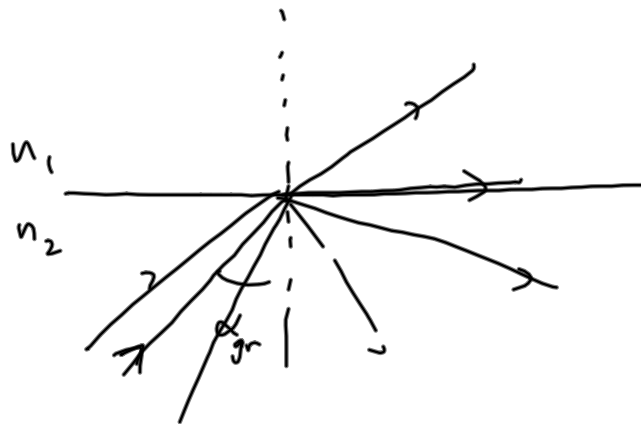
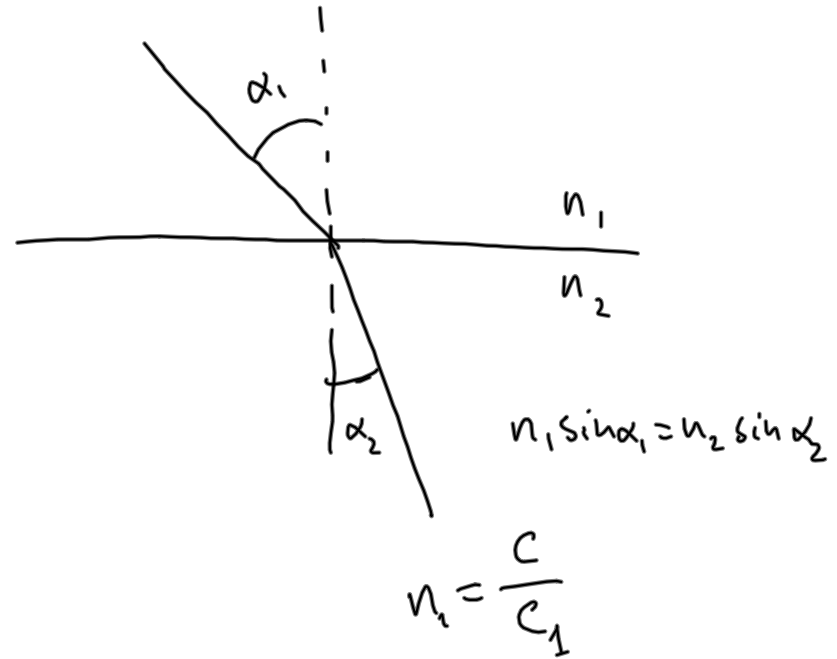
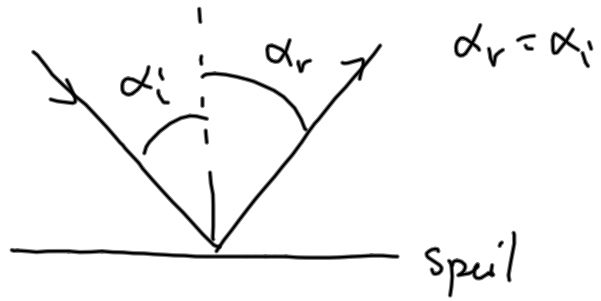


Kort repetisjon

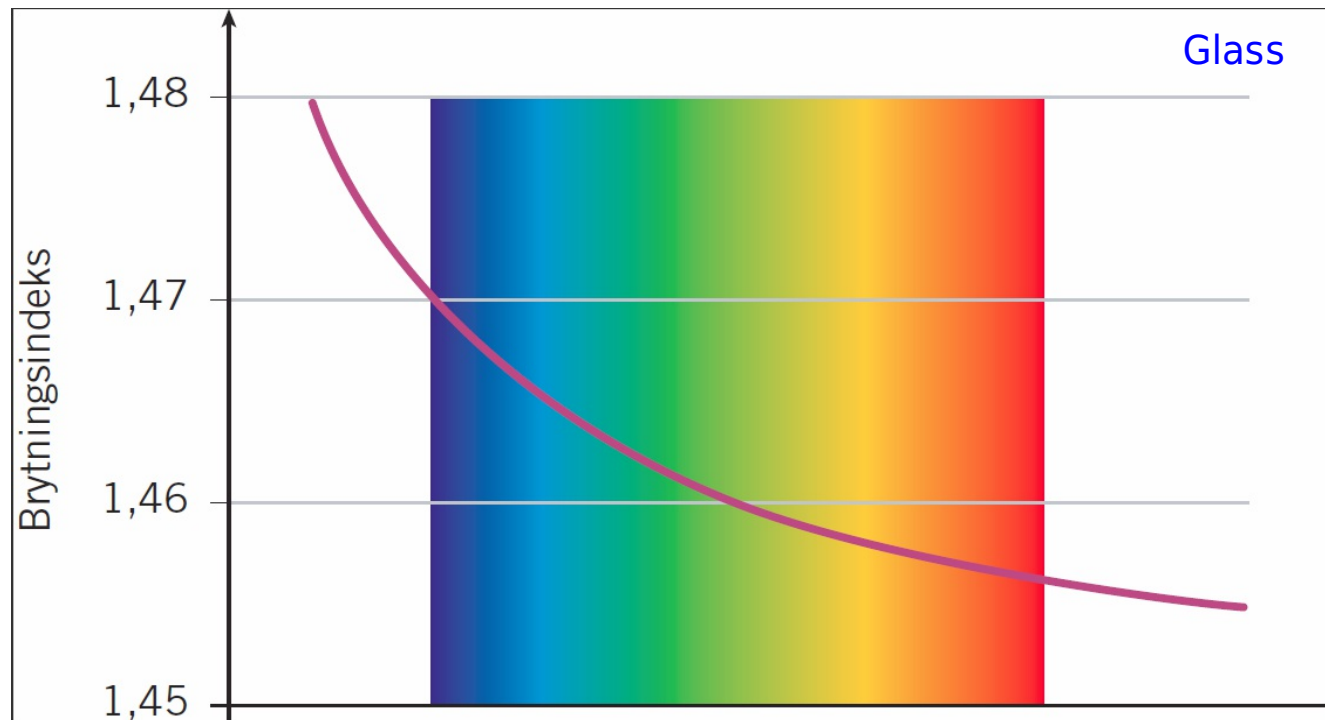


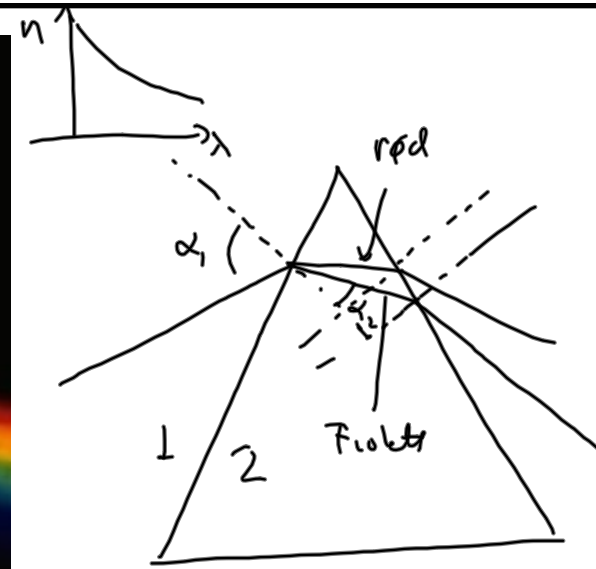
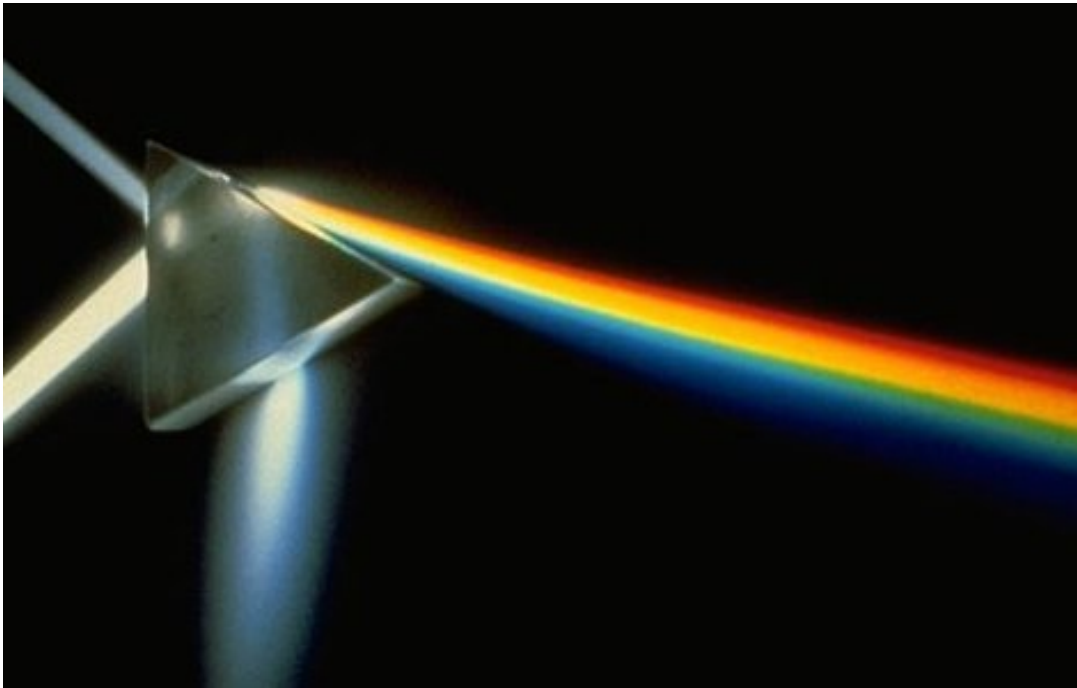
$$n_2 \sin \alpha_{gr} = n_1 \sin 90^\circ$$

$$\sin \alpha_{gr} = \frac{n_1}{n_2}$$

$$\alpha_{gr} = \sin^{-1} \frac{n_1}{n_2}$$

Dispersjon: Brytningsindeksen avhenger av bølglengden

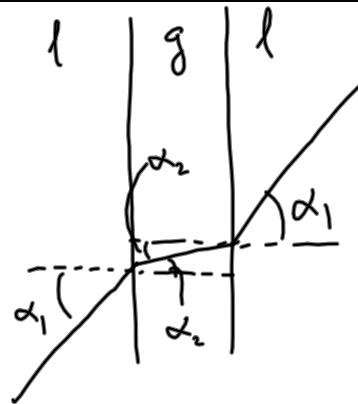
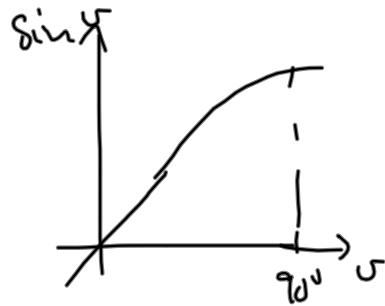




$$n_1 \sin \alpha_1 = n_2 \sin \alpha_2$$

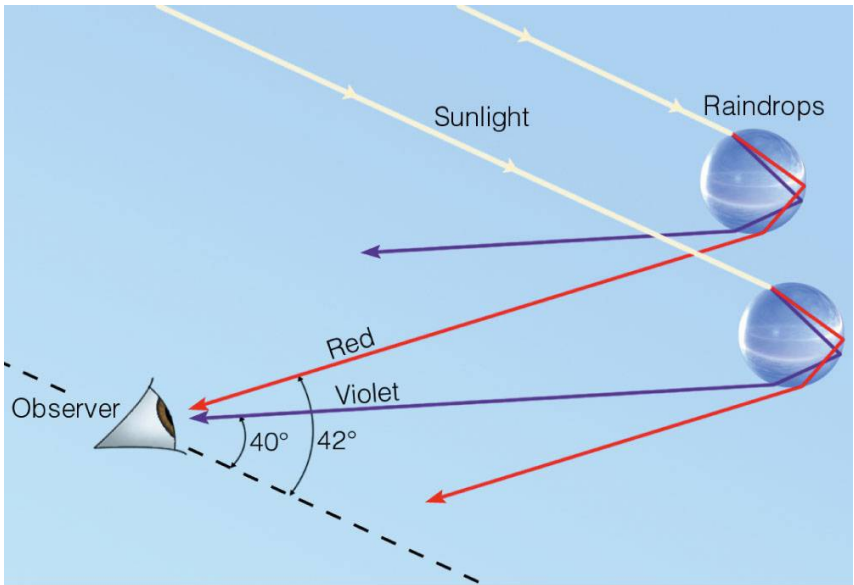
$$\sin \alpha_2 = \frac{n_1 \sin \alpha_1}{n_2}$$

Star $n \Rightarrow$ litar α

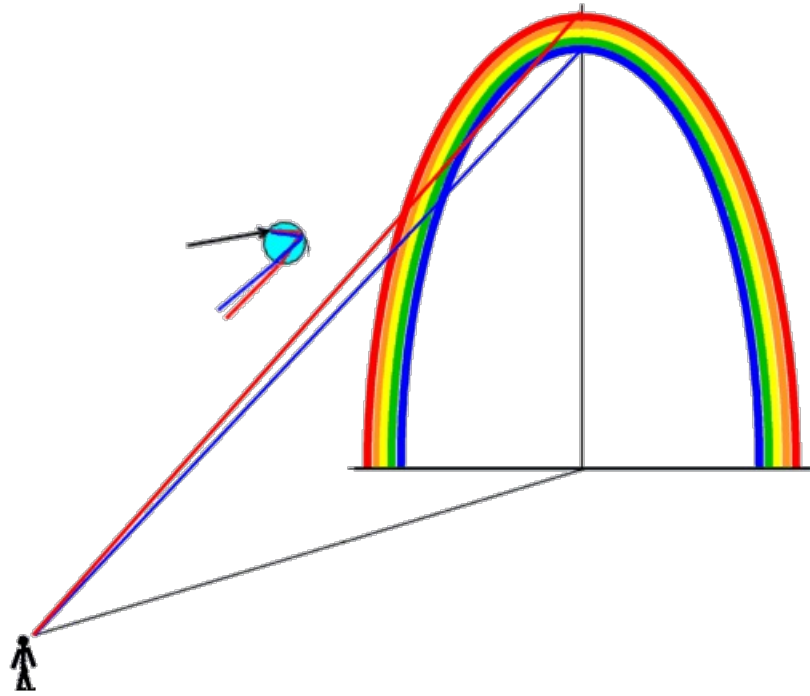




Title : mar 21-14:38 (Page 4 of 21)



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Next-Time Question

CONCEPTUAL Physics

The photographer wishes to photograph the rainbow but is disappointed to find the camera's angle of view is not wide enough to see the whole rainbow. To get the whole rainbow, she would be better off if she were



closer to the rainbow.
farther from the
rainbow.

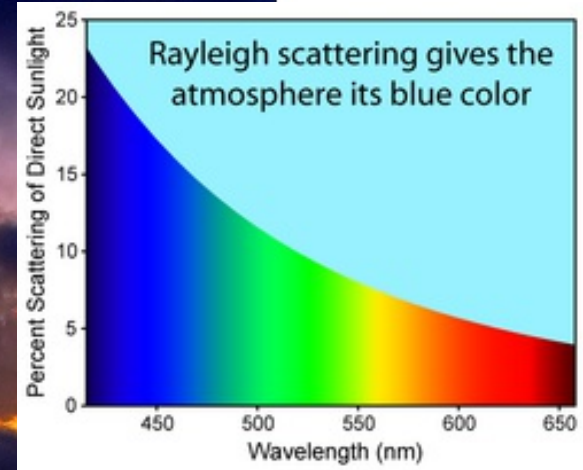
.. neither, for she'd get
the same portion of
bow in either case.



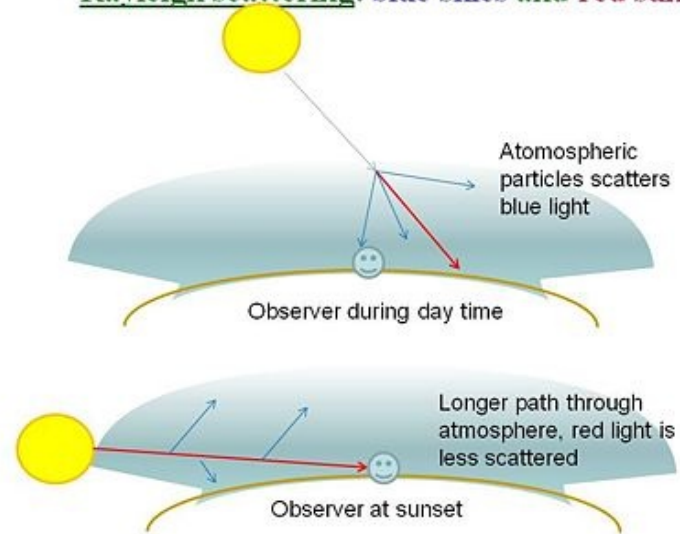
© 2012 D. H. Hathaway

Title : Feb 21-1:14 PM (Page 7 of 21)

Ved spredning mot små partikler blir kortbølget lys spredt mest effektivt.



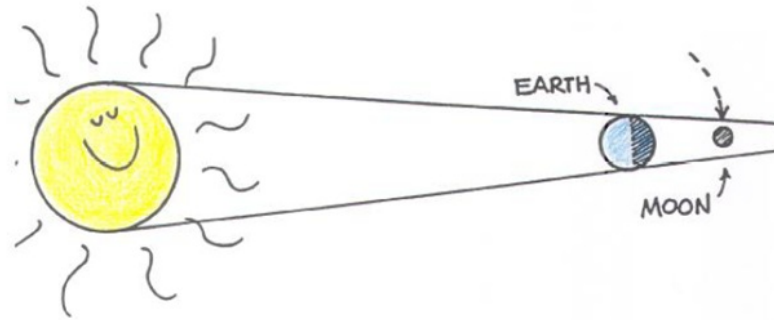
Rayleigh scattering: blue skies and red sunsets

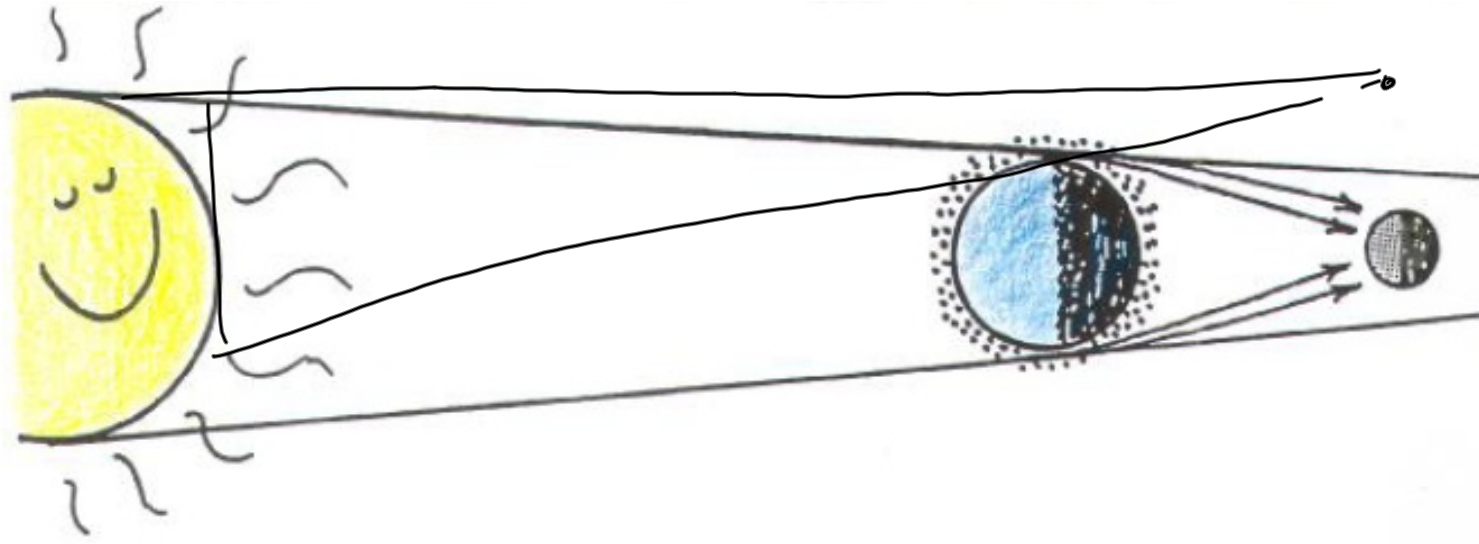


Next-Time Question

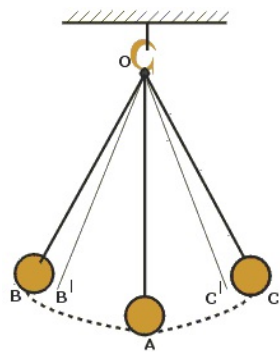
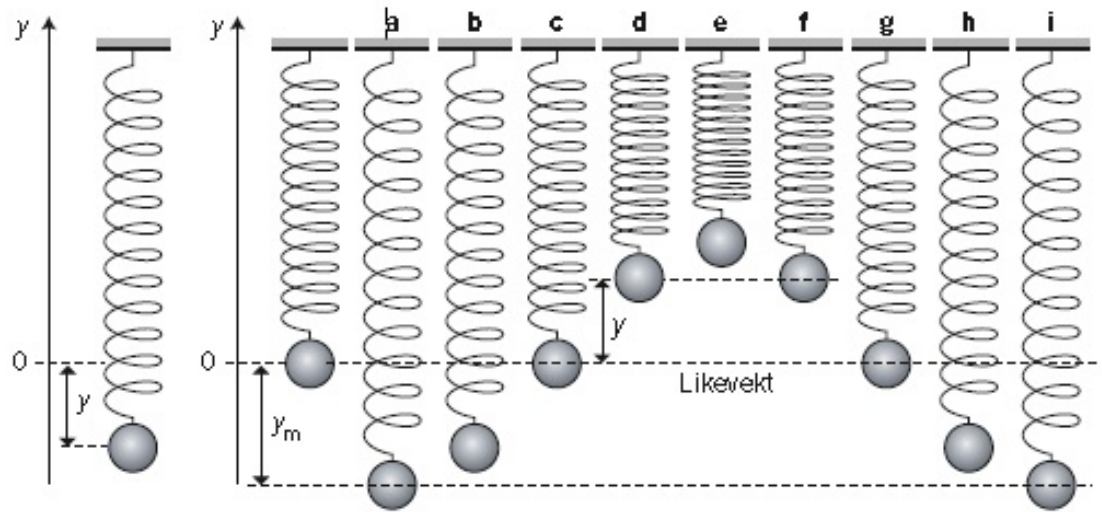
CONCEPTUAL Physics

A lunar eclipse occurs when the Moon passes into the Earth's shadow. Instead of being completely dark, the Moon appears a deep red. What does this reddish color have to do with the sunsets all over the world?

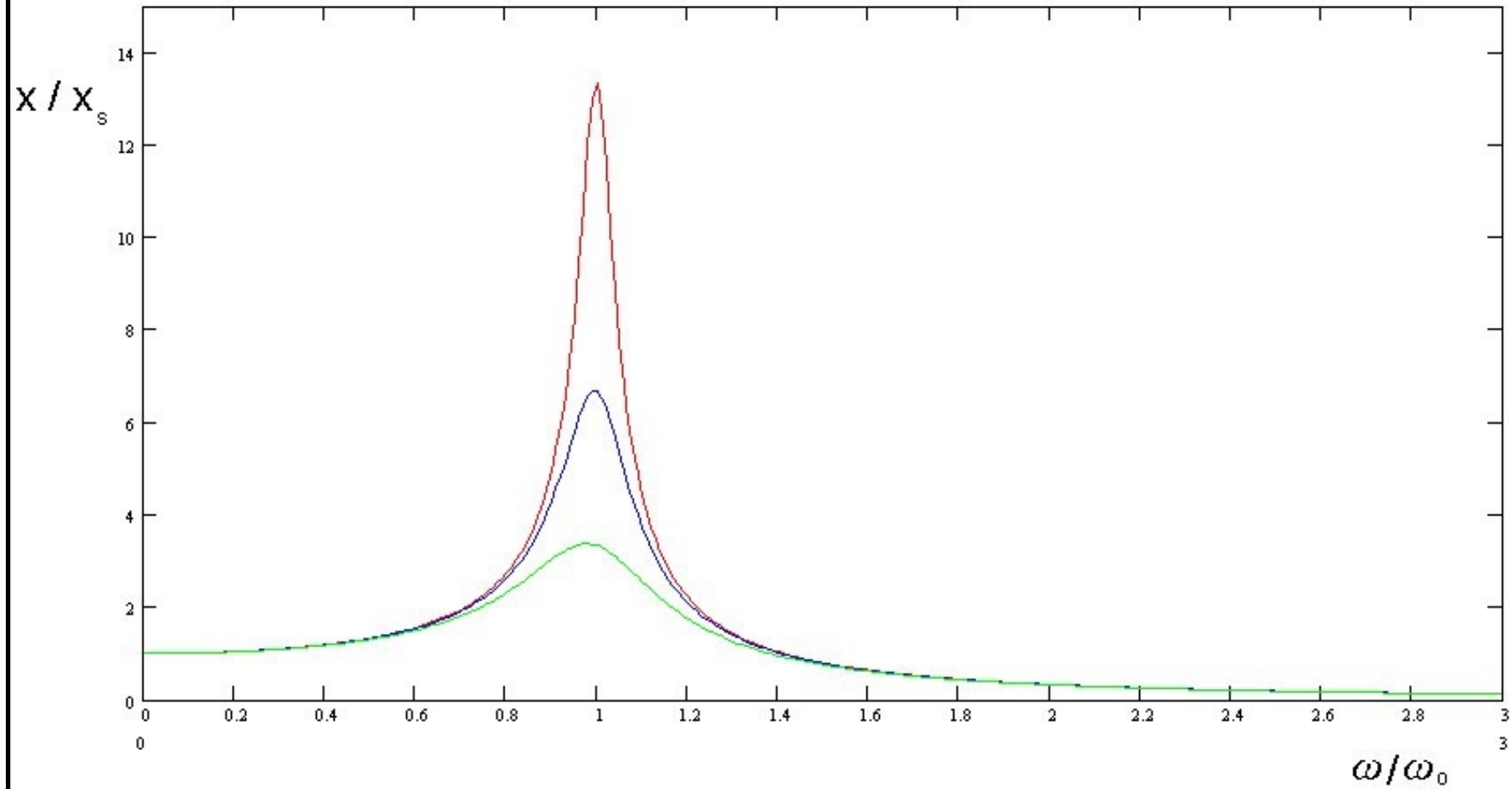




Svingninger og bølger

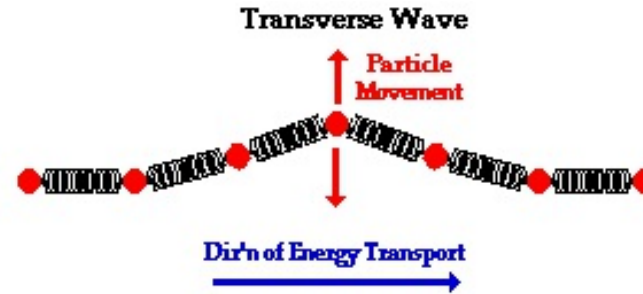


Resonans



Bølgetyper:

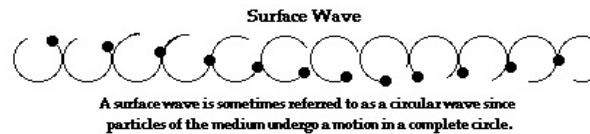
Tversbølger



Langsbølger



Overflatebølger

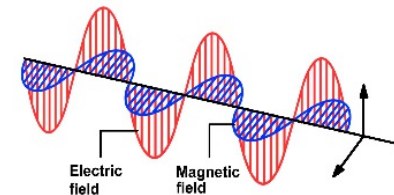


Lydbølger

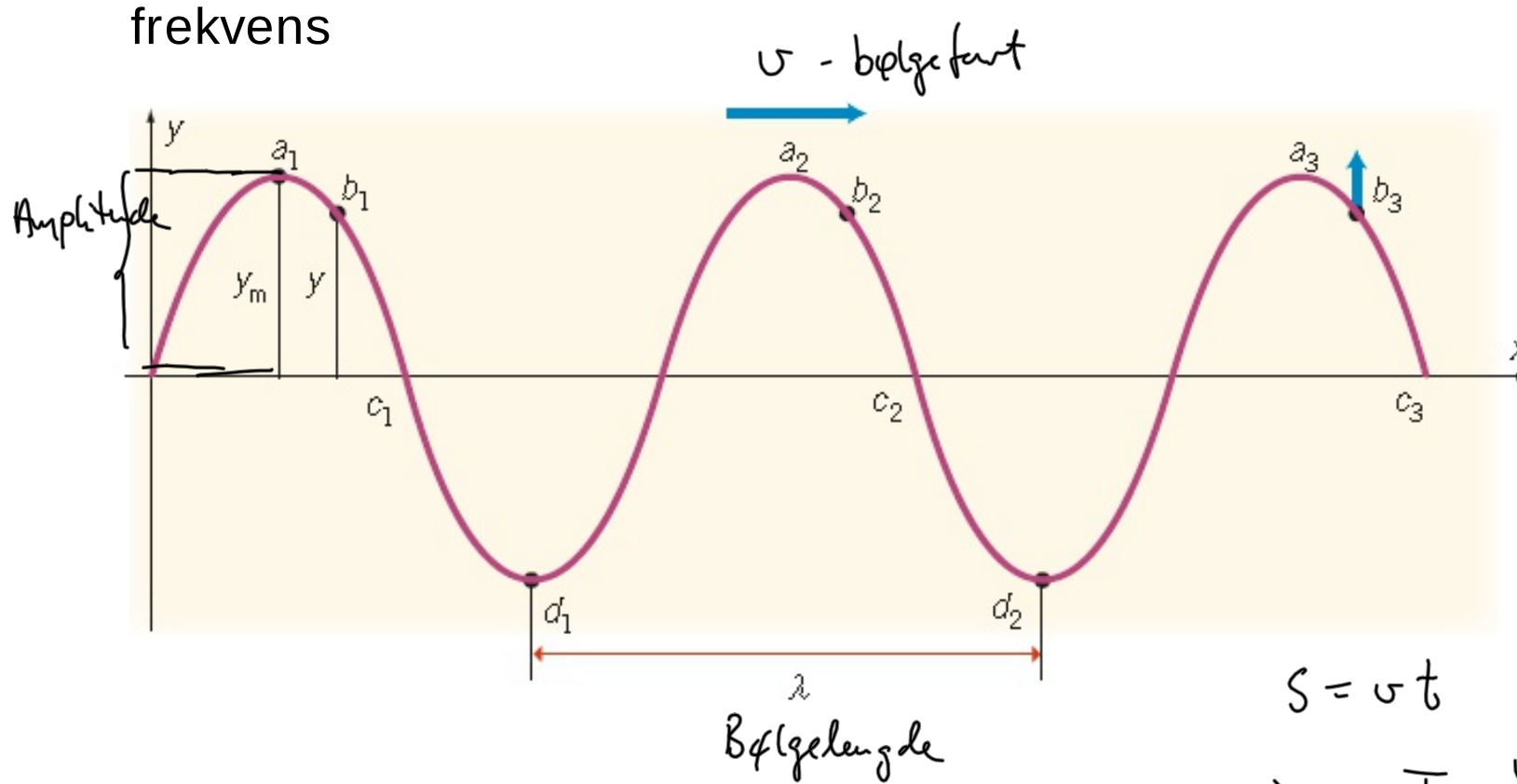
Jordskjelv

<http://www.britannica.com/EBchecked/topic/532925/seismic-wave>

Elektromagnetiske bølger



Sammenhengen mellom bølgelengde, bølgefart og frekvens

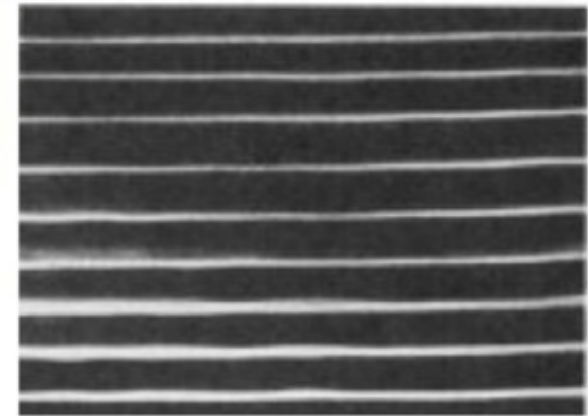
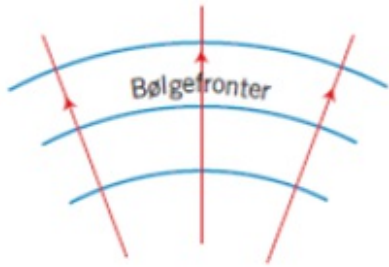
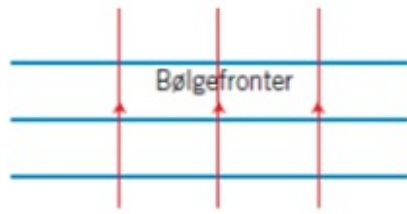


Periode : T
 Frekvens : $f = \frac{1}{T}$

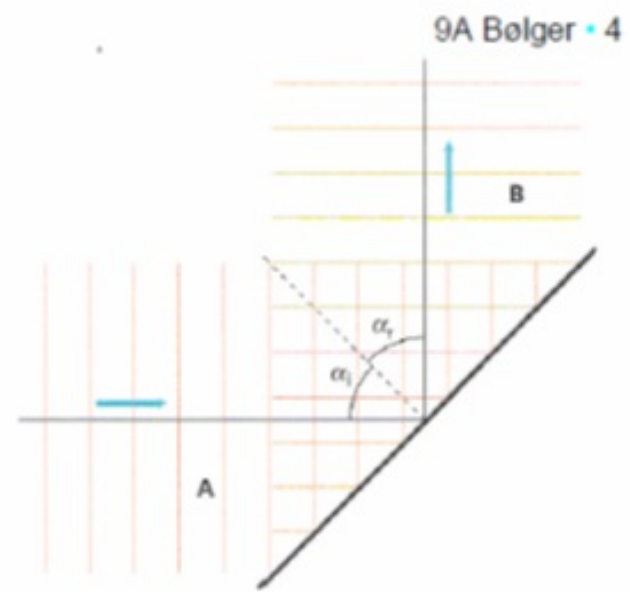
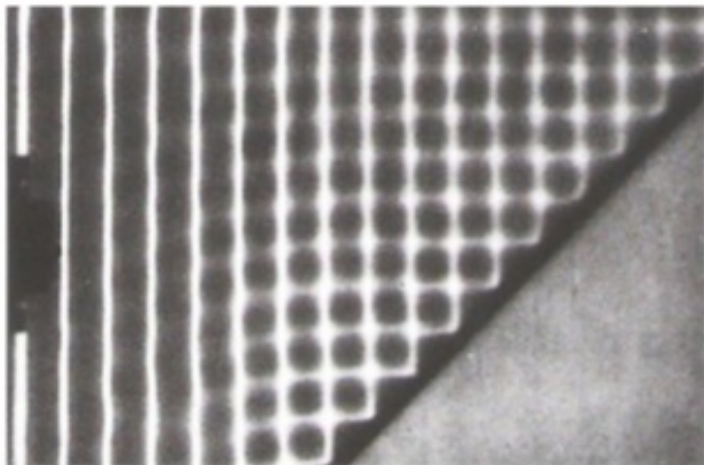
$$s = vt$$

$$\lambda = v \overset{\uparrow}{T} = \frac{v}{f}$$

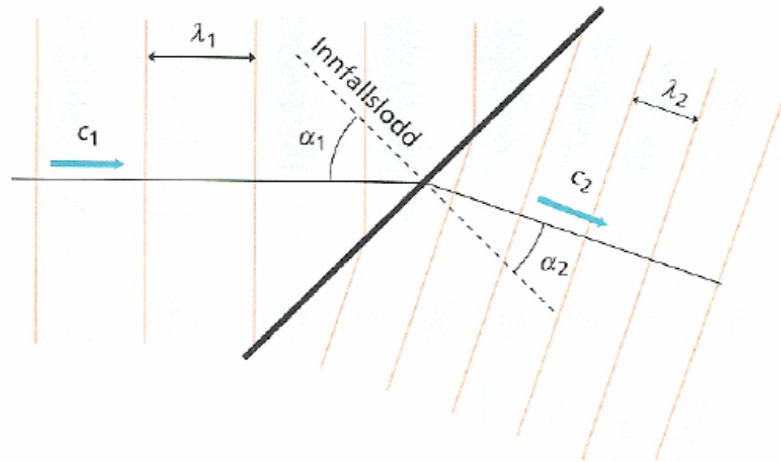
$$v = \lambda f$$



Refleksjon av bølger

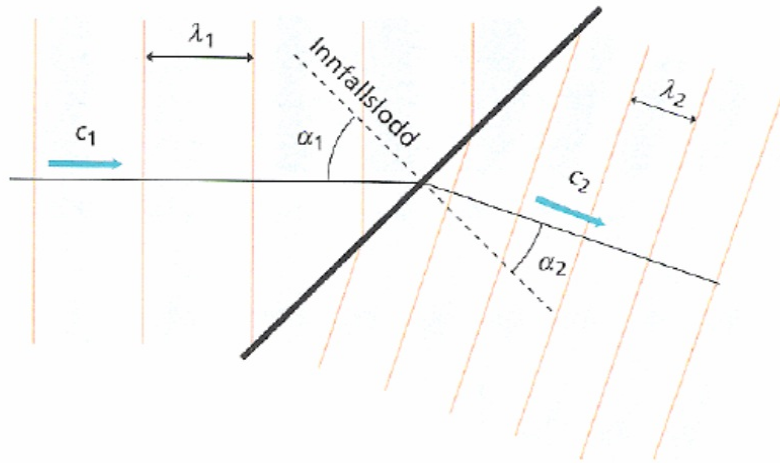


Brytning av bølger



$$\frac{\sin \alpha_1}{c_1} = \frac{\sin \alpha_2}{c_2}$$

Eksempel: $\alpha_1 = 28^\circ$, $\alpha_2 = 15^\circ$, $c_2 = 12 \text{ m/s}$, $c_1 = \text{?????}$



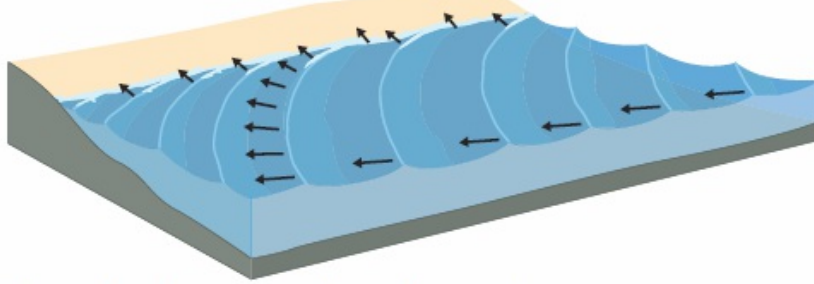
$$\frac{\sin \alpha_1}{c_1} = \frac{\sin \alpha_2}{c_2}$$

$$c_1 = \frac{c_2}{\sin \alpha_2} \cdot \sin \alpha_1 = 22 \text{ m/s}$$

Samsnakk:

Hvorfor ser det alltid ut som
bølgene kommer rett inn mot
stranden? Kommer de aldri
på skrå?





Vannbølgene går saktere jo grunnere det er. Vannbølgene blir derfor brutt gradvis inn mot stranden.

