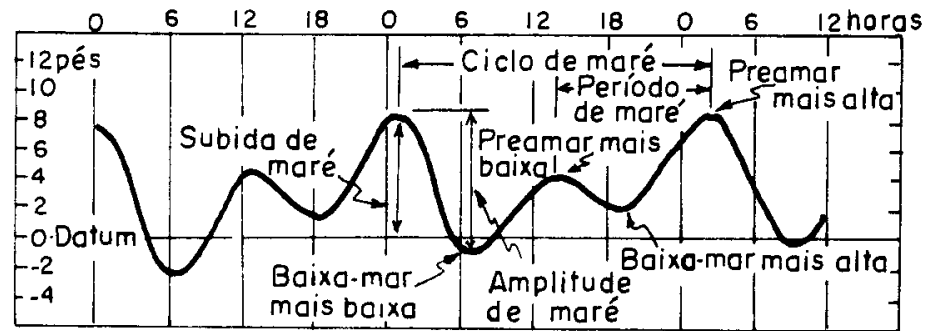
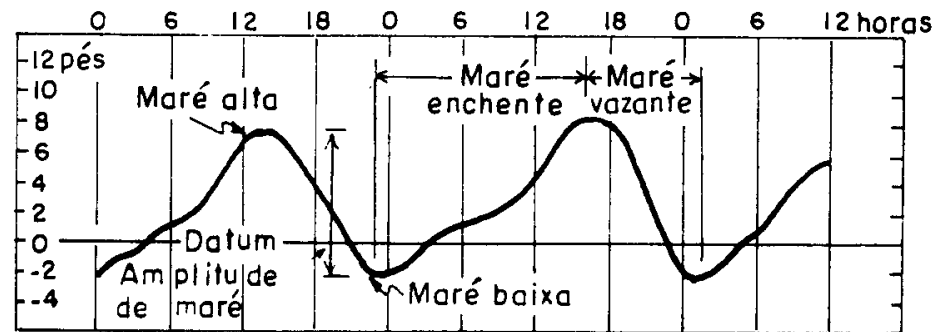
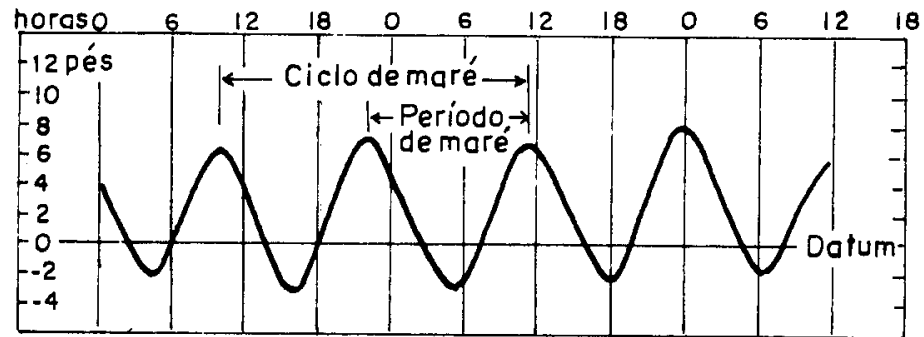


GeoLit

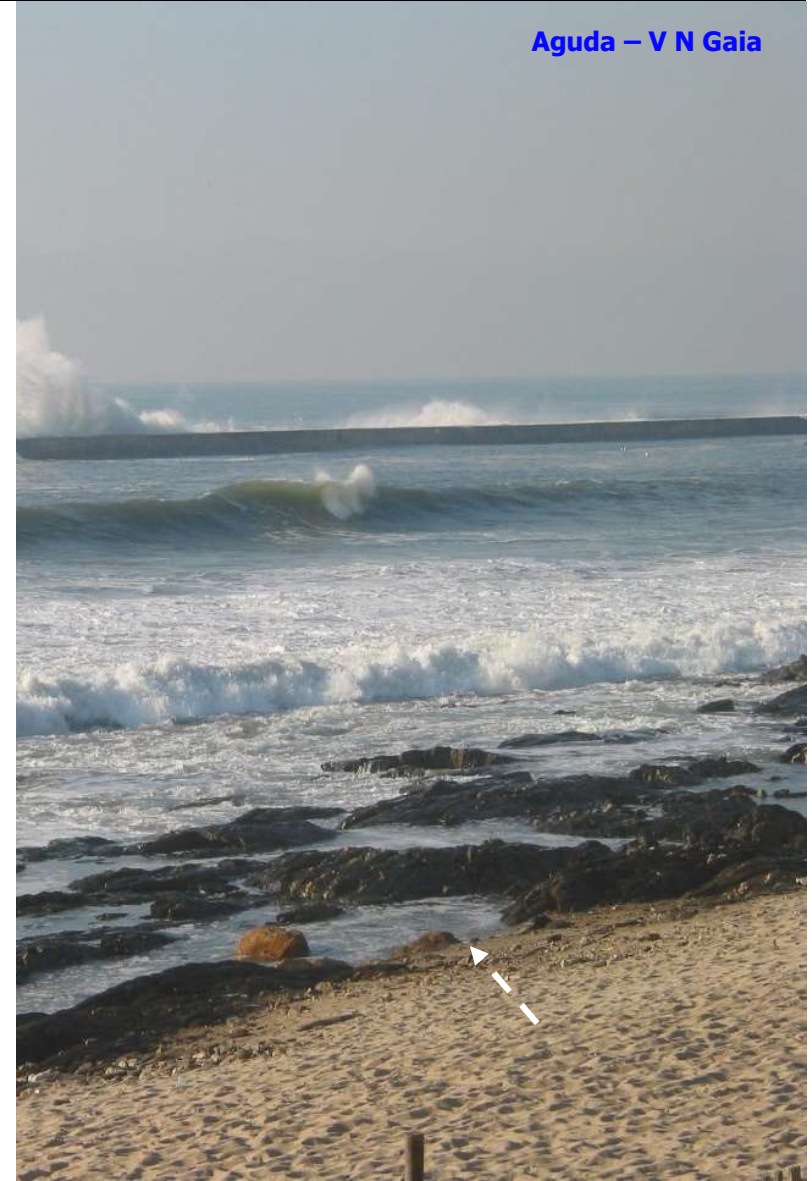
21 outubro de 2024

AGomes

Parâmetros da Maré

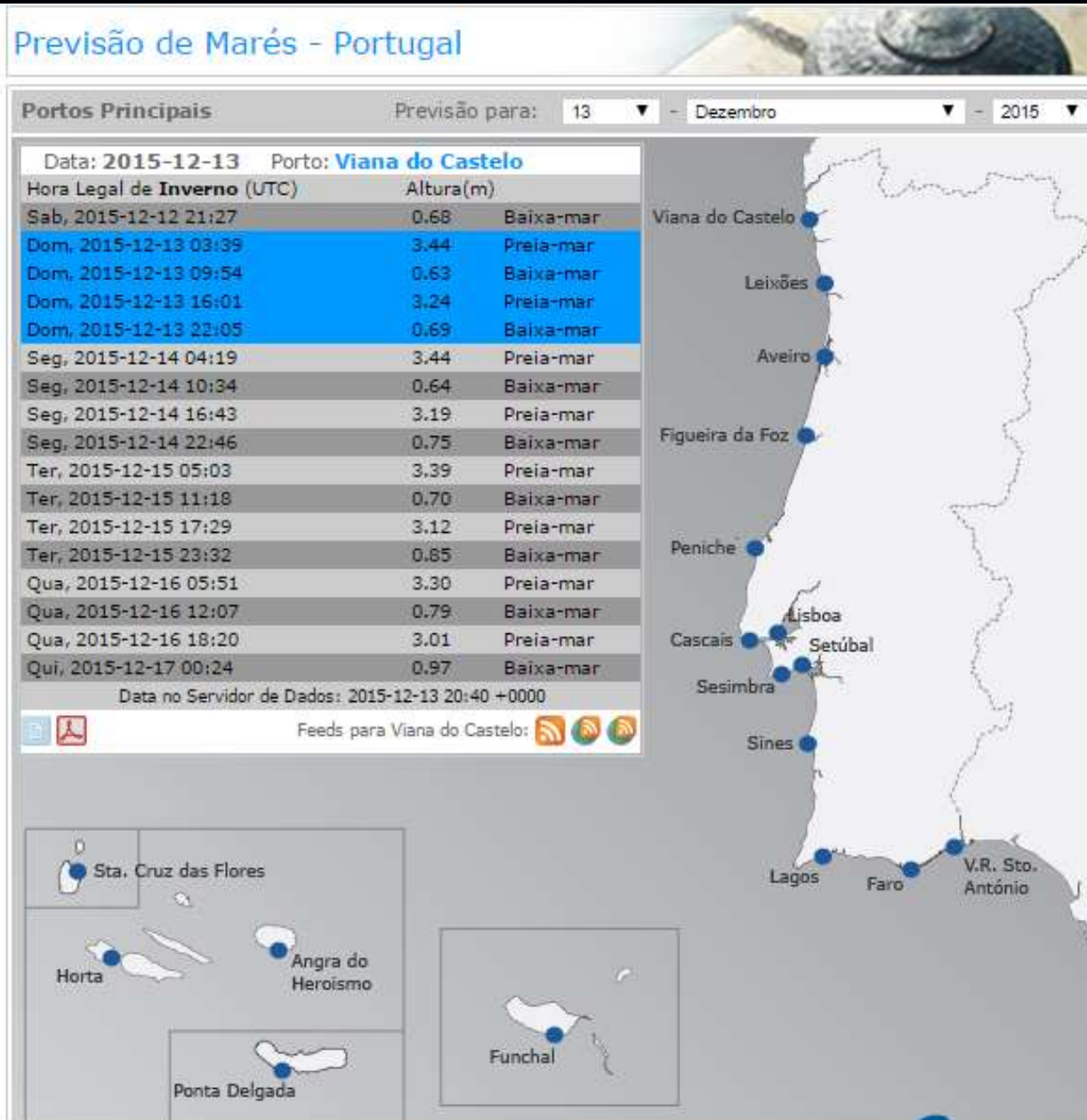


Aguda – V N Gaia



Dados sobre as marés

www.hidrográfico.pt



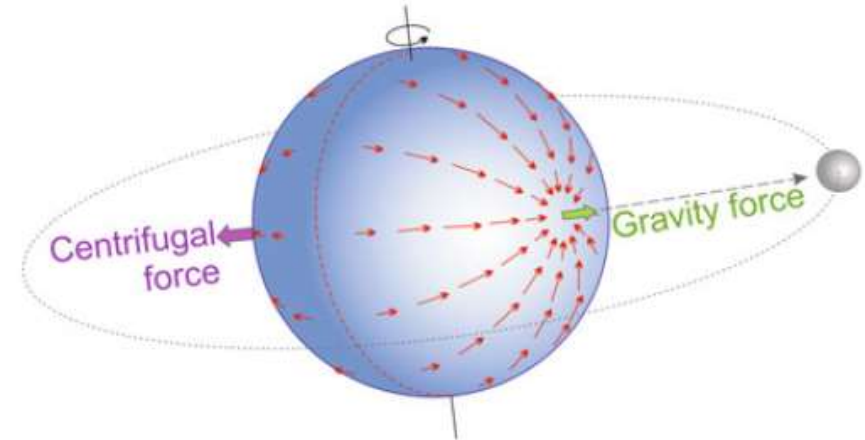
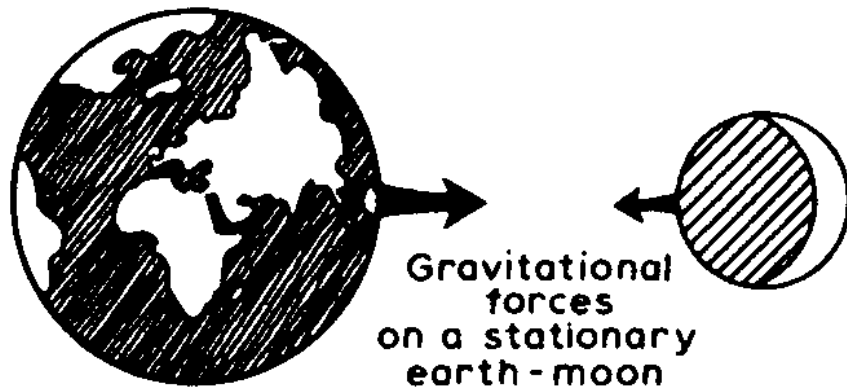
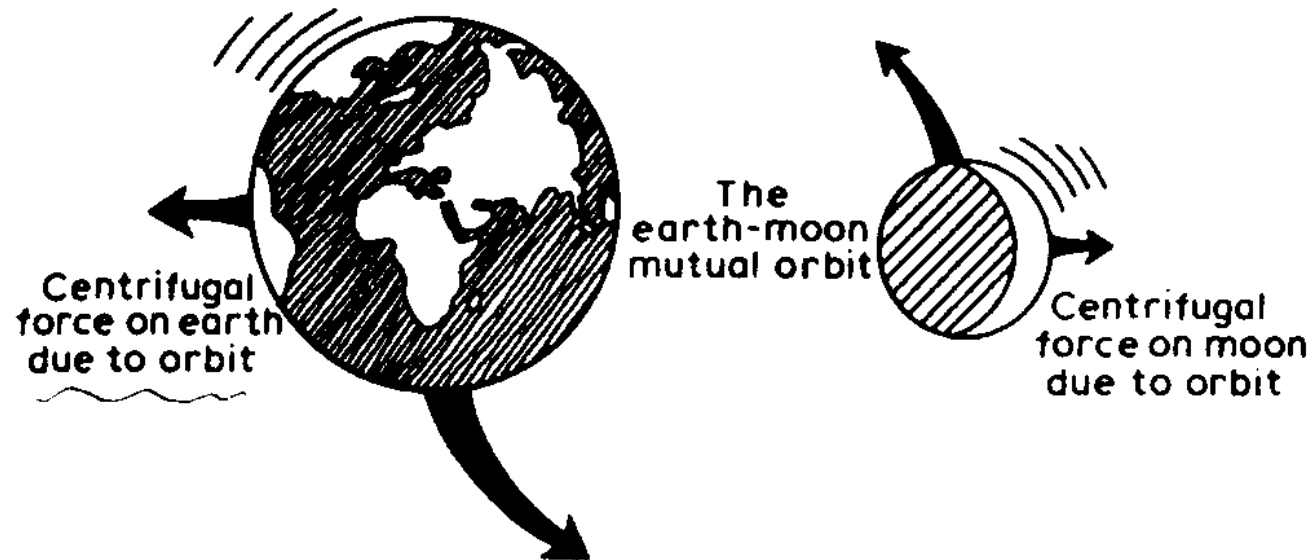


Fig. 4.1: Tide-raising force on a stationary earth.



$$F = G \frac{M * m}{d^2}$$

As forças gravitacionais e centrífugas responsáveis pelas marés.

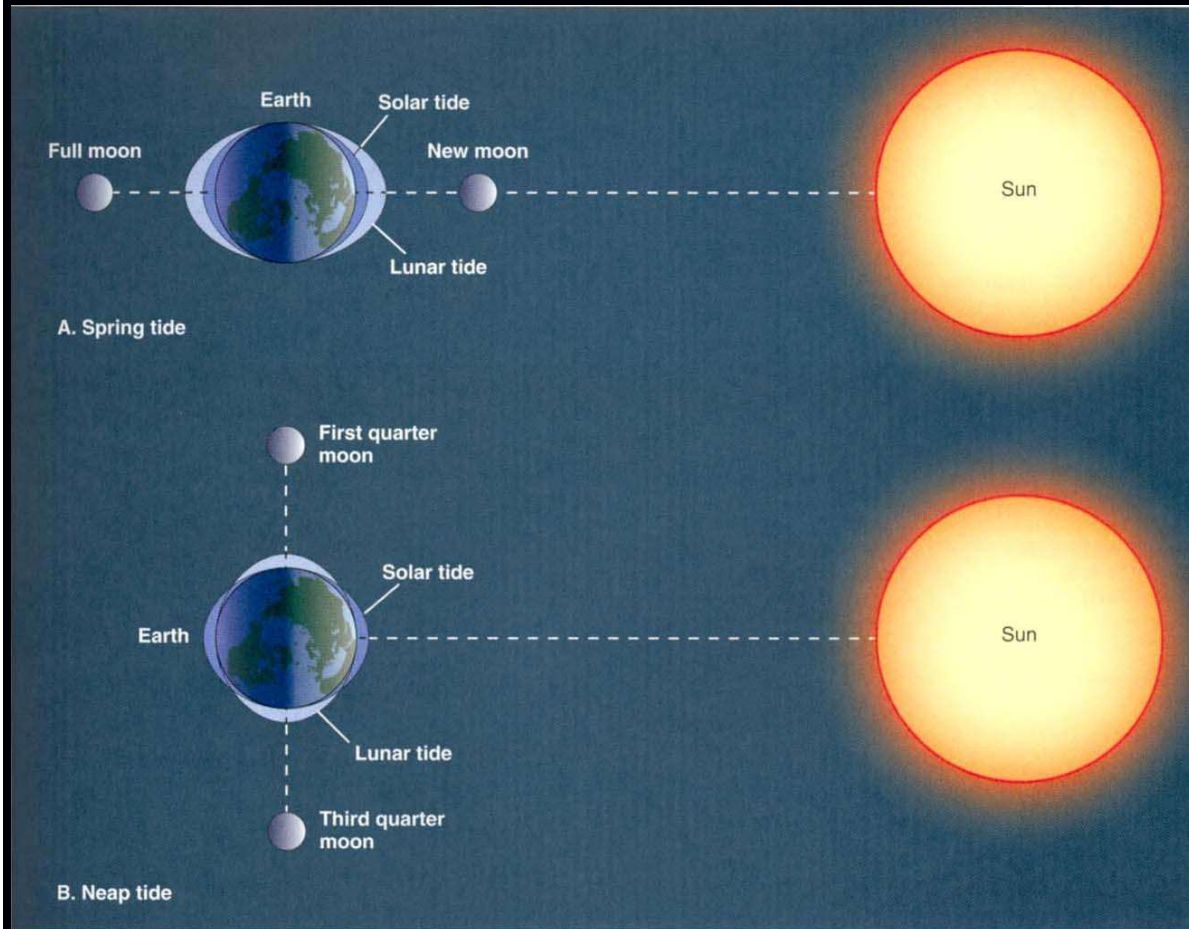
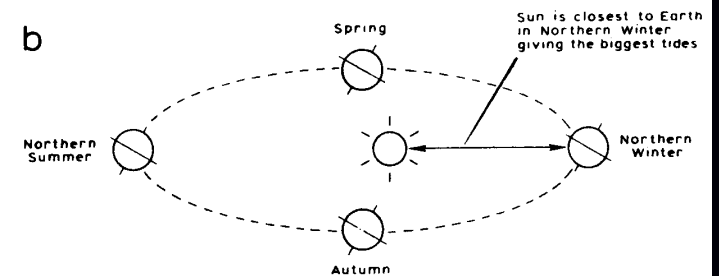
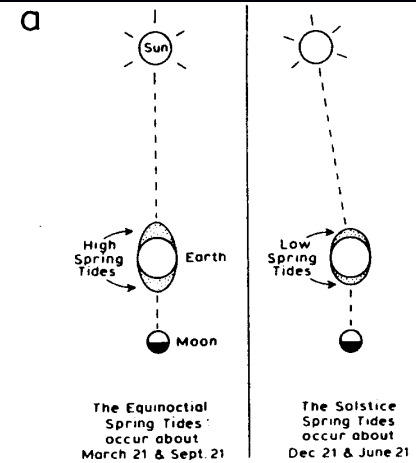


FIGURE 10-8 Earth-Moon-Sun Positions and the Tides.

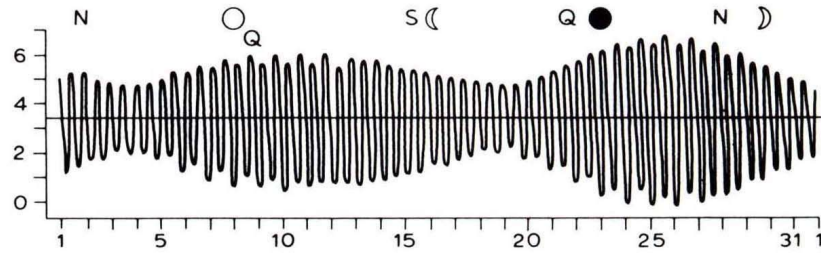
A, When the moon is in the new or full position, the tidal bulges created by the sun and moon are aligned, producing constructive interference and a therefore larger bulges, which "spring forth" as *spring tides*. B, **bottom:** When the moon is positioned halfway between the new and full phases (called the first and third quarters), the tidal bulge produced by the moon is at right angles to the bulge created by the sun. The bulges tend to cancel each other (destructive interference), and the resulting bulges are smaller, called *neap tides*. New moon and full moon phases produce spring tides with maximum tidal ranges, while the first and third quarter phases of the moon produce neap tides with minimal tidal ranges. From The Tasa Collection: Shorelines. Published by Macmillan Publishing Co., New York. Copyright © 1986, by Tasa Graphic Arts, Inc. All rights reserved.

Extraído de H. V. Thurman, 1997

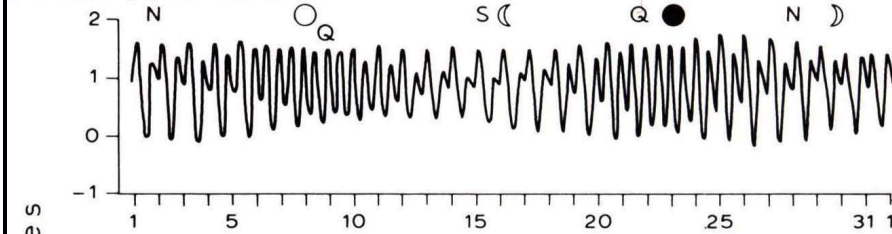
O ciclo Lunar e as marés vivas ou Mortas



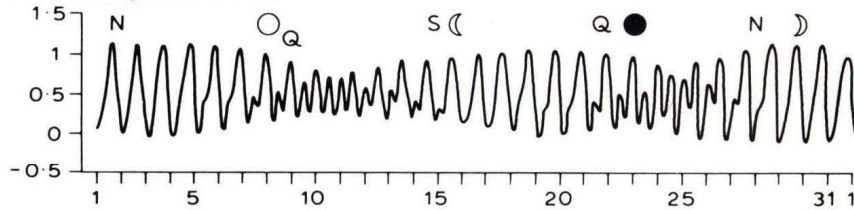
53°36'N; 0°11'W IMMINGHAM : semidiurnal form



37°48'N; 122°24'W SAN FRANCISCO : mixed, predominantly semidiurnal form



14°36'N; 120°59'E MANILA : mixed, predominantly diurnal form



20°41'N; 106°48'E DO - SON : diurnal form

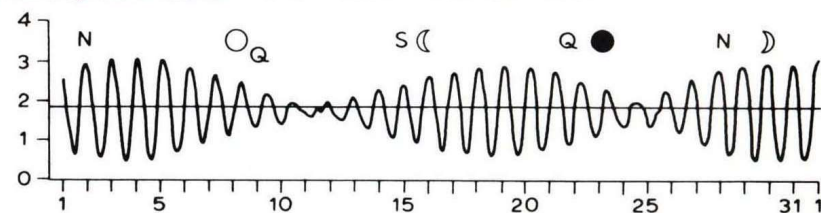


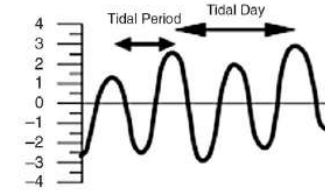
Fig. 4.8: Four examples of tidal variability.

Extraído de J. Pethick, 1984

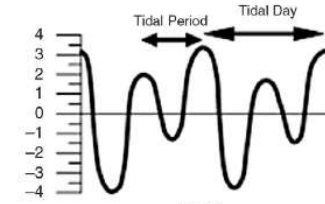
Tipos de marés. Semidiurnas, mistas e diurnas

(A)

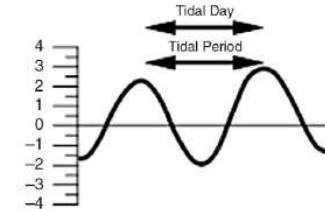
Semidiurnal: Two equal high and low tides per day



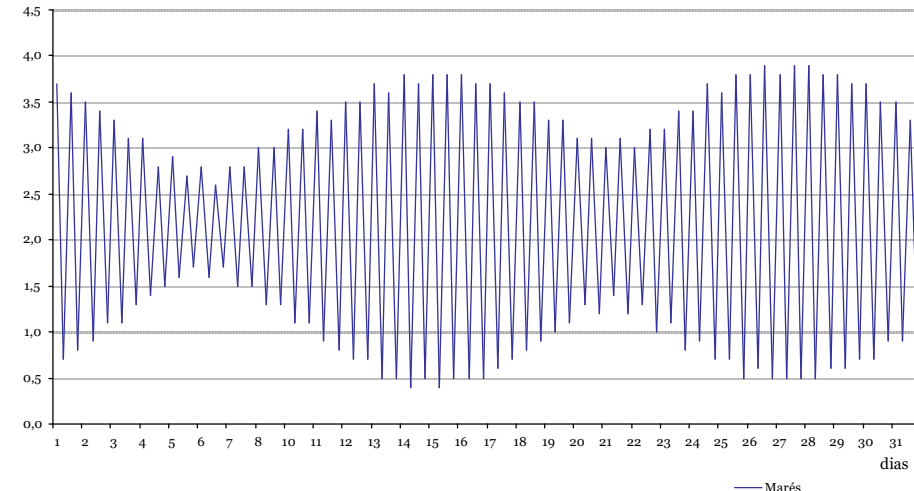
Mixed: Two unequal high and low tides per day



Diurnal: One high tide and one low tide per day



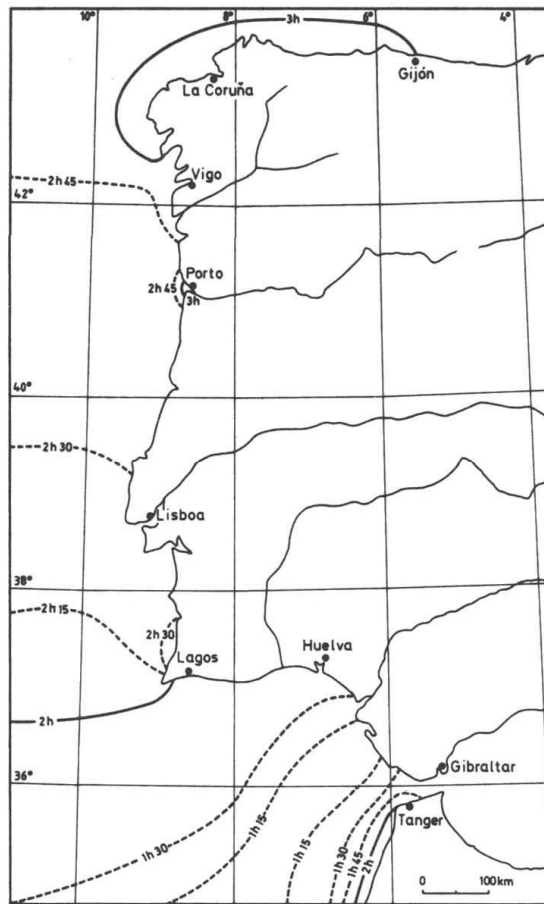
Amplitude das marés para Lisboa (Tejo)
Outubro 2000



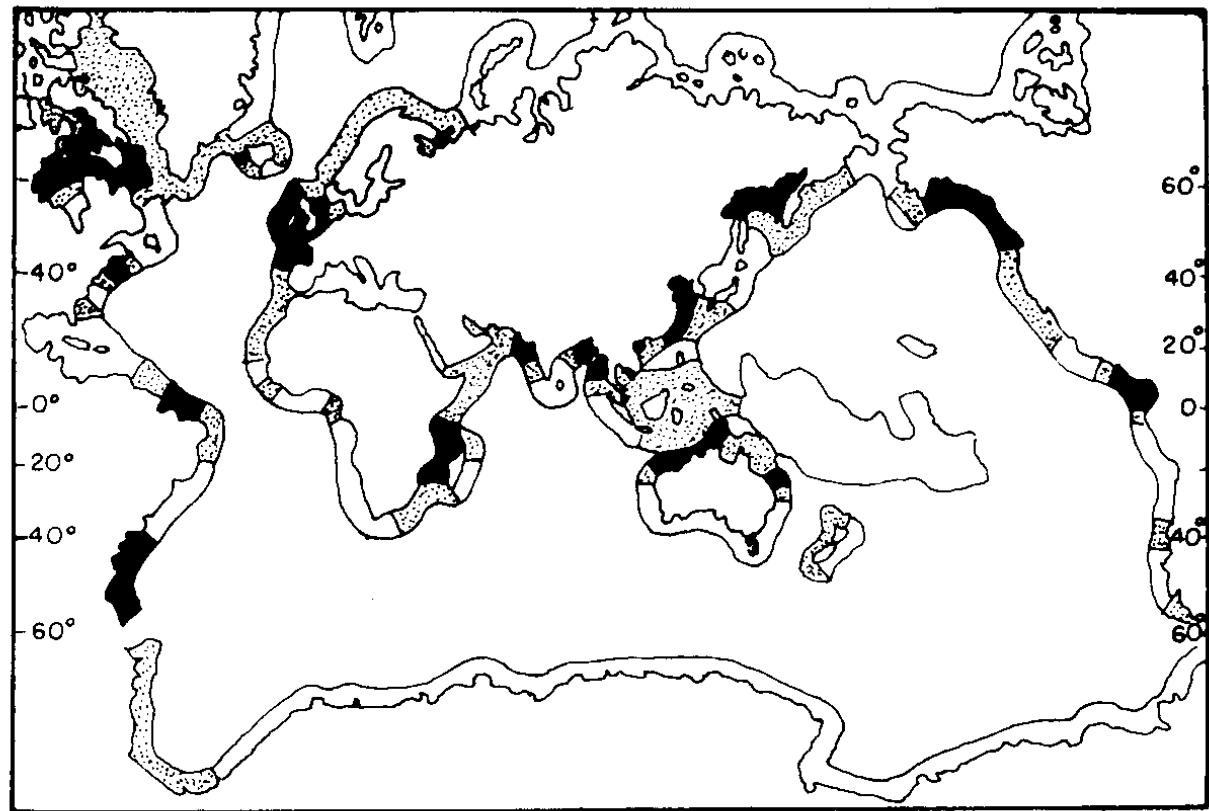
Fonte: Associação Nacional de Cruzeiros, 1999 (<http://www.edinfor.pt/anc/anemar-200010.html>)

Gráfico das marés para Lisboa. Outubro de 2000

Propagação da maré em Portugal



*Es
et.*



Macromaré (>4m)
 Mesomaré (4-2m)
 Micromaré (<2m)

Figura 4.
 As marés ao largo do litoral português.
 Isolinhas da maré M2, referidas à hora de passagem da lua média pelo meridiano de Greenwich, segundo *Marineleitung*, Berlin, 1931.
 Figura preparada por H. Lautensach, em 1944, para a edição portuguesa da *Geografia de Portugal*.

Os diferentes tipos regimes de amplitudes de marés.