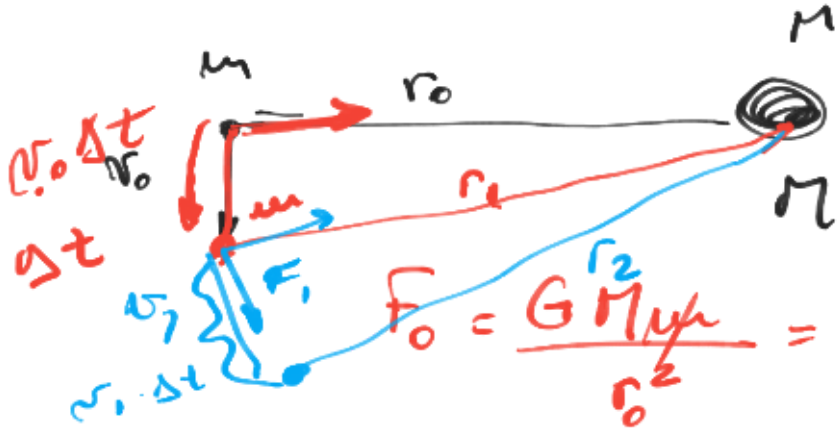
f3b-2019-U03C01-1105-estructura



$$F_0 = \frac{G M m}{r_0^2} = m \vec{a}$$

$$\vec{r}_1 = \vec{r}_0 + \vec{v}_0 \Delta t \qquad \vec{v}_1$$

$$F_1 = \frac{G M m}{r_1^2} = \vec{a}_1 m$$

0) Definir $M, m, r_0, v_0, \Delta t = T/1000$

i) propago el cuerpo

$$\vec{r}_1 = \vec{r}_0 + \vec{v}_0 \Delta t$$

ii) Calculo la aceleración en 1.

$$\vec{a}_1 = \frac{G M}{|\vec{r}_1^2|} \hat{r}$$

iii) Calculo la nueva velocidad.

$$\vec{v}_1 = \vec{v}_0 + \vec{a}_1 \Delta t$$

$t = 0, \infty$

$\vec{r}_{i+1} = \vec{r}_i + \vec{v}_i \Delta t$

$\vec{a}_{i+1} = \frac{GM}{|r_{i+1}^2|} \hat{r}_{i+1}$

$\vec{v}_{i+1} = \vec{v}_i + \vec{a}_{i+1} \Delta t$

i

Vector

dimensión

Modulo

Coordenadas

Vector

- Calcular modulo.
- definir sentido

Calcular modulo:

$i = 1$, dimensión

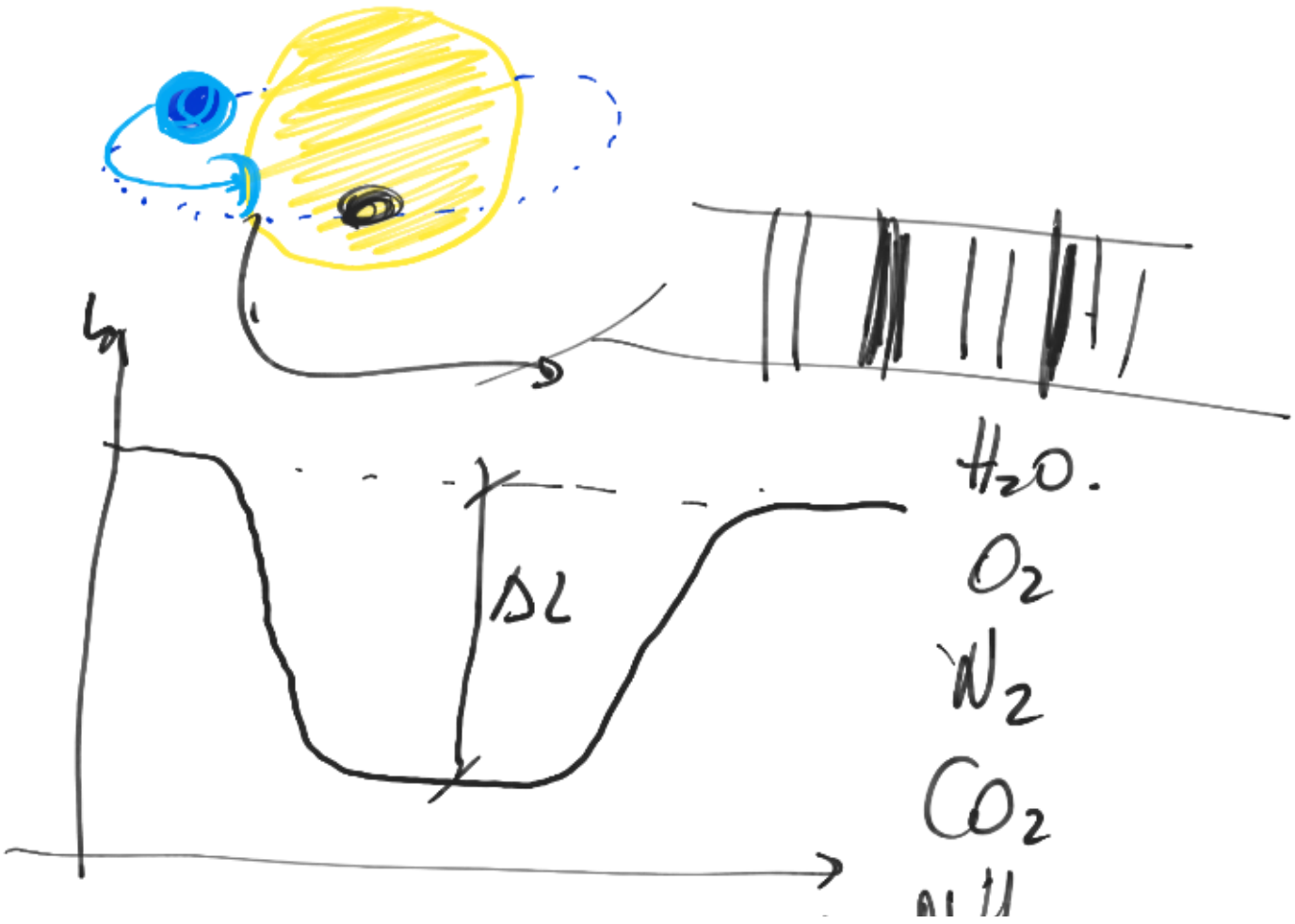
modulo = modulo + x_i^2

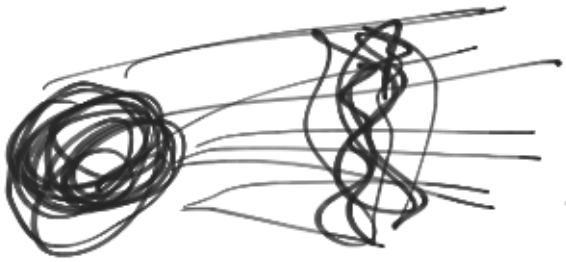
return Modulo

$$\text{modulo} = \sqrt{\sum_{i=1}^{dim} x_i^2}$$

3 estructuras → secuencia
→ decisión.
→ bucle.

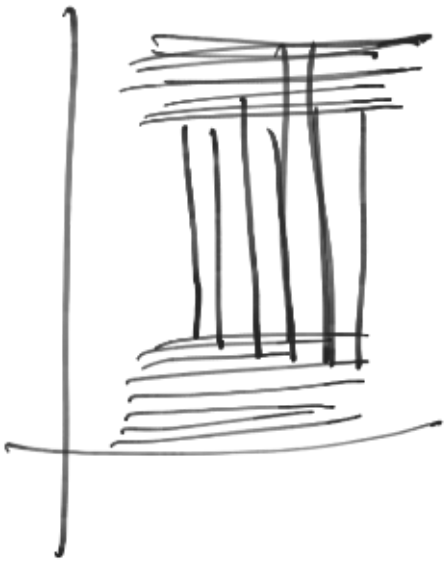
receta.





Lot
Caliente

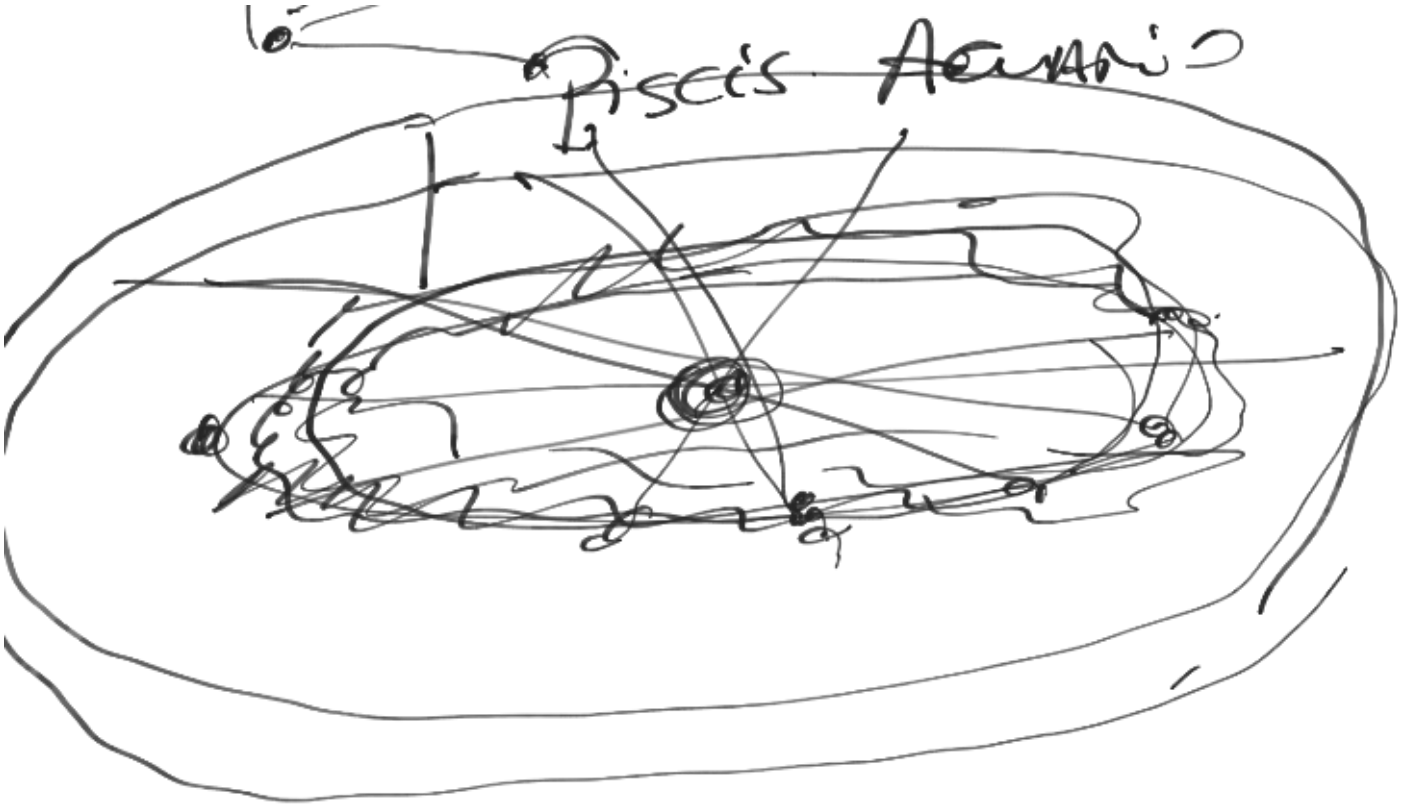
Gas
frio



α = 1 segundo arco.

1 parsec

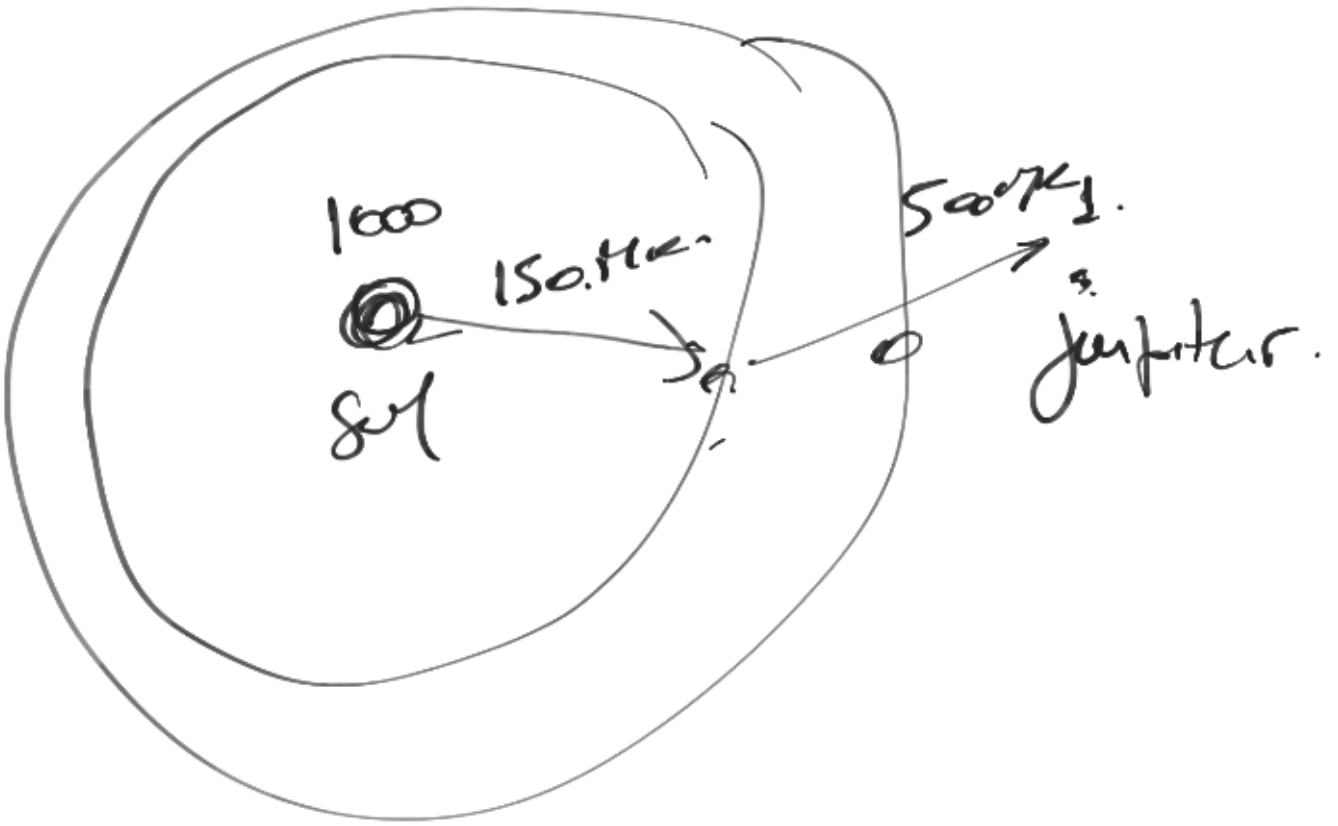
1 parsec $\simeq$ 3,26al



3rd Law of Kepler.

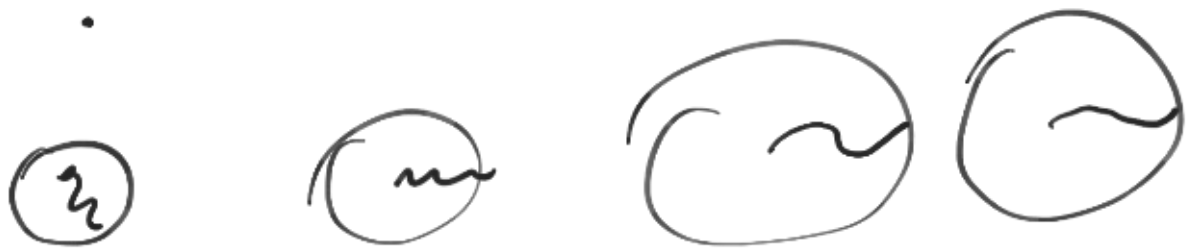
i) Relatividad general.

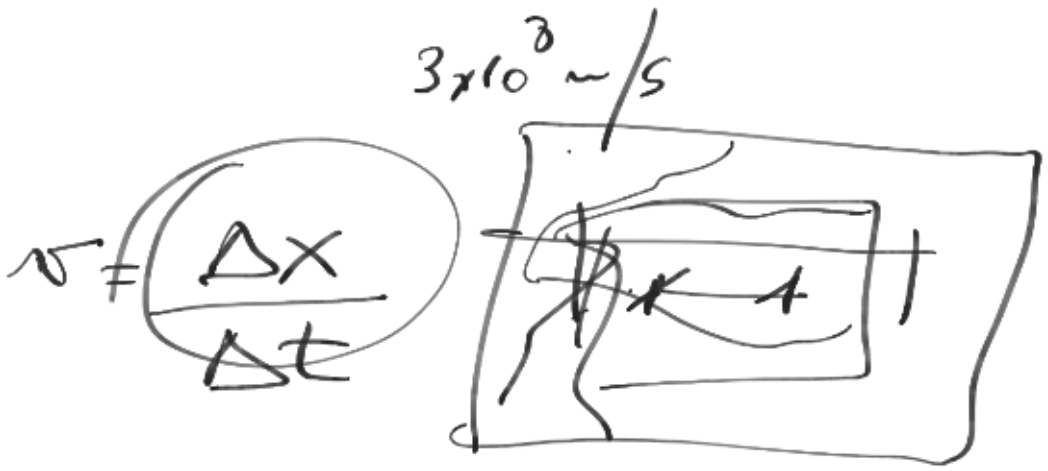
ii) Interacción con los planetas Jupiter.



$$E = h\nu \qquad c = \lambda\nu$$

$$\Rightarrow E = \frac{hc}{\lambda}$$





Redshift cosmologico

Comentario del rojo