



The Secret Voyage of Sir Francis Drake

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"They that go down to the sea in ships, that do business in great waters; These see the works of the LORD, and his wonders in the deep." (Psalm 107:23-24).

Sir Frances Drake was one of the heroes of the defeat of the "Invincible" Armada, and the first captain to sail around the world. In 1591, he was knighted by Queen Elizabeth I for his amazing 3 year circumnavigation of the globe.

[Map of Sir Francis Drake's circumnavigation of the globe!!](#)



Frances Drake (1542 -1598) at about 35 years old.

In 1577, Francis Drake began an incredible journey which eventually took him around the world.

The purpose of his voyage was to find a Northwest Passage between the Pacific and the Atlantic oceans and plant a British colony in the New World.

Captain Drake used celestial navigation—the daily orbiting sun, moon and stars, to guide him on his Homeric odyssey.



Sir Frances Drake after his knighthood by Queen Elizabeth I for his voyage around the world.

Sir Frances Drake should be called SAINT Frances Drake because he was a devout Protestant Christian....Many of the great saints and heroes of the Bible like Joshua and King David were warriors:

"Behold, I have seen a son of Jesse the Bethlehemite, that is cunning in playing, and a mighty valiant man,

and a man of war, and prudent in matters, and a comely (handsome) person, and the LORD is with him." (1 Samuel 16:18).

This GREAT Briton was a *navy of one* as he almost single handedly destroyed Spanish sea power....He was the father of the Royal Navy and the British Empire, while Queen Elizabeth, whom he served so faithfully, could be called the *mother* of that Empire.

He was beloved by the persecuted Protestants of Europe and HATED by the Spanish Inquisition and their supporters. Even today, *some* people refer to him as a *pirate* or *corsair*.

The battle of San Juan de Ulúa

Drake's personal vendetta against the Spanish began during a peaceful trading voyage to the New World. In 1568. Drake served under Admiral Sir John Hawkins and captained a ship named the *Judith*. They were forced by a storm into the Spanish port of San Juan de Ulúa about 15 miles from Vera Cruz, Mexico:

"Serving as a captain under Hawkins was Francis Drake. In his mid twenties, Drake had already spent half his life in the seagoing profession. When he reached the age of twelve or thirteen his father had arranged for him to apprentice under the old captain of a small bark plying the coastal trade between England, France, and the Low Countries, or Netherlands, and Drake had learned to read current, wind, and tide, and to handle a ship in all weather on those treacherous coasts. Then at age twenty, he had gone into the service of his wealthy ship-owning kin, the Hawkins brothers of Plymouth, and this was his third voyage to the Caribbean in their employ. His skill in directing men, and the alacrity with which he performed his duties, had marked him for advancement, and on the present voyage John Hawkins had given him command of the fifty-ton bark *Judith* when they departed Africa." (Bawlf, *The Secret Voyage of Sir Francis Drake*, p. 12).

Promised safe conduct to repair their ships, the Spaniards attacked them without warning. Drake barely escaped with his life and finally reached England 4 months later. Only 100 of the original 400 plus sailors on the Hawkins expedition ever saw their homes again. Many were sent to Spain and burned alive by the Inquisition, while some ended up as slaves rowing the Spanish galleons.

Drake's secret mission to discover the Northwest Passage

In December 1577, Frances Drake set sail with 5 ships to discover the fabled Northwest Passage from the Atlantic to the Pacific ocean. This mission was TOP SECRET and even the crew did not know their final destination.

Spanish spies were EVERYWHERE at the court of Elizabeth, and secrecy was absolutely essential. The mission's main goal was to sail into the Pacific and find the western entrance to the passage. Then England could set up a colony there and accomplish 4 main objectives:

1. Preach the Gospel of Christ to all the New World natives.
2. Arm the New World natives against the Spanish Inquisition.
3. Expel the cruel, rapacious Spaniards from the New World completely.
4. Establish trade with the Far East and make England the center of the spice trade.

Establishing a colony to trade with the Orient was the very goal of John Cabot when he left England in 1498. That colony was wiped out by the Portuguese and Spanish . . . so absolute secrecy was essential to the success of the mission.

Even at that time, spies were watching every move of [John Cabot](#). Here is a letter from the Milanese ambassador in London to the Duke of Milan:

"But Messer Zoane has his mind set upon even greater things, because he proposes to keep along the coast from the place at which he touched, more and more towards the east, until he reaches an island which he calls Cipango, situated in the equinoctial region, where he believes that all the spices of the world have their origin, as well as the jewels ... and they will go to that country and form a colony. By means of this they hope to make London a more important mart for spices than Alexandria." (Raimondo de Raimondi letter to the Duke of Milan).

Nova Albion or New England

Francis Drake left England in December 1577, with 5 ships and 164 men. After many tribulations, he arrived on the Pacific coast in September 1578, with 1 ship and 85 men. He managed to capture a Spanish ship with sailing charts of the Pacific ocean and this enabled him to sail northward to find the passage.

He sailed all the way to Alaska or above latitude 48 degrees before the cold forced him to turn back. It was then he found a harbor to repair his ship and founded New Albion.



Replica of Drake's ship the *Golden Hind* now on display in London.



Drake's Bay in northern California where Sir Francis founded a colony.

When Drake arrived in New Albion, he had 2 ships and 85 men. He could not return by the Straits of Magellan because the Spanish would be waiting for him so he decided to sail around the world and reach England by that route.

When he arrived at the Moluccas, he had 65 men so 20 were left behind to found a colony, and continue looking for the Northwest Passage:

"How the men were selected for this mission will never be known. Even their names were subsequently lost to memory except for one man: the pilot named Morera. However, it is a fact that some twenty of Drake's men were unaccounted for when he left this coast. No doubt Drake offered "profitable persuasions" such as he had first promised in June.

Most likely, they were instructed to proceed to the junction of the strait with the passage eastward, and then to continue only if the seaway clearly was open. If not, they would have had to return down the coast to their former camp at Whale Cove, which alone offered a secure relationship with the Indians, and await rescue. There certainly would not have been any thought of them trying to return to England via Magellan's Strait or crossing the Pacific in such small vessels. But Drake would have assured them that with the great cargo of treasure he was bringing back, the Queen would allow him to return for them if need be, and to fulfill his plan for Nova Albion." (Bawlf, *The Secret Voyage of Sir Francis Drake*, pp. 324-325).

Francis Drake was knighted by Queen Elizabeth

On September 26, 1580, Francis Drake returned to England with a vast quantity of gold and silver. He immediately went to London where the Queen received him gratefully. They had a very long private conversation, and he related all the details of his incredible journey.

Strict secrecy was however still absolutely necessary. If the Spanish ever found out that the English had planted a colony in the New World, they would have moved heaven and EARTH to destroy it.



Queen Elizabeth knighting Drake aboard his ship the *Golden Hind*.



Elizabeth gave this priceless jeweled cup to Sir Frances at his knighthood. Notice the globe was not TILTED at that time!!

His knighting by his grateful Queen was the high tide of Sir Francis Drake's remarkable career. Not until many years later was the true extent of his miraculous journey revealed to the public.

This fearless act by the Queen enraged King Philip II, and he began building his "Invincible" Armada to invade England and put a stop to any British colonization of the New World.

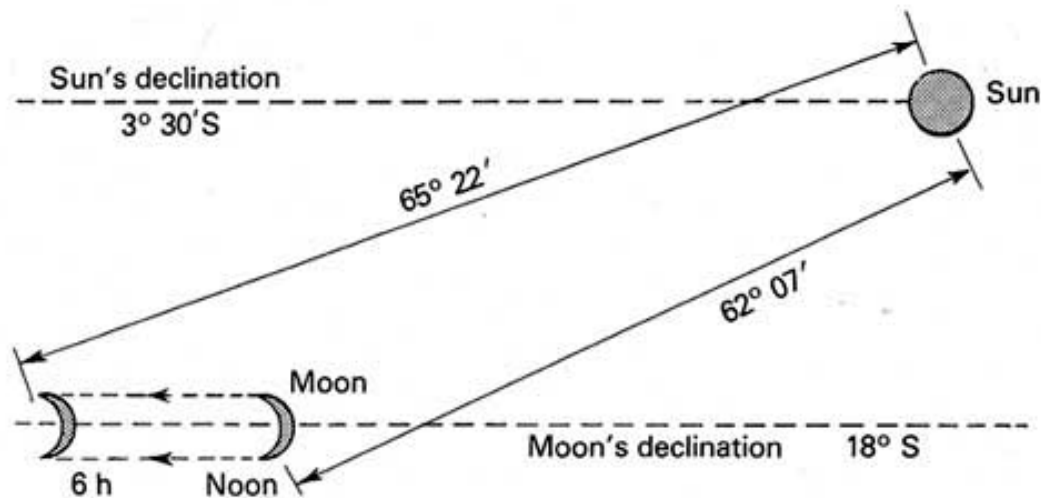
Sir Francis Drake used CELESTRIAL navigation!!

During the Elizabethan age, mariners did not have the GPS so they had to rely on the heavenly bodies: namely the sun, moon and stars for

navigation....Here is a quote from the book *The Secret Voyage of Sir Francis Drake*:

"While the practical means of determining one's latitude had been developed, however, there was no corresponding means of determining longitude—one's position east or west of a known point—from a ship at sea. Theoretically, as Bourne explained in *A Regiment for the Sea*, one could produce a book of *ephemerides* in which the moon's distance from the sun or a prominent star, viewed from a particular place, or "prime meridian," at a given hour could be predicted and tabulated, day by day, for several years to come. **Then an observer in another location, finding the moon at a greater or lesser distance from that star, and knowing its rate of motion, could calculate the difference in local time between his position and the prime meridian.** The time differential could then be converted to degrees of longitude—each four minutes being equal to one degree—and after adjusting for the observer's latitude the degrees could be converted into miles east or west of the prime meridian." (Bawlf, *The Secret Voyage of Sir Francis Drake*, pp. 71-72).

Celestial navigation is the process whereby angles between objects in the sky (celestial objects) and the horizon are used to locate one's position on the globe. At any given instant of time, any celestial object (e.g. the moon, Jupiter, navigational star Spica) will be located directly over a particular geographic position on the earth. This geographic position is known as the celestial object's sub point, and its location (e.g. its latitude and longitude) can be determined by referring to tables in a nautical almanac.

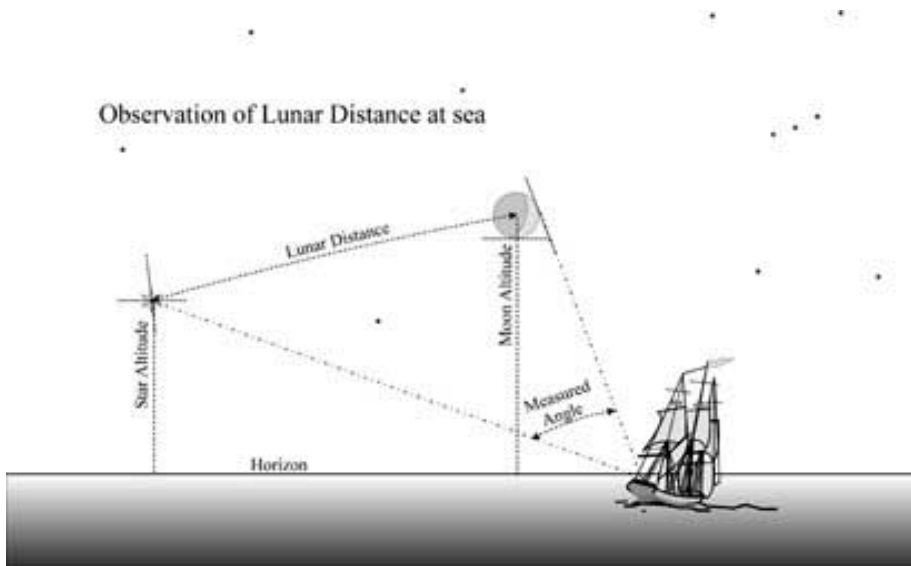


A correct knowledge of the motions of the sun and moon is absolutely necessary for celestial navigation.



A cross staff used to measure height and distance.

By using this scientific method, Sir Francis was able to calculate that Nova Albion was 3,000 miles from the east coast of Canada. Later this correct longitude began to show up on maps of the New World.



Lunar distances at sea were used for celestial navigation.



As astrolabe was used to determine the height of the sun in the sky.

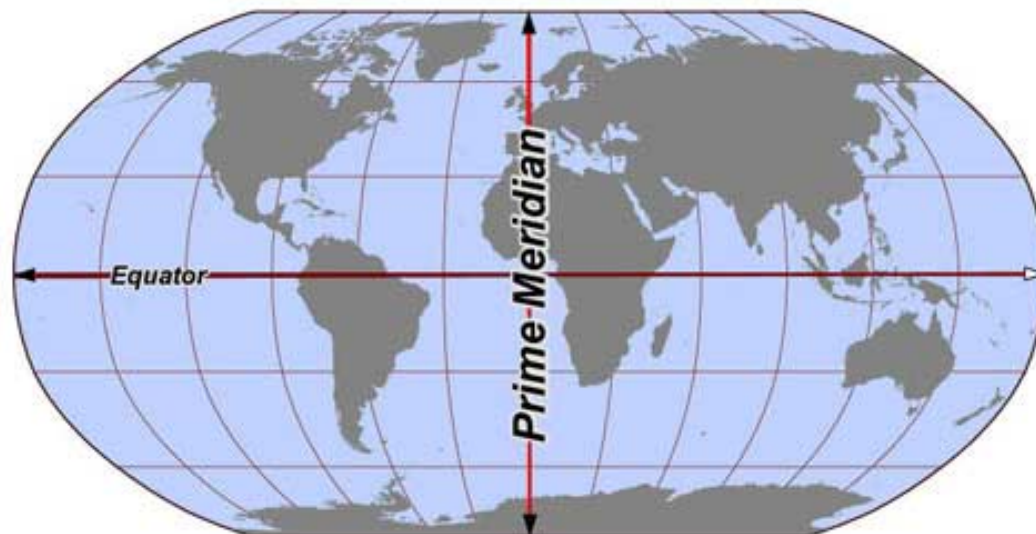
At that time, no country could have a maritime empire without a correct knowledge of astronomical navigation. As the British Empire expanded, Greenwich, England, was established as the PRIME MERIDIAN for calculating LONGITUDE at sea.

Greenwich is now the prime meridian for longitude

Greenwich, England, is now the prime meridian for longitude and Greenwich Mean Time (GMT) is a term originally referring to mean solar time at the Royal Observatory, Greenwich, in London. It is now often used to refer to Coordinated Universal Time (UTC) when this is viewed as a time zone, although strictly UTC is an atomic time scale which only approximates GMT in the old sense. It is also used to refer to Universal Time (UT), which is the astronomical concept that directly replaced the original GMT.



Royal Observatory, Greenwich.



The prime meridian runs through Greenwich in London, England.

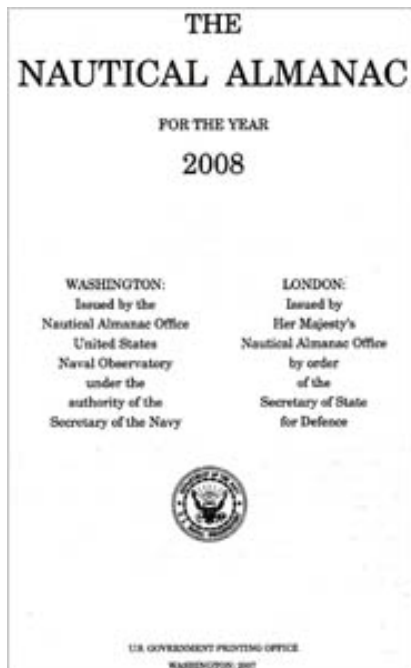
The sun and moon pass over the prime meridian EVERY DAY!!

As we said earlier, the Spanish Inquisition would move heaven and EARTH to try and stop the English colonization of the New World. In 1633, Jesuit Galileo came out with his screwball heliocentric theory that had the earth moving . . . and not the sun!!

It seems that the Spanish Inquisition EXCOMMUNICATED the heavenly bodies for guiding English ships to the New World!!

This theory was soon taught in most of the colleges of Europe, and anyone questioning [Galileo](#) was ridiculed and called a FLAT EARTHER!!

Of course the Royal Navy—and later the U.S. Navy—continued to produce nautical almanacs that showed the true movement of the sun and moon in the heavens.



The *Nautical Almanac* is published annually by the U.S. Naval Observatory and Her Majesty's Nautical Almanac Office.

2008 JANUARY 1, 2, 3 (TUES., WED., THURS.)

| UT | SUN | | MOON | | | | Lat. | Twilight | | Sunrise | Moonrise | | | | | | | | |
|------|-----|------|------|-------|-----|------|------|----------|-------|---------|----------|----|----|----|----|----|----|----|----|
| | GHA | Dec | GHA | ν | Dec | d | | HP | Naut. | | Civil | 1 | 2 | 3 | 4 | | | | |
| d h | o | r | o | r | o | r | o | r | h | m | h | m | h | m | h | m | h | m | |
| 1 00 | 179 | 13.8 | S23 | 04.1 | 265 | 32.6 | 16.2 | S10 | 20.8 | 13.2 | 54.5 | 08 | 24 | 10 | 41 | 02 | 51 | 05 | 32 |
| 01 | 194 | 13.5 | 04.0 | | 280 | 07.8 | 16.1 | 10 | 34.0 | 13.1 | 54.5 | 08 | 05 | 09 | 49 | 02 | 31 | 04 | 42 |
| 02 | 209 | 13.2 | 03.8 | | 294 | 42.9 | 16.1 | 10 | 47.1 | 13.0 | 54.5 | 07 | 50 | 09 | 16 | 02 | 16 | 04 | 10 |
| 03 | 224 | 12.9 | 03.6 | | 309 | 18.0 | 16.1 | 11 | 00.1 | 13.0 | 54.5 | 07 | 37 | 08 | 53 | 10 | 27 | 02 | 04 |
| 04 | 239 | 12.6 | 03.4 | | 323 | 53.1 | 16.1 | 11 | 13.1 | 13.0 | 54.5 | 07 | 27 | 08 | 34 | 09 | 49 | 01 | 54 |
| 05 | 254 | 12.3 | 03.2 | | 338 | 28.2 | 16.0 | 11 | 26.1 | 12.9 | 54.5 | 07 | 17 | 08 | 19 | 09 | 23 | 01 | 45 |
| 06 | 269 | 12.0 | S23 | 03.0 | 353 | 03.2 | 16.0 | S11 | 39.0 | 12.8 | 54.5 | 07 | 09 | 08 | 05 | 09 | 02 | 01 | 38 |
| 07 | 284 | 11.7 | 02.8 | | 7 | 38.2 | 16.0 | 11 | 51.8 | 12.8 | 54.4 | 07 | 02 | 07 | 54 | 08 | 45 | 01 | 31 |
| 08 | 299 | 11.4 | 02.6 | | 22 | 13.2 | 15.9 | 12 | 04.6 | 12.8 | 54.4 | 06 | 56 | 07 | 44 | 08 | 31 | 01 | 26 |
| 09 | 314 | 11.1 | 02.4 | | 36 | 48.1 | 15.9 | 12 | 17.4 | 12.7 | 54.4 | 06 | 50 | 07 | 36 | 08 | 19 | 01 | 21 |
| 10 | 329 | 10.8 | 02.2 | | 51 | 23.0 | 15.9 | 12 | 30.1 | 12.6 | 54.4 | 06 | 44 | 07 | 28 | 08 | 08 | 01 | 16 |
| 11 | 344 | 10.5 | 02.0 | | 65 | 57.9 | 15.8 | 12 | 42.7 | 12.6 | 54.4 | 06 | 39 | 07 | 20 | 07 | 59 | 01 | 12 |
| 12 | 359 | 10.2 | S23 | 01.8 | 80 | 32.7 | 15.8 | S12 | 55.3 | 12.6 | 54.4 | 06 | 28 | 07 | 05 | 07 | 38 | 01 | 03 |
| 13 | 14 | 09.9 | 01.6 | | 95 | 07.5 | 15.8 | 13 | 07.9 | 12.4 | 54.4 | 06 | 18 | 06 | 52 | 07 | 22 | 00 | 56 |
| 14 | 29 | 09.6 | 01.4 | | 109 | 42.3 | 15.8 | 13 | 20.3 | 12.5 | 54.3 | 06 | 09 | 06 | 40 | 07 | 08 | 00 | 50 |
| 15 | 44 | 09.3 | 01.2 | | 124 | 17.1 | 15.7 | 13 | 32.8 | 12.4 | 54.3 | 06 | 00 | 06 | 30 | 06 | 56 | 00 | 44 |
| 16 | 59 | 09.0 | 01.0 | | 138 | 51.8 | 15.6 | 13 | 45.2 | 12.3 | 54.3 | 05 | 44 | 06 | 11 | 06 | 35 | 00 | 35 |
| 17 | 74 | 08.7 | 00.8 | | 153 | 26.4 | 15.6 | 13 | 57.5 | 12.2 | 54.3 | 05 | 28 | 05 | 54 | 06 | 17 | 00 | 26 |
| 18 | 89 | 08.4 | S23 | 00.6 | 168 | 01.0 | 15.6 | S14 | 09.7 | 12.2 | 54.3 | 05 | 11 | 05 | 38 | 06 | 00 | 00 | 19 |
| 19 | 104 | 08.1 | 00.4 | | 182 | 35.6 | 15.6 | 14 | 21.9 | 12.2 | 54.3 | 04 | 53 | 05 | 20 | 05 | 43 | 00 | 11 |
| 20 | 119 | 07.8 | 00.2 | | 197 | 10.2 | 15.5 | 14 | 34.1 | 12.1 | 54.3 | 04 | 31 | 05 | 00 | 05 | 24 | 00 | 03 |
| 21 | 134 | 07.5 | 23 | 00.0 | 211 | 44.7 | 15.4 | 14 | 46.2 | 12.0 | 54.3 | 04 | 02 | 04 | 35 | 05 | 03 | 24 | 23 |
| 22 | 149 | 07.2 | 22 | 59.8 | 226 | 19.1 | 15.4 | 14 | 58.2 | 12.0 | 54.3 | 03 | 44 | 04 | 20 | 04 | 50 | 24 | 14 |
| 23 | 164 | 06.9 | 59.6 | | 240 | 53.5 | 15.4 | 15 | 10.2 | 11.9 | 54.2 | 03 | 21 | 04 | 03 | 04 | 35 | 24 | 05 |
| | | | | | | | | | | | | 02 | 52 | 03 | 41 | 04 | 18 | 23 | 55 |

GHA or Greenwich Hour Angle tells the position of the sun and moon from Greenwich. It is always measured WESTWARD from the Greenwich meridian and is expressed in degrees from 0° to 360°

This is a GREAT example of British-U.S. peaceful cooperation.

The invention of the marine chronometer made celestial navigation unnecessary!!

Latitude was determined by measuring the sun's angle at noon with the aid of a table giving the sun's declination for that day.

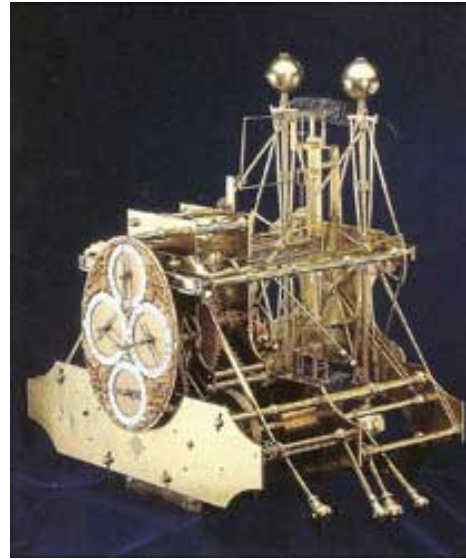
Calculating LONGITUDE required an extensive knowledge of the moon's motion, and the moon was not visible every night, so this presented navigators with a major problem.

In 1714, the British Parliament established the Longitude Board and huge prizes were offered for a practical solution to finding longitude at sea.

John Harrison—a humble British carpenter—invented an ingenious clock that could keep time accurately on a ship and therefore solve the longitude problem.



John Harrison (1693-1776), inventor of the marine chronometer.



Harrison's first clock, made in 1730, was 63 cm (24.8 in.) high.



John Harrison's final masterpiece, made around 1760, was a hand held marine chronometer.

John Harrison—like all great inventors—had to battle years of apathy and ignorance before his invention was accepted by the Royal Navy.... His invention would have GUARANTEED that BRITANNIA ruled the waves for centuries, yet he received absolutely no funding from the government.

For over 30 years, with only his son William as his helper, he worked to perfect his masterpiece—the marine chronometer....By that time, the Royal Society, and the top levels of the Royal Navy, were secretly controlled by Jesuits, so the last thing they wanted was an accurate way of guiding British ships at sea.

The heavenly bodies were *excommunicated* by the Spanish Inquisition!!

According to the 1493 Bull of Pope Alexander VI, *anybody* visiting the New World without a license from Ferdinand and Isabella . . . and their successors . . . was automatically *excommunicated* and damned to hell forever:

"Furthermore, under penalty of excommunication *late sententie* to be incurred *ipso facto*, should anyone thus contravene, we strictly forbid all persons of whatsoever rank, even imperial and royal, or of whatsoever estate, degree, order, or condition, to dare, without your special permit or that of your aforesaid heirs and successors,

to go for the purpose of trade or any other reason to the islands or mainlands, found and to be found, discovered and to be discovered, towards the west and south, by drawing and establishing a line from the Arctic pole to the Antarctic pole, no matter whether the mainlands and islands, found and to be found, lie in the direction of India or toward any other quarter whatsoever, the said line to be distant one hundred leagues towards the west and south, as is aforesaid, from any of the islands commonly known as the Azores and Cape Verde; apostolic constitutions and ordinances and other decrees whatsoever to the contrary notwithstanding." ([Inter Caetera Bull](#)).

Sir Francis and his seamen came under this ban, and the heavenly bodies that guided him on his incredible journey shared the wrath of the Spanish Inquisition. The sun—our daily timekeeper—was fired (sacked in Britain) and no longer "rejoiceth as a strong man to run a race"(Psalm 19). The moon no longer had to keep up with the fast moving sun so its speed was reduced to circling the earth ONCE EVERY MONTH!!

Vital Links

[Online Nautical Almanac](#)

[Map of Sir Francis Drake's circumnavigation of the globe!!](#)

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