small stuff applied to prevent the end of a line from unlaying.

**Whisker Pole** (*tangon de foc*): A pole used to hold the clew of a jib to windward when running wing-on-wing.

**Willy Willy** (*willy willy*) : A tropical cyclone which originates in the Timor Sea and turns southward over the northwest coast of Australia.

**Winch** (*winch*): A geared drum turned by a handle and used to pull lines such as sheets and halyards.

**Wind** (*Vent*): Horizontal motion of the air reported in both speed and direction.

**Wind direction** (*direction du vent*): the direction from which the wind blows.

**Wind Shear** (*cisaillement du vent*): Sharp changes of wind speed and/or direction over short distances, either vertically or horizontally. Frequently encountered beneath thunderstorms, they are hazardous to aircraft and marine craft alike.

**Wind's Eye** (*lit du vent*): The exact direction from which the wind is blowing.

**Windage** (*Résistance au vent*): Resistance to the wind.

**Windlass** (*guindeau*): A winch, powered by hand or motor, for hauling anchors.

**Windsurfer** (*véliplancheur*): see **sailboard**.

**Windward** (*Au vent*): Towards the wind. The direction from which the wind is blowing.

**Windward side** (*côté au vent*): (1) on a sailboat, the side opposite to that on which the mainsail is carried. (2) the side on which the wind is blowing

**Wing-on-Wing** (*ciseaux*): Sailing on a run with the jib and mainsail set on opposite sides.

**Working Jib** (*foc de route*): A normally used jib that has an area about equal to the area of the foretriangle.

**World Geodetic System** (*système international géodésique*): The advent of satellite "soundings" has made it possible to produce a single world model with one datum and one set of dimensions. The latest datum is WGS(19)84 which is used by GPS and in all Vector Charts.

**Woven Roving** (*tissue stratifié*): Loosely woven fiberglass cloth.

**WWNWS** (*WWNS*): **World Wide Navigational Warning System.**

## X

**X-Band** (*Bande X*): the 3 cm radar band used by most recreational boats. Its frequency is about 9400 Mhz. See **S-Band**.

**XTE** (*écart de route*): See **Cross Track Error**.

## Y

**Yaw** (*embarder*): to swing off course, as in a following sea, or caused by bad steering.

**Yawing Moment** (*moment de lacet*): A moment tending to rotate the hull about a vertical axis, usually due to disposition of the centre of effort of the sails outboard of the centre of resistance of the hull.

**Yawl** (*cotre à tapecul*): A two-masted vessel whose mizzen is stepped abaft the rudder post.

## Z

**Zenith** (*Zénith*): The point on the celestial sphere directly overhead of the observer.

**Zenith distance** (*Distance du zénith*): Angular distance along a vertical circle from the zenith to a body: same as co-altitude. The side of the terrestrial navigational triangle between the assumed position (AP) or dead reckoning position (DR) and the geographical position (GP) of the body.

**Zodiac** (*Zodiaque*): Band of the sky extending about 8° to either side of the ecliptic in which the planets and moon appear. Each of the zodiac's 12 areas is named for a constellation and represented by a sign.

**Zone description** (*Nom de zone*): A number including a positive or negative sign added to or subtracted from zone time to obtain **Greenwich mean time**. Zone Description (ZD) is determined by dividing the Lo by 15 and rounding the answer to a whole number. The sign is positive in west longitude and negative in east longitude.

**Zone meridian** (*Méridien central*): The central meridian of a time zone. Those longitudes which are evenly divisible by 15°.

**Zone time** (*Heure du fuseau*): Local mean time usually kept throughout a designated zone based on the nearest meridian with a longitude exactly divisible by 15°.

**Zoom** (*zoom*): A means of magnifying the size of an electronic image on a display screen.

**ZT** (*ZT – heure d'un fuseau*): See **Zone Time**.