

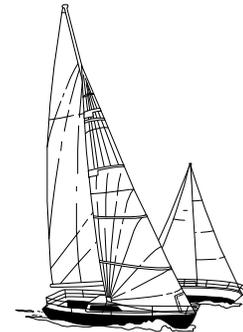
Everything *I* Wanted to Know About:

**NAUTICAL TERMS,
SAILING DICTIONARY,
& BOATING GLOSSARY**

© *By*

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PETER'S NAUTICAL TERMS DICTIONARY & GLOSSARY for BLUEWATER SAILING

INTRODUCTION This dictionary was compiled over many years from multiple sources. Pulling it all together was great fun and a wonderful learning experience. Thumbing through the pages on a cold winter night can be quite enjoyable, especially if you have someone to share your new found wisdom. During long passages at sea, you might even be able to devise word games to help pass the time.

You might consider that sailing, like virtually all professions, has it's own tribal language and customs. Special words and terminology have been created over many years. They are often glibly used by members of each professional community to clearly communicate with one another. The almost unconscious use of these particular words are both a reflection of a desire to be precise but is also sometimes used as an initiation hurdle which sets a standard of acceptance for entering the domain of that particular or peculiar group of people.

You can enjoyably sail for many years without utilizing very many of these terms. However, you would have some or serious concerns if you went to a Doctor and told them that you had a pain in a certain body part and the Doctor replied that part is, "Now don't tell me, that's the arm(?) isn't it?". In the same sense, you might have similar questions if you visit someone's boat and they say, "Watch out for the "??#?%?&?* ", it might be nice to kind of have an idea of what's coming. You'll also have much more fun on the water if you have a passing knowledge of the often fascinating words that have come down to us from thousands of years of human history on the waters.

The dictionary is designed for sailors of all experience levels.. It is intended to provide a comprehensive listing which covers a wide variety words and terms but only very brief definitions and short summaries of information. New sailors should not be dismayed by the size and volume of the entries. Only a few basic and fundamental terms are required to start your adventure on the ocean. Yet this publication should also provide a life long reference volume which should still provide a smile and some information to those more experience people with sea legs and salt water in their veins.

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INTRODUCTION (Continued)

In some cases where multiple definitions are offered, the initial or oldest nautical usage is listed first with subsequent modifications or landlubber usage (by theft) listed later. Similarly, if the origin of the word or term (sometimes obscure) is listed, then only the oldest derivation is discussed. Please remember that languages evolve and a reference to 'English' may be usage from hundreds of years ago and not indicated in current dictionaries.

The material is broadly nautical but does not focus on or emphasize any particular aspect of sea-going terminology. It is specifically arranged for limited definitions which are designed to shallowly cover many topics and is specifically not designed as a comprehensive "Oxford" guide with one, very complete definition and derivation per page.

This dictionary does not specifically address pronunciation. As with other, distinct or tribal languages and dialects that, for many years, were only oral, not written, traditions, and which were gleaned from many different languages, certain nautical words also evolved into somewhat unusual pronunciations. However, that is a subject for another glossary. Please also note that some long words can often be seen spelled as two distinct words or one, long term. This book attempts to utilize the most common approach.

Please also recall that sailors were often at sea for quite some time without suitable companionship. Thus some of the terms might be considered slightly racy or risqué. If you are easily offended or wouldn't like to know about the early but sometimes off color history of some of our current nautical terms you had best stop reading at this point and not proceed.

Please contact me if you have any comments, corrections or additions. I would be happy to include any improvements into future editions. Please have fun with the material, at least as much as you legally can without resorting to using small, furry mammals and a 55 gallon drum of mazola oil. If your appetite for more nautical information is stimulated, all the better to steer you to other people, more sailing or other reference books! Hope you have fun discovering the language of our nautical heritage!!

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THE AUTHOR (why would you want to know anything about him ?)

Contrary to popular myth, Peter was not born as a Son of a Gun with seawater in his veins nor rocked in the cradle of the deep. He started out as a small child, then began to develop a life long love of the sea while graduating from the U.S. Naval Academy. With more than 35 years sailing experience, he served as a U.S. Navy Captain and holds an active Coast Guard Captain's License, with Power, Steam, Sail and Towing endorsements. After more than 4,000 days at sea and a few equator crossings, he was on the right track to become to be Managing Director of Bluewater Sailing, which was founded in 1978. Bluewater is dedicated to offering the finest level of sail education, charter and rental options.

Over the past 35 years Peter has accumulated more than 650,000 kilometers in oceans and seas around the world on board a wide range of vessels from sailboards, sloops, schooners and a 152' square rigged bark to cruisers and aircraft carriers. He was the first person in the world qualified as an Examiner for International Yacht Training (IYT) who was also a certified Instructor Evaluator for the American Sailing Association (ASA).

Peter started sailing and received his B.S. in Aerospace Engineering from the United States Naval Academy, followed by a MS(e) in Nuclear Engineering from the Navy's Nuclear Power School. He later obtained professional certification as a Chief Engineer of Nuclear Ships. Peter also obtained an MBA from Northwestern University, majoring in Finance, International Business and Strategic Policy Planning where he graduated #1 in his class.

Following active duty service with the U.S. Navy, where Peter completed graduate work in celestial navigation, served as a Congressional Aide and directed the largest Division in the Atlantic Fleet. Peter continued to sail while serving as President and Chief Executive Officer of several technically complex public corporations listed on the NASDAQ stock exchange.

Peter is a retired U.S. Navy Captain who was privileged to serve in a near unprecedented 6 assignments as Commanding Officer or Executive Officer of various operations throughout the nation. His awards include the Legion of Merit, Defense Meritorious Service Medal, Navy Commendation Medal and Joint Service Meritorious Unit Award.

After coming to his senses, Peter began to teach sailing and navigation on a full time basis several years prior to consulting on the purchase of Bluewater Sailing in early 1999. Fulfilling various nautical roles he has appeared on NBC's Today Show, CBS, Discovery Channel, E! Entertainment, TLC as well as films and television shows.

PETER'S NAUTICAL TERMS DICTIONARY & GLOSSARY for BLUEWATER SAILING

IF YOU LIKED THIS BOOK,

(If you didn't like it, please don't tell anyone)

TELL YOUR FRIENDS AND CONSIDER THE OTHER TITLES BY THE SAME AUTHOR

Everything *I* Wanted To Know About: BAREBOAT CHARTERING: THEORY AND OPERATIONS
PLUS BOAT INSPECTION & PURCHASE CHECKLIST

Everything *I* Wanted To Know About: CELESTIAL NAVIGATION

Everything *I* Wanted To Know About: MYTHOLOGY

NOTES:

- 1) AKA means 'Also Known As'. This term is used to related a different word with the same definition.
- 2) Reference to similar, opposite or related definitions is accomplished by the tern "See".
- 3) Words used in one definition that are defined elsewhere are Capitalized.

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A 1) 'Alpha' letter of international phonetic alphabet. It is designated in International code by blue and white broad pennant divided vertically. Hoisted on its own it means: Have Diver Down, Keep Clear. 2) Nautical prefix indicating condition or direction. Boat that is drifting is adrift and something off side of boat is abaft. Other common examples of this form: Abash: toward another boat; Awhiff: toward area of low tide; Aglub: sinking; Aduff: seated; Adaft: mentally unbalanced; Asludge: in an oil slick; Abarf: under the weather; Amuck: caught in mud.

AAA Anti-Aircraft Artillery on warships or used against Navy pilots.

A1 Highest insurance rating of quality or class of ship in Lloyd's of London Register of shipping. Ship, hull and gear are in excellent condition for cargo carrying. "A": new or newly restored condition of the hull and "1": for condition of her rigging and gear as well as capacity for freight. 2) Highest class of people or things. 3) The Best. AKA A-1 at Lloyds.

AB Able Bodied Seaman. A first class sailor, a skilled seaman, having passed through his training as an Ordinary Seaman.

ABACK Sail or sails back winded or trimmed to Windward such that it acts to drive a ship in direction of Stern. Ship with Sails force flat against Mast, either by sudden change of wind or in course of Backing Ship.

ABAFT Direction towards rear, after part or Stern of Vessel. Behind, Aft or Astern of. Located at, near or toward the Stern. At the rear of, with reference to a ship or any specified part of a ship. From the Anglo Saxon, 'beaften', behind. Opposite to forward of.

ABAFT THE BEAM Object said to be this when it is behind horizontal line drawn through middle of ship at right angles to ship's Fore and Aft, keel or lengthwise line. Opposite of Forward of the Beam.

ABANDON 1) Anchor is this when it becomes Fouled and left on Bottom with part of its Chain or rope. 2) Wild state in which sailor acquires boat. 3) Wild state in which sailor relinquishes boat.

ABEAM 1) To one side of Vessel, at right angles (90°) to Fore and Aft, Centerline or Keel of Vessel, opposite waist, midships or middle part of ship. 2) An object outside and close off either Port or Starboard side of Vessel. Off side and not on boat.

ABERRATION 1) Apparent displacement of celestial body in direction of earth's motion in orbit caused by motion of earth combined with finite velocity of light. 2) Convergence to different foci of parallel rays of light by lens or mirror. 3) What some of your more interesting guests may be interested in.

ABLATION Wasting of snow or ice by melting or evaporation.

ABLE SEAMAN General term for a sailor who has a great deal of experience in performing the basic tasks of sailing a ship. The most senior, best paid and most prestigious of the three basic Rates of sailors: Able Seaman, Ordinary Seaman and Landsman.

ABOARD On, within or in Vessel. On board. From Latin 'bordure', meaning side. See By The Board.

ABOUT To turn around. In sailing Vessels, to "come about" means to turn and sail in a different direction with the wind and boom on the opposite side of the boat.

ABOVE To pass above a mark is to pass on its windward or weather side.

ABOVE BOARD 1) Any activity which went on above wooden boards of planking which made up Deck would be in open for everyone to see. Honest vessels kept their crews on deck while pirates would keep cutthroat crews below Decks out of sight to avoid suspicion. 2) Fair play and honest dealing. Opposite of Below Board.

ABOVE DECK On Deck, not over it. See Aloft.

ABRAHAM-MAN One who feigns sickness. From parable of Lazarus.

ABRAHAM'S BOSOM Abode of the blessed dead where Lazarus was carried by angels.

ABRASION Rubbing or wearing away.

ABREAST 1) Alongside of, even with, by the side of or side by side. If two Vessels are running side by side, one Vessel is said to be Abreast of the other. 2) Only one?

ABROAD Spread, as in "all sail abroad".

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- ABROHOLOS** Squall frequent from Man
- August between Cabo de Sao Tome and Cabo Frio on
Brazil coast.
- ABSOLUTE ACCURACY** Measure of
ability to determine your true or exact geographic position
or location in latitude and longitude from a navigation or
positioning system such as GPS or Loran-C. See
Repeatable Accuracy.
- ABSOLUTE HUMIDITY** Mass of water
vapor per unit volume of air.
- ABSOLUTE MOTION** Motion relative to
a fixed point.
- ABSOLUTE TEMPERATURE** Temperature
measured from Absolute Zero.
- ABSOLUTE VALUE** Value of a real number
without regard to sign. Thus the Absolute Value of +8 or -
8 is +* or |8|.
- ABSOLUTE ZERO** Theoretical temperature at
which molecular motion ceases = -459.69° F = -273.16° C.
- ABSORPTION** Process by which
radiant energy is absorbed and converted to other forms of
energy.
- A-BURTON** Stowage of casks with
their axes Athwartships. Applying particularly to stores
readily accessible by a Deck Tackle, AKA a burton.
- ABYC** American Boat and Yacht
Council, Inc. Organization that sets voluntary safety and
construction standards for small craft in the U.S.A.
- ABYSS** Very or
particularly deep area of Ocean or any part below 300
Fathoms.
- ABYSSAL PLAIN** See Plain.
- ACCIDENTAL JIBE** Unintended Jibe which
can be very dangerous, including the possibility of making
the crew a lot shorter and/or a lot fewer. See Jibe. AKA
Uncontrolled Jibe.
- ACCOMMODATION** Quarters or
compartments where crew or passengers are berthed.
- ACCOMMODATION LADDER** Flight of portable
steps at Gangway, set against side of Vessel, leading
down Ship's side to small Boat or Pier to enable officers
and visitors to enter and exit Ship via access to and from
Boats coming alongside.
- A-COCKBILL** Having tapered ends
cocked or turned upward. Said of the Anchor when it
hangs from the Cathead, ready for dropping and of the
Yards of a Vessel, when they are placed at an angle to the
Deck. The latter denotes mourning. See Cockbill
- ACCRETION** Accumulation of material on
surface of any object.
- ACCURACY** 1) Navigation: measure of
difference between position indicated by measurement and
true position. 2) Measure of how close outcome of series
of observations or measurements approaches true value of
quantity being determined. See Precision.
- ACLINAL** Without Dip or horizontal.
- ACLINIC** Without Magnetic Dip.
- ACLINIC LINE** Magnetic equator or line
on earth's surface connecting all points of zero magnetic
Dip.
- ACM** Air Combat Maneuvering,
Dogfighting practice.
- ACQUISITION** Selection of those targets
or satellites requiring a tracking procedure and initiation
of their tracking.
- ACT OF GOD** Due to causes beyond human
control. First used in maritime insurance.
- ACTIVE LEG** Segment of a route
currently being traveled.
- ACUTE ANGLE** 1) Angle of less than 90°.
2) A good looking angle.
- ADAMASTER** Hideous phantom sea
monster spirit of the stormy Cape of Good Hope.
- ADF** Automatic Direction Finder, an
advanced variation of a Radio Direction Finder or RDF.
- ADF REVERSAL** Swing of needle on ADF
indicating that station to which ADF is tuned has been
passed.

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ADIABATIC Referring to a thermodynamic change of state of a system in which there is no transfer of heat or mass across boundaries of system.

ADMEASURE Measure a vessel for the purpose of documentation.

ADMIRAL 1) Highest or senior ranking officer in most navies. Naval officer of Flag Rank. From Arabic 'amir-al-baka', prince of the sea; 'amir-al-ma', commander of the water; 'amir-al'bahr', commander of the sea and 'amir-al-amara', commander of commanders. From Moorish 'emir', chief and 'emiral' chief of all chiefs. See Flag Officer. 2) Very large fid, usually used by riggers.

ADMIRALTY 1) Administrative department superintending the British Navy, directed by the Lord Admiral or Board of Admiralty. 2) Pertaining to body of law that governs maritime affairs.

ADMIRALTY CHARTS Charts produced by Great Britain.

ADMIRALTY LAW 1) Law of the sea. Term for maritime law. From British Admiralty department which administers naval affairs. 2) Convoluted body of law which regulates behavior at sea..

ADRAZO Rough and ready system of distilling salt water used aboard Spanish Ships.

ADRIFT 1) Unsecured, loose or unmoored. Afloat, not moored, not aground, fastened or attached to Shore or bottom. Floating free without propulsion or power at will or mercy of sea, wind and tide. 2) Broken loose, undone or gone missing. Term may refer to a Vessel or various parts of a Vessel. 3) Someone late, lost or wandering in their mind. Also 'drifter': a person with no aim in life.

ADVANCE Distance Vessel moves ahead on her old course or initial direction when making a turn. Measured from point where rudder is started over until Heading has changed 90°. From the Latin, 'ante'. See Transfer. 2) Distance vessel moves in initial direction for Heading changes of less than 90°.

ADVANCED LINE OF POSITION Line of position which has been moved forward along course line to allow for run since line was established. Opposite of Retired Line Of Position.

ADVECTION Transport of atmospheric properties solely by mass motion of atmosphere. Wind refers only to air motion while this is transfer of any property of atmosphere such as temperature, humidity, etc. from area to another. Loss or gain of heat resulting from the horizontal movement of air.

ADVECTION FOG See Fog, Advection.

ADZE Long handled carpenter's or cooper's cutting tool, like an ax with blade set at right angles to haft or handle and curving in toward it. Often used by ship-wrights for the shaping of wooden beams. Originally a ship building tool.

AEF/A Auxiliary Electrician Forward / Aft (Nuclear, submarine).

AEGEAN SEA Named for Athenian King Aegeus of Greek mythology whose son, Theseus, promised to hoist a white sail on his voyage home from Crete to signal he was alive. When Theseus forgot, Aegeus, thinking his son had been killed, committed suicide by throwing himself into sea.

AEOLUS Ruler of winds in Greek mythology.

AEROMARINE LIGHT Marine light having part of its beam deflected to an angle of 10° to 15° above horizon for use by aircraft.

A-FARTS Spoken form of A.F.R.T.S. (Armed Forces Radio and Television System), a US system providing television and radio entertainment to forces overseas.

AFFF Aqueous Film Forming Foam. A fire-fighting agent which is mixed with water and sprayed on flammable liquids fires. Pronounced "A triple-F". AKA 'Light Water' for the foam's ability to float on oil or gasoline. Replaced protein foam.

AFFLUENT 1) Stream flowing into larger stream or lake. AKA tributary. 2) What you might, incorrectly, think you must be to enjoy sailing and boating.

AFLOAT Desirable condition of floating. Water-borne. See Aground, Ashore, Floating, Surfaced and Uncovered. From the Anglo Saxon, 'floetan'.

AFRICUS Latin God of the Southwest Wind. AKA Ajerventus, Africanus of Libs.

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AFT Towards, near or at Stern , back part or 'blunt end of the boat'. From Anglo Saxon, 'aeft', rear or back. AKA After. Opposite of Forward. See Aft or Astern.

AFTER Prefix denoting location toward stern.

AFTER BOW SPRING LINE Mooring line running Aft from a point at or near the Bow to Shore to control forward and backward motion of a Vessel in its Berth.

AFTERBURNER System in engine(s) of many tactical aircraft (and very few non-tactical a/c such as SR-71) which dramatically increases thrust at cost of doubling (or more) fuel consumption. Analogous term in UK-based countries is reheat.

AFTER CABIN Cabin in the after part of the ship used by Captain, Commodore, or Admiral, having superior accommodation and usually its own companionway.

AFTER DECK Section of Upper Deck Aft of Superstructure.

AFTERGLOW 1) Broad, high arch of radiance or glow seen occasionally in western sky above highest clouds in deepening Twilight, caused by scattering effect of very fine dust particles suspended in upper atmosphere. 2) Slowly decaying luminescence of cathode ray tube screen or TV after ceasing of excitation by electron beam.

AFTERGUARD 1) Ship's officers who always worked and lived in after area of Vessel. 2) Seamen and people stationed on Quarterdeck and Poop to attend and work the after sails, generally composed of Ordinary Seamen and Landsmen. 3) Owner's party on yachts, most of which had at least some paid crews. 4) Crew leaders in larger racing yachts such as the America's Cup contenders.

AFTERGUY Spinnaker sheet or control line on the Windward side that attaches through a fitting on the Spinnaker Pole to the Tack. Pulls the Spinnaker Pole back and eases it Forward.

AFTERNOON WATCH 1200 - 1600 Watch at sea. Nautical day begins at noon. See Forenoon Watch, Dogwatch, Mid Watch, Night Watch.

AFTER PEAK Near the Stern. Compartment closest to the Stern. See Fore Peak.

AFTERWARD 1) Toward the rear of a ship or behind. 2) Behind in time, later on or later. From the Saxon 'aft' for Stern of a boat and 'ward' meant 'in the direction of'.

AGE OF DIURNAL INEQUALITY Time interval between maximum semimonthly north or south Declination of Moon and maximum effect of Declination upon range of Tide (increase height) or speed difference of Tidal Current between two high / low waters or flood / ebb Currents. These are called Tropic Tides. AKA Diurnal Age.

AGE OF PARALLAX INEQUALITY Time interval between Perigee of Moon and Maximum effect of parallax upon Range of Tide or speed of Tidal Current. See Parallax Inequality.

AGE OF PHASE INEQUALITY Time interval between new or full moon and maximum of effect of these phases upon Range of Tide or speed of Tidal Current. AKA Age of Tide.

AGE OF THE MOON Elapsed time, usually expressed in days, since the last new moon. See Phases Of The Moon.

AGE OF THE TIDE Time interval between new or full moon and the maximum effect of these different phases of the moon upon the Range of the Tide or speed of the Tidal Current. Range and speed of Current tend to increase with the Age of the Tide and result in Spring Tides. See Age Of Phase Inequality.

AGETON Divided triangle method of sight reduction in which a perpendicular is dropped from Geographic Position of celestial body to Meridian of Observer. Invented by Rear Admiral Ageton, U.S. Navy.

AGGER See Double Tide.

AGONIC LINE Imaginary Line of points on earth's surface or on Chart joining points along which there is no magnetic Compass Variation. From the Greek, 'agonos', meaning no angle. See isogonic Line.

AGROUND Hull, Keel or bottom Fast, touching, resting, stuck fast or lodged on Sea bottom. Stuck and unable to move in shallow water.

AGULHAS CURRENT Generally southwestward and swift flowing Indian Ocean Current off the south Coast of South Africa.

AHEAD In front of Vessel bearing approximately 000° relative. In forward direction. Term often used loosely for Dead Ahead, exactly 000° relative. Opposite of Astern.

AHEAD REACH Distance traveled by Vessel proceeding Ahead at full power from time engines are reversed until Vessel is at full stop.

AHOY 1) Dreaded battle or war cry of Vikings. See Hoi. 2) Traditional nautical hailing call, salutation, cry or exclamation used to attract attention, usually between ships.

A - HULL, (LYING) Condition of Vessel making no way in Strom, allowing wind and sea to determine position of Ship. Sailing ship driven before the wind, under bare poles, No Sails or only storm sails and Helm lashed Alee in very heavy weather is said to lie like this. See Hulling.

AID Abbreviation for Aid To Navigation.

AID (S) TO NAVIGATION Artificial device, object or structure external (outside of) Vessel such as charted markers on land or sea that are established and specifically intended or designed to assist Navigators avoid or warn of danger, Fix or determine their position or define safe course. Buoys, beacons, Lights, Lighthouse, radio beacons, Channel markers, daybeacons etc. used to warn of dangers or obstructions to Navigation and supplement natural landmarks to indicate safe and unsafe waters. Information published or broadcast to assist mariners. AKA Aid or ATON. See Navigational Aid.

AIR 1) Wind. 2) Mixture of gases comprising earth's atmosphere. See Atmosphere.

AIR ALMANAC 1) Periodical publication of astronomical data designed primarily for air navigation, but often used in marine navigation. 2) Joint publication of U.S. Naval Observatory and H.M. Nautical Almanac Office, Royal Greenwich Observatory. Information similar to Nautical Almanac but is given to precision of 1' of arc (0.1' for sun and Aries) and 1 second of time, at intervals of 10 minutes.

AIR(E)DALE Any Naval personnel connected with Naval aviation.

AIR MASS Extensive body or large portion of air that has the same uniform horizontal physical characteristics of temperature, density, humidity, etc. Properties of it are determined by characteristics of region which it forms. It

is cold or warm if it is colder or warmer than surrounding air

AIR MASS CLASSIFICATION Classified according to source regions. Four such regions are generally recognized: a) equatorial (E), Doldrum area between north and south Trades; b) tropical (T), Trade wind and lower temperate regions; c) polar (P), higher temperate Latitudes and d) Arctic or Antarctic (A). Classification is general indication of relative temperature as well as Latitude of origin. Further classified as maritime (m) or continental (c) depending upon whether they form over water or land and indicates relative moisture content of Air Mass. Also sometimes tropical or polar Air Masses classified whether warm (w) or cold (k) relative to underlying surface.

AIRPORT An opening in the side of a ship commonly referred to as a porthole. Portlight which opens for ventilation purposes. See Deadlight and Portlight.

AIR TEMPERATURE CORRECTION Correction due to nonstandard air temperature, particularly Sextant Altitude correction due to changes in altitude and refraction caused by difference between actual temperature and standard temperature used in computation of Nautical Almanac refraction table which is based upon air temperature of 50°F or 10°C. Refraction is greater at lower temperatures

ALASKA CURRENT North Pacific Ocean current flowing counterclockwise in Gulf of Alaska. Northward flowing division of Aleutian Current

ALBATROSS 1) Family of large, long winged web footed seabirds related to Petrels and Shearwaters. Capable of very long flights, sometimes following ships at sea for weeks. Held in reverence by mariners as omen of good luck. Believed by sailors to contain souls of dead sailors, and so killing one was thought to bring bad luck. From Portuguese 'alcatraz' meaning large pelican. AKA Gooney Birds, mollymawks or mollyhawks from Dutch 'mollemok' meaning stupid gulls. 2) Encumbrance or handicap.

ALCOHOL STOVE Compact stove used in small boat galleys to bring liquids to body temperature and solid foods to cabin temperature, usually within one hour. Also used sometimes by boat owners, together with a valid insurance policy, to convert their craft into a liquid asset.

ALDIS LAMP Hand held spotlight with a trigger like switch, used for signaling.

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ALEE On or toward the Lee or Leeward, away from the Wind, on the sheltered side of the ship or island. See Hard Alee and Lee.

ALEUTIAN CURRENT Eastward flowing North Pacific Ocean current which lies north of North Pacific Current. As it approaches coast of North America it divides to form northward flowing Alaska Current and southward flowing California Current. AKA Subarctic Current.

ALGA Plant of simple structure which grows chiefly in water such as various forms of seaweed. Ranges in size from microscopic to giant kelp. Plural is algae.

ALIDADE Instrument, movable ring or bearing circle provided with verniers round edge fitted with telescope, compasses or other navigational instruments to facilitate observation of or for taking bearings or other readings. From the Arabic, 'alhidadah', for turning radius. AKA Telescopic Alidade.

ALLIGATOR From Spanish 'el largarto'. See Crocodile Tears.

ALL AFTER RT proword meaning all words following a given word or phrase.

ALL A TAUT Everything ready to go, shipshape and in good order for putting to sea. AKA All Taut.

ALL AT SEA 1) Most early mariners hugged the coastlines when they voyaged from place to place because their navigational aids were crude and inaccurate. However they were often blown far out to sea where they had no landmarks or bearings to guide them and thus used term to describe condition of any confused, helpless person. 2) Feeling of complete helplessness, bewilderment or confusion.

ALL BEFORE RT proword meaning all words that precede a given word or phrase.

ALL CLEWED UP See Clewed Up.

ALL IN THE SAME BOAT Two or more people sharing same risks or living under similar conditions. From people adrift in same lifeboat. AKA 'to stick or have an oar in another's boat' meaning to meddle in someone else's affairs.

ALLEY 1) A shipboard passageway. 2) The Passageway on a galley. 3) Where the propeller shaft runs.

ALLEYWAY Passageway, giving access to cabins or other parts of a ship, which on land would be called a corridor.

ALL HANDS AND THE COOK Everyone on Deck to deal with a problem.

ALLIGATOR 1) Mississippi River Keelboat sailor. 2) Your close, personal, Florida friend.

ALL IN A DAY'S WORK 1) Day's work is reckoning or account of ship's course during 24 hour period between noon and noon. 2) Regular work period.

ALLOWANCE Money paid for various purposes or services and distinct from pay.

ALL POOPED Feeling like seamen caught on Poop or Aft Deck of Ship when wave crashed down and washer over them.

ALL SEWN UP Dead sailors would be sewn inside their hammock with a canon ball at their feet and the last stitch sewn through their nose to make sure that they were really dead. (I hate when than happens, Ouch!) See Sewn Up.

ALL SQUARED UP Business of tidying the Yards.

ALL WEATHER Designed or equipped to perform by day or night under any weather conditions.

ALMANAC Periodical publication of ephemeral astronomical data. If information is given in a form and to a precision suitable for marine navigation, it is called Nautical Almanac or designed primarily for air navigation, called Air Almanac. See Astronomical Almanac and Ephemeris.

ALMUCANTAR Small Circle on Celestial Sphere parallel to Horizon. AKA Circle of Equal Altitude or Parallel of Altitude.

ALMUCANTAR STAFF Ancient instrument formerly used for Altitude observations.

ALOFT Up Mast or above Deck of boat, usually Overhead in Rigging of Ship or on Yards. Opposite of Alow.

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ALONGSIDE Beside.

ALONGSHORE CURRENT See Longshore Current.

ALOOF 1) Keeping Ship's head pointing high into wind to clear Lee Shore. From Dutch word 'loef', meaning Windward. Ship cannot hold to Windward except by keeping Bow away from wind thus yielding definitions # 2 and # 3. 2) One who stands apart. Be reserved or reticent. 3) Steering clear of someone or something. Keep away from. Keep at a distance. See Stand Aloof.

ALOW On Deck. Opposite of Aloft.

ALPHA See A.

ALPHANUMERIC Referring to set of computer characters consisting of alphabetic and numeric symbols.

ALTAIR Eagle star, found in the northern constellation Aquila. One of the three brightest stars that form the summer triangle.

ALTERNATING 1) Referring to periodic changes in color of Lighted Aid To Navigation. 2) Light that alternately (in a given sequence) shows different colors or a continuous, steady light which shows a change of colors. AKA Alternating Light.

ALTERNATING CURRENT Electric current that continually changes in magnitude and periodically reverses polarity.

ALTERNATING FIXE AND FLASHING LIGHT Fixed light varied at regular intervals by single flash of greater luminous intensity, with color variations in either fixed light or flash, or both. See Alternating Light.

ALTERNATING FIXED AND GROUP FLASHING LIGHT Fixed light varied at regular intervals by group of two or more flashes of greater luminous intensity, with color variations in either fixed light or flashes or both.

ALTERNATING FLASHING LIGHT Light showing single flash with color variations at regular intervals, duration of light being shorter than that of darkness. See Flashing Light.

ALTERNATING GROUP FLASHING LIGHT Group Flashing Light which show periodic color change.

ALTERNATING GROUP OCCULTING LIGHT Group Occulting Light which shows periodic color change.

ALTERNATING LIGHT Light showing different colors alternately. See Alternating.

ALTERNATING Occulting LIGHT Light totally eclipsed at regular intervals, duration of light always being longer than duration of darkness which show periodic color change. See Alternating Light.

ALTIMETER Aneroid Barometer type instrument used in aircraft to measure height or Altitude above the earth's surface.

ALTITUDE 1) Angular distance or height of a body in heavens above Horizon, used in Celestial Navigation. Arc of vertical circle between Horizon and point on Celestial Sphere, measured upward from Horizon. Measure taken at sea using a Quadrant or Sextant and used to help determine a ship's longitude and latitude. Opposite of Negative Altitude or Depression. 2) Vertical distance above the Earth's surface.

ALTITUDE, APPARENT (Ha) Sextant Altitude corrected only for inaccuracies in reading (instrument, personal, index errors corrections) and inaccuracies in reference level (primarily dip or Coriolis/acceleration). AKA height, apparent or rectified altitude. See Altitude, Observed and Altitude, Sextant.

ALTITUDE, APPROXIMATE Altitude determined by inexact means, such as estimation by Star Finder or star Chart..

ALTITUDE CIRCLE See Parallel of Altitude.

ALTITUDE, COMPUTED (HC)Altitude after interpolation or if determined by calculation, mechanical device or graphics. (If HC minus [-] : object is below Horizon). AKA calculated altitude or height, computed. See Altitude, Tabulated.

ALTITUDE DIFFERENCE 1) See Altitude Intercept. 2) Change in altitude of Celestial Body occurring with change in Declination, Latitude, or Hour Angle.

ALTITUDE INTERCEPT (a) Difference in minutes of arc between Computed and Observed Altitudes. Labeled 'T' (toward) or 'A' (away) if observed altitude is greater or smaller than computed altitude. AKA Altitude Difference or Intercept. AKA altitude difference.

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ALTITUDE INTERCEPT METHOD See St. Hilaire Method.

ALTITUDE, MERIDIAN Altitude of Celestial Body on Celestial Meridian.

ALTITUDE, OBSERVED (Ho) Fully corrected observed Altitude from celestial horizon to object. AKA height observed or corrected sextant altitude.

ALTITUDE, SEXTANT (Hs) Actual Altitude on or indicated by Sextant. AKA height, sextant.

ALTITUDE, TABULATED Altitude taken directly from table, before interpolation.

ALTO 1) Prefix used in cloud classification to indicate middle level (6,500-20,000'). See Cirro. 2) Nice voice range when singing show tunes on board Ship.

ALTOCUMULUS Clouds within middle level composed of flattened globular masses, smallest elements of regularly arranged layers being fairly thin, with or without shading. See Cloud Classification.

ALTOSTRATUS Sheet of gray or bluish Cloud with middle level. Sometimes composed of compact mass of dark, thick, gray clouds of fibrous structure. At other times, sheet is thin and through it sun or moon can be seen dimly. See Cloud Classification.

ALUMINUM CLOUD Navy F-14 aircraft. From their large or huge size.

AM Amplitude Modulation. One form of broadcast radio transmission, modulating or changing Amplitude of carrier wave in accordance with the strength of the audio signal.

A.M. Ante Meridian, before noon in Zone Time or period of time between midnight (0000) and noon (1200). See Post Meridian.

AMAZON RIVER Second longest river in the world (after the Nile), but carries 50 times more water volume, nearly one fifth of Earth's running fresh water. Nearly 7 million cubic feet per second keeps the Atlantic water fresh instead of salt up to 200 miles offshore.

AMAZONS Mythical (?) race of brave and fierce warrior women who did not tolerate the presence of men. Their only contact with the opposite sex was at an annual festival. Men were dispassionately used and then

transformed into eunuchs and kept as slaves or expediently disposed of. Only female children were kept with the boys sent away. From Greek words for breastless; 'a' meaning 'without' plus 'maxos' meaning 'breast' since the tribe cut or burned off their right breasts so as not to impeded the drawing of their bows.

AMBERGRIS Waxlike substance of marbled, ashy color produced in the intestines of the sperm whale and found floating in tropical seas. It was odoriferous and used in perfumes.

AMBIGUITY Condition in navigation when given set of observations defines more than one point, direction Line of Position, or surface of position. See Cocked Hat.

AMERICA, COLUMBIA North and South America were named after Americus Vespucci who explored the New World in 1499-1500 by cartographers Waldseemuller and Mercator, partially because Columbus refused to admit he had discovered a new continent.

AMERICAN PRACTICAL NAVIGATOR (BOWDITCH) 1) 1) Navigational text and reference book published by the Defense Mapping Agency (DMA) which contains extensive navigation information. From Nathaniel Bowditch and AKA Bowditch. 2) Ancient nautical treatise, generally thought to deal with navigation, which to the present day has resisted all attempts to decipher it. Often found on board ship as a decorative element or paperweight.

AMERICA'S CUP Originally called the Hundred Guinea Cup offered by Royal Yacht Squadron to the winner of the 1875 international yacht race around the Isle of Wight.

AMIDSHIP (S) 1) At, near, in center, center portion, middle or toward middle of Vessel with reference to either its length or breadth or on Centerline. Between Fore and Aft or middle section of Vessel where she is widest. Point of intersection of two lines; one drawn From Stem To Stern, other across Beam (or widest part of Vessel) which is actual midships of Vessel. Amidships also locates any object or part of a Vessel lying on or above Keel. From Dutch, 'midscheeps'. 2) Condition of being surrounded by boats.

AMMETER Instrument for measuring electrical current in amperes.

AMPERE Base unit of electric current.

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- AMPERE PER METER** Derived unit of magnetic field strength.
- AMPHIDROMIC POINT** Point on tidal Chart where Cotidal Lines meet.
- AMPHIDROMIC REGION** Area surrounding no-tide point from which the radiating Cotidal Lines progress through all hours of tidal cycle.
- AMPHITRITE** Goddess of the Sea in Greek mythology, wife of Poseidon and mother of Triton. Nereid meaning 'pretty ankles'. See Doris, Nereus, Oceanus, Oceanids and Portunus.
- AMPLITUDE** 1) Angular distance of Celestial Body north or south of Prime Vertical Circle. Angle at Zenith between Prime Vertical Circle and Vertical Circle through Celestial Body measured north or south from Prime Vertical to Vertical Circle. 2) Maximum value of displacement of wave from zero position. 3) One half Range of constituent Tide or maximum speed of constituent Current.
- AMPLITUDE COMPASS** Compass intended primarily for measuring Amplitude, graduated from 0° at east and west to 90° at north and south.
- AMPLITUDE MODULATION** See AM.
- AMVER SYSTEM** See Automated Mutual Assistance Vessel Rescue System.
- ANABATIC WIND** Any wind blowing up an incline. Opposite of Katabatic Wind.
- ANADAMA BREAD** Yankee cornmeal recipe that was delicious and would not spoil on long sea voyages. From sailor's call to his wife 'Anna, damn, 'er'. Must curse before eating this bread.
- ANALEMMA** Graduated scale of Sun's Declination and Equation of Time for each day of year located in Torrid Zone on terrestrial globe.
- ANCHOR** 1) Heavy, metal device shaped to grip or bite into Seabed or Bottom or for Mooring floating object to the bottom and Fastened to Chain or Line. Used to secure or hold Vessel to sea floor or hold in position, partly because of its weight, but chiefly because designed shape digs into Bottom From the Greek, 'agkura'. See Arms, Backs, Catted, Danforth, Eye, Fished, Flukes, Shank, Stocks, Weigh. 2) Base of strength or symbol of hope. 3) Device designed to bring up mud samples from bottom at inopportune or unexpected times. 4) Any of a number of heavy, hook-shaped devices that are dropped over the side of the boat on end of length of rope and/or chain, and which is designed to hold vessel securely in place, until a) wind exceeds 2 knots, b) owner and crew depart or c) 0300.
- ANCHORAGE** 1) Customary, suitable and usually designated harbor area or place where Vessels may Anchor in relation to wind, seas and Bottom. It is usually protected from wind and waves, of sufficient Depth and clean Bottom into which Anchor will bite in order to provide Vessel with safe Moorings. 2) Destination at day's end. Always found at junction of two charts, in gutter of chart book or on chart not on board. 3) Any location on water where at least twenty boats may be accommodated in sufficient proximity to one another so that 10 decibel sound made by member of crew of any one boat may be heard clearly by person of average hearing.
- ANCHORAGE BUOY** Buoy which marks limits of Anchorage, not to be confused with Mooring Buoy.
- ANCHORAGE CHART** Nautical Chart showing prescribed or recommended Anchorages.
- ANCHORAGE, EXAMINATION** Anchorage at which boats wait until entry examination is complete.
- ANCHORAGE MARK** Navigation Mark which indicates an Anchorage area or defines its limits.
- ANCHORAGE, QUARANTINE** Anchorage set aside for ships in Quarantine. 'Q' flag is flown here.
- ANCHOR ALARM** Feature of many GPS, Loran Receivers and Depth Sounders that can be set to warn you that you are dragging Anchor.
- ANCHOR BEND** Specific Knot, generally used to Fasten an Anchor Line to an Anchor. AKA Fisherman's Bend.
- ANCHOR BUOY** Buoy marking position of Anchor on bottom, usually painted green for Starboard Anchor and red for Port Anchor. Secured to Crown of anchor by buoy Rope.
- ANCHOR CABLE** Correct term for Anchor Rode.
- ANCHOR CHAIN** Incorrect term for Anchor Rode since all Chains are Cables but not all Cables are Chains.

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ANCHOR ICE Submerged ice attached or anchored to bottom, irrespective of the nature of its formation.

ANCHOR LIGHT 1) All round, 360° white Light shown from vessel to indicate its status and position when riding at Anchor, usually at highest point of boat. Required by Navigation Rules and illuminated when Anchored or Moored at night, located at the top of Mast. AKA Riding Light. See Masthead Light. 2) Small light used to discharge battery before daylight.

ANCHOR RING Large ring on Shank of Anchor for attaching or bending on Anchor Cable or Rope.

ANCHOR RODE Line, Rope, Chain or steel cable leading from Boat to Anchor and used to hold Vessel Fast to Anchor.

ANCHOR'S AWEIGH 1) Anchor has broken free from bottom. 2) Song by Charles Zimmerman and Alfred Miles composed for 1906 Army Navy football game.

ANCHOR SHACKLE Secures Anchor Chain to Anchor.

ANCHOR WATCH Crew members kept alert on Deck standing watch while a Vessel is at Anchor or Moored in order to cope with unexpected situations. It's easier to watch the Vessel than to hold your breath underwater while attempting to actually watch the anchor.

ANDREW, THE British slang for Royal Navy. From Andrew Millar or Miller, notorious Press Gang leader who Shanghaied so many men into Navy that victims thought it belonged to him. AKA Andrew.

ANDROMEDA Constellation of the northern hemisphere, representing the mythical Andromeda, daughter of Cepheus and Cassiopeia and wife of Perseus, who rescued her from a sea monster.

ANEMOMETER Device or instrument for measuring wind speed and sometimes velocity which includes both speed and direction. From the Greek, 'anem', wind and 'metron', measure. See Wind Indicator and Vane.

ANEROID BAROMETER Device or instrument to measure, determine and indicate air pressure of the atmosphere for meteorology, using a mechanical means,

rather than a liquid such as mercury. Pressure is generally indicated as the equivalent of so many Millibars, or inches of mercury. See Mercurial Barometer.

ANGEL Radar echo caused by physical phenomenon which cannot be seen.

ANGEL WITH A SILVER HOOK Fisherman who fails to catch anything but doesn't want to go home empty handed and thus buys fish with silver coin to conceal his failure.

ANGLE OF ATTACK 1) Angle between the Sail and the Apparent Wind, measured as the angle of the wind to the sail's chord. 2) Angle between the Rudder or Centerline and the water.

ANGLE OF CUT Smaller angular difference of two Bearings or Lines of Position.

ANGLE OF DEPRESSION Angle in vertical plane between horizontal and descending line. AKA Depression Angle. See Angle of Elevation.

ANGLE OF DEVIATION Angle through which ray is bent by refraction.

ANGLE OF ELEVATION Angle in vertical plane between horizontal and ascending line, as from observer to object. AKA Elevation Angle. Negative angle of elevation is usually called Angle Of Depression.

ANGLE OF ENTRANCE Angle forward waterlines make with the centerline at their forward ends.

ANGLE OF INCIDENCE Angle between line of motion radiant energy ray and the perpendicular to surface, at point of impingement. Angle is numerically equal to Angle Of reflection.

ANGLE OF REFLECTION Angle between line of motion of reflected radiant energy ray and the perpendicular to surface at point of reflection. Angle is numerically equal to Angle Of Incidence.

ANGLE OF REFRACTION Angle between refracted ray and the perpendicular to the refracting surface.

ANGLE OF ROLL Angle between transverse axis of craft and horizontal. AKA Roll Angle.

ANGLE OF UNCERTAINTY Horizontal angle of region of indefinite characteristic near sector boundaries of Sector Light. AKA Arc Of Uncertainty.

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ANGULAR DISTORTION Distortion in map projection because of non-conformity.

ANGULAR RESOLUTION See Bearing Resolution.

ANGULATED SAIL

ANNIE OAKLEY Nickname of an early parachute Spinnaker for racing sailboats that had a series of holes on its center seam.

ANNUAL Pertaining to a year; yearly.

ANNUAL ABERRATION See Aberration.

ANNULAR Ring-shaped.

ANNULAR ECLIPSE Eclipse in which thin ring of light appears around obscuring body. Annular solar eclipses occur, but never annular lunar eclipses.

ANNODE Positive electrode toward which negative ions are drawn. See Cathode.

ANNUNCIATOR Device for transmitting orders from the bridge of a ship to the engine room, generally for the main engines. From the Latin, 'annutilatus', announce.

ANOMALY 1) Departure from strict characteristics of type, pattern, scheme, etc. 2) Angle used in mathematical description of orbit of one body about another. 3) Departure of local mean value of meteorological element from mean value for Latitude. See Magnetic Anomaly.

ANTARCTIC Referring to Antarctic region.

ANTARCTIC AIR Type of air whose characteristics are developed in Antarctic region. Appears to be colder at surface in all seasons and at all levels in fall and winter than Arctic Air.

ANTARCTIC CIRCLE Parallel of Latitude at about 66° 33'S, marking norther limit of south Frigid Zone. Latitude is complement of sun's greatest southerly Declination. Marks approximate northern limit at which sun becomes circumpolar. Actual limit is extended somewhat by combined effect of Refraction, Semidiameter of Sun, Parallax and height of observer's eye above earth's surface. AKA South Polar Circle. See Arctic or North Polar Circle.

ANTARCTIC CIRCUMPOLAR CURRENT See West Wind Drift.

ANTARCTIC FRONT Semi-permanent, semi-continuous Front between Antarctic air of continent and polar air of souther oceans. Generally comparable to Arctic Front of Northern Hemisphere.

ANTARCTIC WHITEOUT Obliteration of contrast between surface features in Antarctic when covering of snow obscuring all landmarks is accompanied by overcast sky, resulting in absence of shadows and unrelieved expanse of white with earth and sky blending such that Horizon is not distinguishable. Similar occurrence in to Arctic Whiteout.

ANTARES Red supergiant star, the brightest in the southern sky constellation Scorpius. It is said to be the heart of the scorpion.

ANTE MERIDIAN See A.M.

ANTENNA 1) Roman name for ship's long, high peaked, wooden, horizontal Yard from which sails were hung. From Greek, "anateinein" to stretch forth. 2) Horns of various insects. 3) Projecting rod, feeler, structure or device use to collect or radiate electromagnetic waves such as radio and television receptors.

ANTENNA ARRAY Combination of antennas.

ANTICORONA Diffraction phenomenon very similar to but complementary to Corona, appearing at point directly opposite to sun or moon from observer. AKA Broken Bow or Glory.

ANTICYCLONE Region of higher atmospheric pressure. In the northern hemisphere, winds rotate in a clockwise direction and away from the center of high pressure.

ANTHELION Rare kind of halo, which appears as bright spot at same Altitude as sun and 180° from it in Azimuth. See Parhelion.

ANTICORONA Diffraction phenomenon very similar to but complementary to Corona, appearing at point directly opposite to Sun or Moon from observer. AKA Broken Bow or Glory.

ANTICREPUSCULAR ARCH See Antitwilight.

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ANTICREPUSCULAR RAYS Extensions of Crepuscular Rays, converging toward point 180° from sun.

ANTICYCLONE Approximately circular portion of atmosphere having relatively high atmospheric pressure and winds which blow clockwise around center in Northern Hemisphere and counterclockwise in Southern Hemisphere. Anticyclone is characterized by good weather. AKA High. See Cyclone.

ANTICYCLONIC WINDS Winds associated with high pressure area and constituting part of Anticyclone.

ANTI-FOULING Type of paint, used on the bottom's of boats, that helps repel barnacles, marine grass and many other undesirable adhesions.

ANTILLES Arc of tropical islands in the Caribbean Sea from the southern point of Florida to the coast of South America, AKA West Indies.

ANTILLES CURRENT Current originates in vicinity of Leeward Islands as part of Atlantic North Equatorial Current. Flow along northern side of Greater Antilles. It eventually joins Florida Current north of Grand Bahama Island to form Gulf Stream.

ANTIPODE Anything exactly opposite to something else.

ANTIPODEAN DAY Day gained crossing the International Dateline. From the Greek, 'hoi antipodes', roughly meaning opposite.

ANTIPODES Term used to refer to Australia and New Zealand, so called because they lie at the opposite end of the earth (the Antipodes) from England.

ANTISCORBUTIC Of use against Scurvy. (a good thing)

ANTISOLAR POINT Point on Celestial Sphere 180° from sun.

ANTITRADES Prevailing western winds which blow over and in the opposite direction to Trade Winds. AKA Countertrades.

ANTITWILIGHT Pink or purplish zone of illumination bordering shadow of earth in dark part of sky opposite sun after sunset or before sunrise. AKA Anticrepuscular Arch.

ANTI-VENTILATION PLATE Flat plate on outboard engine helps prevent Prop from drawing in surface air and losing its grip on water.

ANVIL CLOUD Heavy Cumulus or Cumulonimbus having anvil like upper part.

ANVIL TOP Shape of the top of a fully developed Cumulonimbus cloud in a thunderstorm.

ANY PORT IN A STORM 1) Origin is obscure. 2) Anything will suffice when in need.

AP Assumed Position.

APEX Highest point of something, such as cone, triangle or maximum Latitude or Vertex of Great Circle.

APHELION Point in elliptical orbit of body about sun farthest from sun. Opposite of Perihelion.

APHYLACTIC MAP PROJECTION Map projection which is neither Conformal nor Equal Area. AKA Arbitrary Map Projection.

APLUSTER An ornament on a Vessel's stern. Also a term for a bas relief name board on the transom. AKA Aplustre.

APOAPSIS See Apocenter.

APOCENTER Point in elliptical orbit which is farthest distance from focus where attracting mass is located. It is at one end of major axis of orbital ellipse. AKA Apoapsis or Apofocus. Opposite of Pericenter, Perifocus or Periapsis.

APOFOCUS See Apocenter.

APOGEAN RANGE Average Semidiurnal Range of Tide occurring at time of Apogean Tides. It is smaller than Mean Range, where type of Tide is either Semidiurnal or Mixed, and is of no practical significance where type of tide is Diurnal.

APOGEAN TIDAL CURRENTS Tidal Currents of decreased speed occurring monthly as result of moon being at Apogee.

APOGEAN TIDE (S) Tides of decreased Range occurring monthly as result of moon being at Apogee. Occur when the moon is at the point in its orbit farthest from the earth. See Perigean Tide.

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APOGEE Point in non-circular orbit of moon, earth, etc. which is farthest away from center of attraction. Opposite of Perigee. See Apocenter and Pericenter.

APOSTLES Nickname for Knights, large single Bitts on the Deck of a square rigger. Usually 12 of them.

APPAREL All the removable gear on a Vessel. Sailor's term for making fit or fitting out a Vessel. From the French, 'apareille', meaning equipment. See Furniture.

APPARENT ALTITUDE See Altitude, Apparent.

APPARENT HORIZON See Visible Horizon.

APPARENT MOTION Motion relative to specified or implied reference point which may itself be in motion. Usually refers to movement of celestial bodies as observed from earth. AKA Relative Movement or Relative Motion.

APPARENT NOON. Twelve o'clock Apparent Time, or instant Apparent sun is over Upper Branch of Meridian. It may be either local or Greenwich depending upon the reference Meridian. High Noon is Local Apparent Noon.

APPARENT PLACE Position on Celestial Sphere at which Celestial body would be seen if effects of Refraction, Diurnal Aberration, and Geocentric Parallax were removed; position at which object would actually be seen from center of earth. AKA Apparent Position.

APPARENT POSITION See Apparent Place

APPARENT PRECESSION Apparent change in direction of axis of rotation of spinning body, such as gyroscope, due to rotation of earth. To observer on rotating earth, gyroscope appears to turn or precess as result of gyroscopic inertia or rigidity in space.

APPARENT SECULAR TREND Non-periodic tendency of sea level to rise, fall and / or remain stationary with time. Word 'apparent' is used since it is often not possible to know whether trend is truly non-periodic or merely segment of very long oscillation.

APPARENT SHORELINE Line drawn on Chart in lieu of Mean High Water line or mean water level line in areas where either may be obscured by marsh, mangrove, cypress, or other marine vegetation. Line represents intersection of appropriate Datum with outer limits of vegetation and appears to Navigator as Shoreline.

APPARENT SIDEREAL TIME See Sidereal Time.

APPARENT SOLAR DAY Duration of one rotation of earth on its axis with respect to apparent sun. It is measured by successive transit of apparent sun over lower branch of Meridian. Its length is 24 hours of Apparent Time and averages length of Mean Solar Day, but varies somewhat from day to day.

APPARENT SUN Actual sun as it appears in sky. AKA True Sun. See Dynamical Mean Sun and Mean Sun.

APPARENT TIME Time based upon rotation of earth relative to Apparent or True Sun. It is time shown by sun dial. It may be designated as either local or Greenwich depending whether local or Greenwich Meridian is used as reference. AKA True Solar Time. See Equation of Time.

APPARENT WIND Wind speed, force or strength and direction relative to a moving Vessel and measured or felt from the Deck on board boat. It is a combination of True Wind and the boat's speed and direction. It varies with changes in any of the prior categories. Motion of a boat Under Way creates this effective wind, which can be indicated by a Telltale or instruments, acting on Sails or Hull. It varies from the True or actual Wind. AKA Relative Wind.

APPENDAGE Rudder, Keel, Centerboard, or Skeg.

APPROACH CHART Chart used to approach Harbor. See Chart Classification By Scale.

APPROXIMATE ALTITUDE See Altitude, Approximate.

APPULSE 1) Near approach of one celestial body to another on Celestial Sphere, as in Occultation, Conjunction, etc. 2) Penumbral eclipse of moon.

APRON Gentle slope on sea floor with generally smooth surface, particularly as found around groups of islands or sea mounts. AKA Archipelagic Apron. 2) Area of Wharf or Quay for handling Cargo.

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3) Sloping underwater extension of an iceberg. 4) Outwash plain along front of glacier.

APSE LINE See Line of Apsides.

APSIS Either of two orbital points nearest or farthest from center of attraction such as Perihelion and Aphelion or Perigee and Apogee. See Line of Apsides.

AQUANAUT, OCEANAUT Scientist-explorers who work and live in the sea for long periods. From Greek 'nautes', meaning sailor.

AQUEDUCT 1) Conduit or artificial channel for conveyance of water, often elevated, especially one for transport of large water quantities that flows by gravitation. 2) Flying fowl that floats on water.

AQUILO Roman God of the North winds. AKA Boreas in Greek.

ACQUISITION TIME Time it takes for GPS unit to acquire lock onto enough satellites (three for a 2D and four for a 3D) position fix.

ARBITRARY MAP PROJECTION See Aphyllactic Map Projection.

ARC 1) Part of curved line or segment of a circle. See Angular Distance. 2) Semi-circular graduated scale of an instrument for measuring angles. See Excess of Arc.

ARCCOS (COS⁻¹) 1) Inverse of Cosine. 2) 1 / Cos

ARCHED SQUALL Squall which is relatively high in center, tapering off on both sides.

ARCIPELAGIC APRON See Apron.

ARCHIPELAGO 1) Any sea area or broad expanse of water containing many scattered islands or groups of islands. From Italian word for Aegean Sea: 'arcipelago' meaning chief sea. 2) Group of such islands or geographically related group of islands.

ARC OF UNCERTAINTY See Angle of Uncertainty.

ARC OF VISIBILITY Arc of a light sector or portion of Horizon measured in Degrees over which a lighted Aid to Navigation is visible. Designated by its limiting bearings as observed from seaward.

ARCSINE (SIN⁻¹) Arcsine = 1 / Sin

ARCS OF LOWITZ Oblique, rare, downward extensions of Parhelia of 22°, concave toward sun, with red inner borders. Formed by Refracting ice crystals oscillating about vertical, such as with snowflakes.

ARCTANGENT (TAN⁻¹) Arctangent = 1 / Tan

ARCTIC 1) Region within Arctic Circle. 2) Northern regions in general, characterized by very low temperatures. 3) Intense cold.

ARCTIC AIR Type of air which develops mostly in winter over Arctic. It is cold aloft and extends to great heights, but surface temperatures are often higher than those of Polar. See Antarctic Air.

ARCTIC CIRCLE Parallel of Latitude at about 66° 33' N, marking southern limit of north Frigid Zone. Latitude is complement of Sun's greatest northerly Declination and marks approximate southern limit at which sun becomes circumpolar. Actual limit is extended somewhat by combined effect of Refraction, Semidiameter of sun Parallax and height of observer's eye above surface of earth. AKA North Polar circle. See Antarctic Circle or South Polar Circle.

ARCTIC FRONT Semi-permanent, semi-continuous front between deep, cold Arctic Air and shallower, generally less cold polar air of northern Latitudes; generally comparable to Antarctic Front of southern hemisphere.

ARCTIC SEA SMOKE Steam fog, but often specifically applied to steam fog rising from small areas of open water within sea ice. See Frost Smoke.

ARCTIC SMOKE See Steam Fog.

ARCTIC OCEAN Smallest of four oceans, containing 4% of world's water, 5.5 million square miles.

ARCTIC WHITEOUT Obliteration of contrast between surface features in Arctic, when covering of snow obscuring all landmarks is accompanied by overcast sky, resulting in absence of shadows and unrelieved expanse of white, earth and sky blending so that Horizon is not distinguishable. Similar occurrence in Antarctica is called Antarctic Whiteout.

ARCTURUS Brightest star in the northern constellation Bootes.

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ARDENT Have Weather Helm. From the Latin, 'ardens'.

AREAL FEATURE Topographic feature, such as sand, swamp, vegetation, etc. which extends over an area. Represented on published map or Chart by solid or screened color, by prepared pattern of symbols or by delimiting line.

AREA TO BE AVOIDED Ship routing measure compromising area with defined limits which should be avoided by all ships, or certain classes of ships. Instituted to protect natural features or to define particularly hazardous area for navigation. See precautionary Area and Routing System.

ARGESTES Latin God of the East or Northeast winds. AKA Erus in Greek.

ARGONAUT (S) 1) 50 sailors with Jason in mythology who sailed from Greece to Colchis in Galley Argo. From Greek 'argonautes' combining ship name and 'nautes' meaning sailor.

ARGOSY 1) Merchant Vessel of the largest size and burden or any richly laden merchant vessel. From term for merchant ship built at Ragusa, Dalmatia (Dubrovnik) called 'ragusa' then 'ragusy' then 'Argosy'.

ARGUMENT 1) One of the values used for entering table or diagram. 2) What you shouldn't get from your significant other when you want to go sailing.

ARGUMENT OF LATITUDE Angular distance measured in orbital plane from ascending node to orbiting body. It is the sum of Argument of Pericenter and True Anomaly.

ARGUMENT OF PERICENTER Angle at center of attraction from ascending node to Pericenter point, measured in direction of motion of orbiting body. AKA Argument of Perifocus.

ARGUMENT OF PERIFOCUS See Argument of Pericenter.

ARGUMENT OF PERIGEE Angle at center of attraction from ascending node to Perigee point, measured in direction of motion of orbiting body.

ARIES Vernal Equinox or the Spring Crossing of Sun Over Celestial Equator. AKA First Point Of Aries.

ARITHMETIC MEAN See Mean.

ARM Place tallow or other substance into the cavity or recess of lower end of hand or sounding lead, to get or obtain samples of the bottom when Sounding. From the French, 'armer', meaning to equip.

ARMS Part of Anchor. They usually branch from foot of Shank and end in Flukes

ARMADA Fleet of ships. From Latin, 'armator', meaning any armed force. Term created at the time when virtually all offshore Vessels had some kind of armament.

ARMED TO THE TEETH 1) Pirate with a knife clamped between his teeth. 2) Well prepared.

ARMING THE LEAD Put soap or tallow in the hollow base of the Lead Line sinker to bring up a bottom sample. AKA to arm the lead.

ARMOURER Official who has charge of the arms of a ship. Also a maker of armor or manufacturer of arms. (You may be interested in some other part of the human anatomy other than arms)

ARRAY See Antenna Array.

ARRIVE To land or to come ashore.

AROUND THE HORN Permissible practice of spitting to Windward, a privilege accorded only to sailors who had sailed on ship around Cape Horn, otherwise spitting was a serious infraction of the rules of conduct at sea.

ARRESTING GEAR Heavy steel cables stretched across flight deck of aircraft carrier and used to catch incoming aircraft. Cables are connected to braking devices.

ARSE 1) The fall side of a Block. AKA Choke or Breech. From the Greek, 'orsa' for tail. 2) Where your British friends may kick you if you don't behave on board their boat.

ARSEY VERSY Backside foremost, upside down, contrariwise.

ARTICLES Short name for Shipping Articles, the master contract between the members of the crew, except the Master, and the owners.

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ARTICLES OF WAR Royal Navy regulations that first appeared officially in 1652, posted in every ship and read monthly to the ship's company.

ARTICULATED LIGHT Offshore Aid To Navigation consisting of pipe attached to Mooring by pivoting or universal join. It is more accurate in position than Buoy but less than fixed light.

ARTIFICIAL HARBOR Harbor where desired protection from wind and sea is obtained from Breakwaters, Moles, Jetties or other human-made works. See Natural Harbor.

ARTIFICIAL HORIZON Device for indicating horizontal, such as a bubble, gyroscope, pendulum or surface of liquid.

ARTIFICIAL MAGNET Magnet produced by artificial means, either by placing magnetic material in field of another magnet or by means of electric current. See Natural Magnet.

ARTIFICIAL RANGE Range formed by two objects such as buildings, towers, etc., not designed as Aids To Navigation. See Natural Range.

ARTIFICER Royal Navy mechanic.

ASCENDING NODE Point at which planet, planetoid, or comet crosses Ecliptic from south to north, or satellite crosses plane of equator of its primary from south to north. AKA North-Bound Node. Opposite of Descending Node.

ASDIC Early name for underwater search and detection equipment used to find submarines by echo ranging. AKA Sonar.

ASH BREEZE 1) Becalmed. Under this condition a ship's boats were put out in order to tow her by rowing and utilizing wooden Oars, sometimes wood from the ash tree. 2) Also applies to rowing smaller sailing Vessels that could use oars.

ASHORE 1) On shore or on land. AKA a-land. 2) Where you don't want to be.

ASPECT (S) 1) Relative Bearing of own ship from target ship measured 0° to 180° port or starboard. See Target Angle. 2) Apparent positions of celestial bodies relative to one another; particularly Apparent Positions of moon or planet relative to sun.

ASPECT RATIO 1) Ratio of the height of Vessel's Rudder to its width. 2) Length of leading edge squared, divided by area as applied to sails, rudders and centerboards.

ASSIGNED FREQUENCY Center of frequency band assigned to radio station. AKA Center Frequency or Channel Frequency.

ASSIGNED FREQUENCY BAND Frequency band whose center coincides with frequency assigned to station and whose width equals necessary bandwidth plus twice absolute value of frequency tolerance.

ASSOCIATED SHIP UNIT Portable VHF transmitter for use in the vicinity of the ship station with which it is associated.

ASSUMED LATITUDE (a λ) Latitude at which observer is assumed to be located for observation or computation, such as Latitude of Assumed Position or Latitude used for determining Longitude of time sight. AKA chosen latitude.

ASSUMED LONGITUDE (a λ) Longitude at which observer is assumed to be located for observation or computation, such as Longitude of Assumed Position or Longitude used for determining Latitude by Meridian Altitude. AKA chosen longitude.

ASSUMED POSITION (AP) Point at which a craft is assumed to be located, particularly one used as a preliminary to establishing certain navigational data, as that point on the surface of earth for which the Calculated or Computed Altitude is determined in the solution of celestial observation. AKA chosen position.

ASTERN 1) Direction toward, in back, behind or beyond Stern of Vessel or in Wake. Opposite of Ahead. 2) When engine is pushing Vessel backwards or is running in reverse, it is said to be operating Astern propulsion. 3) Bearing approximately 180° Relative. Sometimes loosely used for Dead Astern or bearing exactly 180° Relative.

ASTEROID Minor planet, one of many small celestial bodies revolving around sun, most of orbits being between Mars and Jupiter. AKA Minor Planet or Planetoid.

ASTIGMATISM Defect of lens such as used in binoculars or Sextant which causes image of point to appear as line, rather than point.

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ASTIGMATIZER Lens which introduces Astigmatism into optical system. Lens arranged such that it can be placed in or removed from optical path. In Sextant, it may be used to elongate image of Celestial Body into horizontal line.

ASTRO Prefix meaning star or stars nd sometimes used as equivalent of Celestial.

ASTRODYNAMICS Practical application of celestial mechanics, astrobballistics, propulsion theory and allied fiedl to problem of planning and directing trajectories of space vehicles.

ASTROGRAPH Device for projecting set of pre computed altitude curves onto Chart or Plotting Sheet. Curves move with time such that if they are properly adjusted, they will remain in correct position on Chart or Plotting Sheet.

ASTROLABE Predecessor to Sextant, navigation instrument to find or measure Altitude of sun, pole star or Celestial Bodies. Used for determining accurate astronomical position from which ship's Latitude can be calculated. From Greek, 'astrolabeon', meaning star taking.

ASTROMETRY Branch of astronomy dealing with geometrical relations of Celestial Bodies and therr real and apparent motions.

ASTRONOMICAL Of or pertaining to astronomy.

ASTRONOMICAL ALMANAC Annual publication prepared jointly by Nautical Almanac Office, U.S. Naval Observatory and H.M. Nautical Almanca Office, Royal Greenwich Observatory. Ephemeris gives high precision, and detailed information on large number of Celestial Bodies. Know prior to 1981 as American Ephemeris and Nautical Almanac. See Nautical Almanac.

ASTRONOMICAL DAY AKA and see Civil Day.

ASTRONOMICAL EQUATOR Line connecting points having 0° Astronomical Latitude. Because deflection of vertical varies from point to point, it is not a plane curve. But since verticals through all points on it are parallel, Zenith at any point on it lies in plane of Celestial Equator. AKA Terrestrial Equator. When it is corrected for station error, it becomes Geodetic Equator.

ASTRONOMICAL LATITUDE Angular distance between plumb line at station and plane of Celestial Equator. Latitude which results directly from

observations of Celestial Bodies, uncorrected for deflection of vertical which may amount in U.S. to as much as 25". It applies only to positions on earth and is reckoned from Astronomical Equator (0° to 90° north and south). AKA Astronomic Latitude or Geographic Latitude. See Geodetic Latitude.

ASTRONOMICAL LONGITUDE Angular distance between plane of Celestial Meridian at station and plane of Celestial Meridian at Greenwich. Longitude which results directly from observations of Celestial Bodies, uncorrected for deflection of vertical which may amount in U.S. to as much as 18". It applies only to positions on earth and is reckoned from Greenwich Meridian (0° to 180° east and west) AKA Astronomic Longitude or Geographic Longitude. See Geodetic Longitude.

ASTRONOMICAL MEAN SUN See Mean Sun.

ASTRONOMICAL MERIDIAN Line connecting points having same Astronomical Longitude. AKA Terrestrial Meridian or Geographic Meridian. When it is corrected for station error, it becomes Geodetic Meridian.

ASTRONOMICAL PARALLEL Line connecting points having same Astronomical Latitude. AKA Geographic Parallel. When it is corrected for station error it becomes Geodetic Parallel.

ASTRONOMICAL POSITION 1) Point on earth whose coordinates have been determined as result of observations of Celestial Bodies. 2) Point on earth, defined in terms of Astronomical Latitude and Longitude.

ASTRONOMICAL REFRACTION Atmospheric refraction of radiant energy ray passing through atmosphere from outer space. See Refraction and Terrestrial refraction.

ASTRONOMICAL TIDE Tide without constituents having their origin in daily or seasonal variations in weather conditions which may occur with some degree of periodicity. See Meteorological Tides.

ASTRONOMICAL TIME Time used with Astronomical Day.

ASTRONOMICAL TRIANGLE Navigational Triangle either Terrestrial or Celestial, used in solution of celestial observations.

ASTRONOMICAL TWILIGHT Period of incomplected darkness when center of sun is more than 12°

but not more than 18° below Celestial Horizon. See Civil Twilight and Nautical Twilight.

ASTRONOMICAL YEAR See Tropical Year.

ASTRO-TRACKER Navigation equipment which automatically acquires and continuously tracks celestial body in Azimuth and Altitude.

ATHWART Across Vessel's Keel line at right angles, from side to side, transversely; usually, but not necessarily, in an oblique direction.

ATHWARTSHIPS 1) Across Vessel or across Beam. At right angles to Fore and Aft Centerline or Keel of Vessel. From Icelandic, 'pwert'. 2) Rowboat seats are generally Athwart ships.

ATLANTIC EQUATORIAL COUNTER CURRENT
Ocean Current that flows eastward between Atlantic North and South Equatorial Currents.

ATLANTIC NORTH EQUATORIAL CURRENT
Broad, slow, westward flowing ocean current generated mainly by northeast Trade Winds. Forms Antilles Current in vicinity of Leeward Islands. Joins Guiana current and forms Caribbean Current.

ATLANTIC OCEAN Second largest of 4 oceans, 23% of world's water, 32 million square miles. Origin of name is obscure. It may come from Atlas Mountains or myth of Atlantis.

ATLANTIC SOUTH EQUATORIAL CURRENT
Major part of this westward flowing ocean current (stronger than Atlantic North Equatorial Current) is located south of equator. On approaching coast of South America, one part turns northwestward as Guiana Current with other part turning southwestward along coast as Brazil Current.

ATLANTIC STANDARD TIME See Standard Time.

ATLANTIS Mythical island first mentioned by Plato.

ATLAS Collection of Charts or maps kept loose or bound in volume.

ATLAS GRID Reference system that permits designation of location of point or area on map, photograph or other graphic in terms of numbers and letters.

AT LOGGERHEADS See Loggerheads.

AT LOOSE ENDS 1) To be aimless or disordered without an objective. 2) A rope cast off the belaying pin and dragging idly.

ATMOSPHERE 1) Moving envelope of air completely surrounding and covering Earth, bound to it by gravity and extending vertically from the earth's surface to a height of several hundred miles. 2) Gaseous envelope surrounding any celestial body.

ATMOSPHERIC ABSORPTION Loss of power in transmission of radiant energy by dissipation in Atmosphere.

ATMOSPHERIC NOISE See Atmospheric Radio Noise.

ATMOSPHERIC PRESSURE Pressure exerted by weight of earth's Atmosphere, about 14.7 pounds per square inch. See Barometric Pressure and Standard Atmosphere.

ATMOSPHERIC RADIO NOISE Noise or static in radio reception due to natural causes such as thunderstorm activity. Sometimes shortened to atmospheric noise. See Man-Made Noise and Radio Interference.

ATMOSPHERIC REFRACTION
Refraction resulting when radiant energy ray passes obliquely through Atmosphere. May be called astronomical refraction if ray enters Atmosphere from outer space or terrestrial refraction if it emanates from point on or near earth's surface.

ATOLL Ring or annular shaped coral reef which has closely spaced Islands or Islets on it enclosing central area or lagoon. There may or may not be Islets on Reef. Diameter may vary from less than one mile to 80 miles or more. From Atollon.

ATOLLON 1) Small Atoll on periphery of larger one. 2) Large reef ring in Maldives Islands consisting of many smaller reef rings.

ATOMIC CLOCK Precision clock that depends for its operation upon electrical oscillator regulated by atomic system.

ATOMIC SECOND See Second.

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- ATOMIC TIME** Fundamental kind of time based on transitions in atom.
- ATON** See Aids To Navigation.
- ATTENUATION** 1) Lessening in amount, particularly reduction of amplitude of wave with distance from origin. 2) Decrease in strength of radar wave resulting from absorption, scattering, and reflection by medium through which it passes and by obstructions in its path.
- AT THE END OF YOUR ROPE** Occurred when there was no more Anchor rope to be paid out after you came to the Bitter End.
- ATTITUDE** 1) Position of body as determined by inclination of axes to some other frame of reference. 2) What you need to go sailing.
- A-TRIP** 1) Said of Anchor when it has broken ground and is just clear of ground on being hoisted or Weighing. See Aweigh. From the French, 'treper', or English, 'treppan', meaning in motion. 2) Said of Yards when they are raised up to the Masts and ready for crossing. 3) Said of Topsails when hoisted and ready for trimming.
- A-TRY** To lay Hove to. See Try.
- AUDIBLE AID TO NAVIGATION** Aid To Navigation which uses sound waves.
- AUGMENTATION** Apparent increase in Semidiameter of Celestial Body as Altitude increases, due to reduced distance from observer. Principally used in reference to moon.
- AUGMENTATION CORRECTION** Correction, particularly Sextant Altitude correction, due to Augmentation.
- AUGMENTING FACTOR** Factor used in connection with harmonic analysis of Tides or Tidal Currents to allow for difference between times of hourly tabulation and corresponding constituent hours.
- AUNT MAY** British naval slang for a person generous to sailors. From May Hanrahan who 'adopted' sixteen British destroyers.
- AUREOLE** Poorly developed Corona characterized by bluish-white disk around luminary such as sun and reddish-brown outer edge. Produced by diffraction in cloud composed of droplets distributed over wide size range. More frequent than Corona.
- AURORA** 1) Rising light of dawn. 2) Luminous atmospheric phenomenon, consisting of arches of light and occurring near or radiating from the earth's northern or southern magnetic poles, caused by the emission of light from atoms excited (and you thought you were the only one who got this way) by electrons accelerated along the earth's magnetic field lines. AKA Northern Lights or Aurora Borealis and Southern Lights or Aurora Australis, merry dancers or streamers.
- AURORA AUSTRALIS** Aurora in Southern Hemisphere.
- AURORA BOREALIS** Aurora in Northern Hemisphere. AKA Northern Lights.
- AURORAL ZONE** Area of maximum auroral activity. Two areas exist, each being a 10° wide annulus centered at average distance of 23° from geomagnetic pole.
- AURORA POLARIS** High Latitude Aurora Borealis.
- AUSTER** Roman God of the South winds. AKA Notus in Greek.
- AUSTHALIC MAP PROJECTION** See Equal Area Map Projection.
- AUSTRAL** 1) Belonging or pertaining to south, southern. 2) Influenced by the sought wind, warm and moist. 3) Pertaining to or of Australia or Australasia.
- AUSTRALIA** Previously known as 'Terra Australis' or southern land.
- AUSTRU** West wind blowing over lower Danube lands in winter frequently bringing dry, clear and cold weather.
- AUTOIGNITION** Ignite by itself.
- AUTOMATED MARITIME TELECOMMUNICATIONS SYSTEM (AMTS)** Automatic, integrated and interconnected maritime communications system serving ship stations on specified inland and coastal waters of the United States and presently in use on the Mississippi River and Gulf Intracoastal Waterway.
- AUTOMATED MUTUAL ASSISTANCE VESSEL RESCUE SYSTEM (AMVER)** International

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system, operated by U.S. Coast Guard, which develops, aids and coordinates search and rescue (SAR) efforts in oceans of world by maintaining computerized worldwide merchant vessel plot. Data is made available to recognized SAR agencies or Vessels of any nation for reasons related to marine safety.

AUTODOG Soft ice cream dispenser on board large ships capable of yielding vanilla, chocolate, or a combination with a lift of it's operating lever (sometimes called a tail).

AUTOMATIC DIRECTION FINDER (ADF)
Radio direction finder in which bearing to transmitter is indicated automatically and continuously. AKA Automatic Radio Direction Finder. See Manual Radio Direction Finder.

AUTOMATIC TIDE GAGE Instrument that automatically registers rise and fall of Tide by digital format or by continuous graph of height versus corresponding time.

AUTOPILOT Automatic Steering device which steers Vessel unattended along given Bearing or holds Compass course despite Wind and Current. Heading is sensed by Compass and Vessel is Steered to maintain preset Course by a combination of electronic and mechanical/hydraulic devices. Sailboats utilize a similar system based on Apparent Wind. See Gyro Pilot.

AUTUMN Season between Summer and Winter. In Northern Hemisphere, it begins astronomically at Autumnal Equinox and ends at Winter Solstice. In Southern Hemisphere, it begins at Vernal Equinox and ends at Summer Solstice. Meteorological limits vary with locality. AKA Fall.

AUTUMNAL EQUINOX 1) Point of intersection of ecliptic and Celestial Equator occupied by sun or where Sun passes over Equator as it changes from North to South Declination, on or about September 23. AKA First Point of Libra or September Equinox. 2) Instant sun reaches point of zero declination when crossing Celestial Equator from north to south.

AUXILIARIES Collective term for all non-propulsive engine-drive machinery and equipment of a Vessel.

AUXILIARY Sailboat with an engine.

AUXILIARY LIGHTS See Vertical Lights.

AVAST 1) Hold, stop or cease in any nautical operation, as in order 'avast hauling'. From Dutch, 'hound vast' to hold fast or 'bou 'vest' and Portuguese, 'abasta', meaning enough. 2) Stop

AVISO 1) Dispatch boat. 2) Notification, dispatch, or formal advice.

AVULSION Rapid erosion of shore land by waves during storm.

AWASH 1) Being under, covered or washed over by water as when Decks or top are at or near water level, inundated or intermittently immersed through waves or tidal action. Term applies both to fixed objects such as rocks and to floating objects with tops flush with or slightly above water surface as well as ship when she is almost submerged and at mercy of sea. See Rock Awash, Submerged and Uncovered. From the English, 'waesan'. 2) Helpless.

AWEATHER Toward Weather or Windward side of vessel. Opposite of Alee.

AWEIGH Position or said of the Anchor when it is just broken away or free and is raised clear or unhooked off Bottom from Hoisting. From Icelandic, 'vega', meaning to lift or carry.

AWNING 1) Canvas, roof-like covering providing shelter, screen or shade over Deck, Deck opening or for a Boat from sun, rain or Weather. From French, 'auvan', meaning a shade over a ship's Deck. 2) Part of Poop Deck that is forward of Bulkhead of Cabin.

AXIS 1) Straight line about which body rotates. 2) One set of reference lines for certain systems of coordinates. 3) Principal line about which anything may extend, such as Axis of Channel or compass card Axis.. 4) Straight line connecting two related points.

AXIS, MAJOR Longest diameter of ellipse or ellipsoid.

AXIS, MINOR Shortest diameter of ellipse or ellipsoid.

AXIS, POLAR Straight line connecting poles of a body.

AYE Yes, or I understand. From the French 'je' or 'o je' and old English 'yie', meaning yes. AKA Aye Aye.

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AYE AYE Bluejacket sailor says this meaning, 'I understand and I will obey'.

AZIMUTH Horizontal direction or bearing of celestial point from terrestrial point, expressed as angular distance from reference direction, usually 000° clockwise through 360°, true, magnetic, compass grid or relative. From Arabic, 'assamut', for points on Horizon.

AZIMUTHAL Of or pertaining to Azimuth.

AZIMUTHAL CHART Chart on Azimuthal Map Projection. AKA Zenithal Chart.

AZIMUTHAL EQUIDISTANT CHART Chart on Azimuthal Equidistant Map Projection.

AZIMUTHAL EQUIDISTANT MAP PROJECTION
Azimuthal Map Projection on which straight lines radiating from center or pole of projection represent great circles in True Azimuths from that center, and lengths along those lines are of exact scale. Projection is neither equal area nor conformal.

AZIMUTHAL MAP PROJECTION
Map projection on which Azimuths or directions of all lines radiating from central point or pole are same as Azimuths or directions of corresponding lines on ellipsoid. Classification includes Gnomonic, Stereographic, Orthographic and Azimuthal Equidistant Map Projections. AKA Zenithal Map Projection.

AZIMUTHAL ORTHOMORPHIC PROJECTION
See Stereographic Map Projection.

AZIMUTH, ALTITUDE Azimuth determined by solution of Navigational Triangle with Altitude, Declination and Latitude. See Time Azimuth.

AZIMUTH ANGLE (Z) Azimuth measured at North or South reference direction 0° - 180° in either clockwise or counterclockwise direction, East or West from observer's Meridian to Great Circle Joining Assumed Position & Geographic Position of Celestial Body. Label Z according to same name of North or South Latitude or reference direction as prefix and Meridian Angle (t) reference direction as suffix. See Amplitude.

AZIMUTH BAR 1) Instrument for measuring Azimuths, particularly device consisting of slender bar with vane at each end, designed to fit over central pivot in glass cover of magnetic Compass. See Bearing Bar. 2) Where Azimuths hang out.

AZIMUTH CIRCLE Ring designed to fit snugly over Compass or Compass Repeater and provided with means for observing Compass Bearings and Azimuths. See Bearing Circle.

AZIMUTH COMPASS Compass for taking bearings of both heavenly and terrestrial bodies.

AZIMUTH, COMPUTED Azimuth after interpolation or determined by calculation, mechanical device or graphics.

AZIMUTH INSTRUMENT Instrument for measuring Azimuths, particularly device which fits over central pivot in glass cover of magnetic compass.

AZIMUTH STABILIZED DISPLAY See Stabilization of Radarscope Display.

AZIMUTH, TIME Azimuth determined by solution of Navigational Triangle with Meridian Angle, Declination and Latitude given.

AZIMUTH, TRUE (Z_n) Arc of Horizon or angle at Zenith, measured (0° - 360°) from North Pole or north part of Celestial Meridian or principal vertical circle, clockwise to Great Circle joining Assumed Position (AP) and Geographic Position (GP) of Celestial Body. Determined by the table below where LAT is Latitude and t is Meridian Angle:

<u>LAT</u>	<u>t</u>	<u>LHA</u>	<u>Z_n =</u>	<u>LAT</u>	<u>t</u>	<u>LHA</u>	<u>Z_n =</u>
N	E	>180°	Z	S	E	>180°	180 - Z
N	W	<180°	360 - Z	S	W	<180°	180 + Z

AZIMUTH, TABULATED Azimuth taken directly from table, before interpolation.

AZORES CURRENT Slow but fairly constant southeast branch of North Atlantic Current and party of Gulf Stream System with no discernible seasonal fluctuation. Part of general clockwise oceanic circulation of North Atlantic Ocean. AKA Southeast Drift Current.