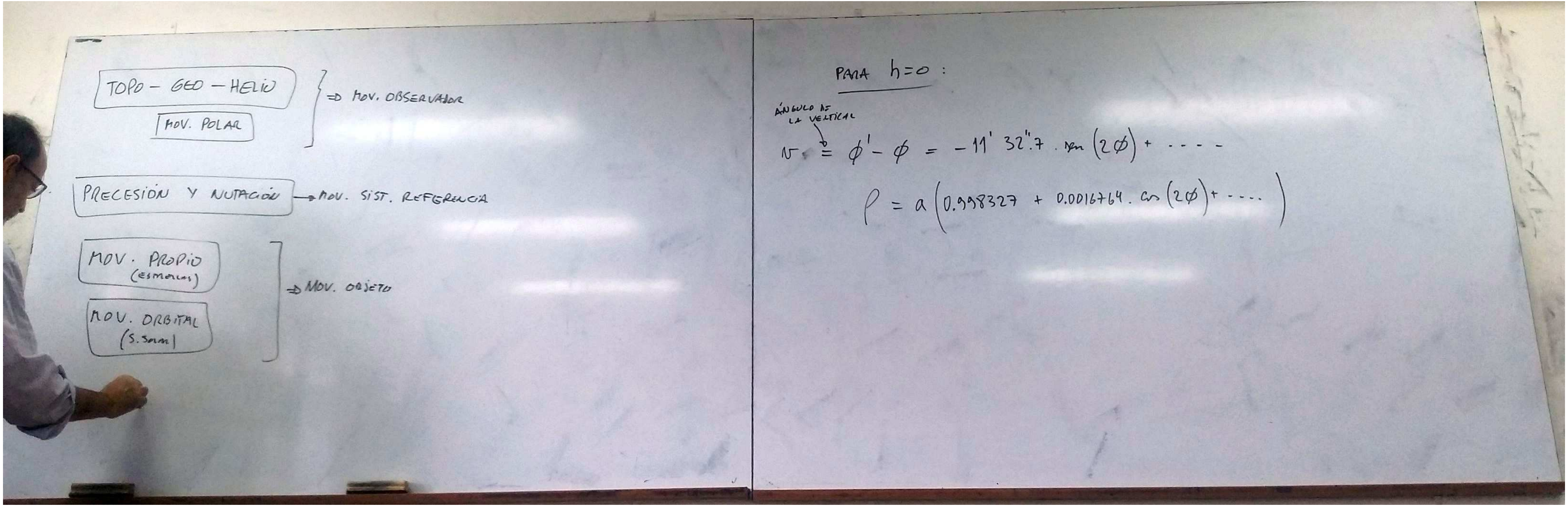
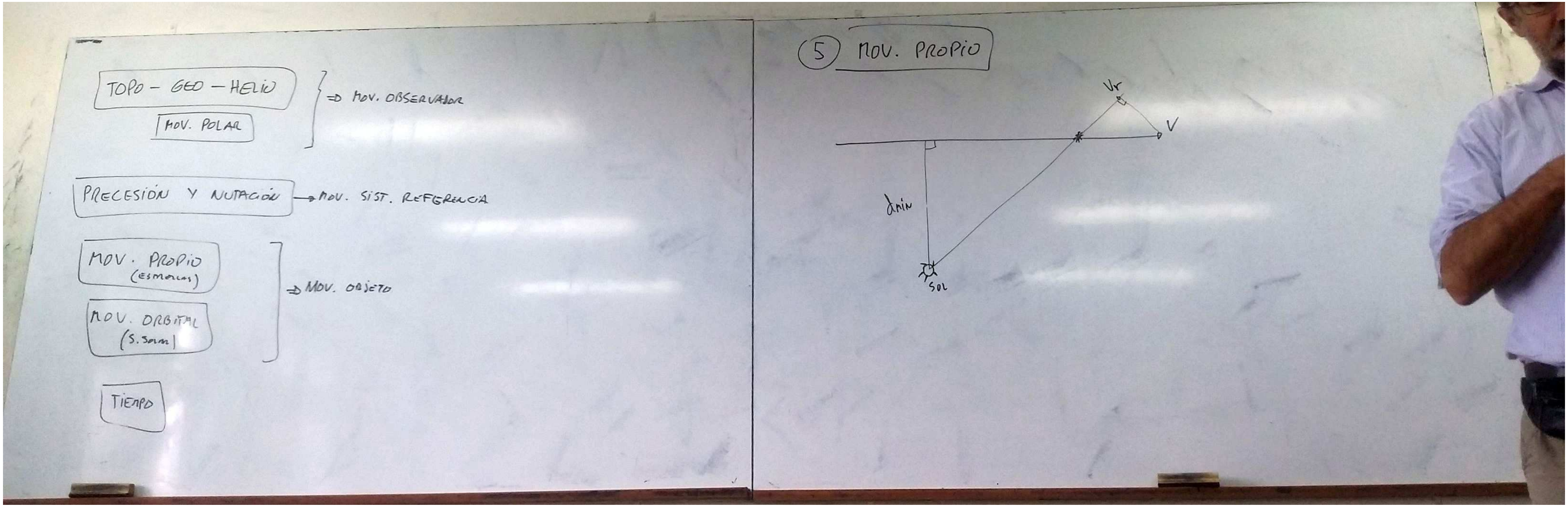
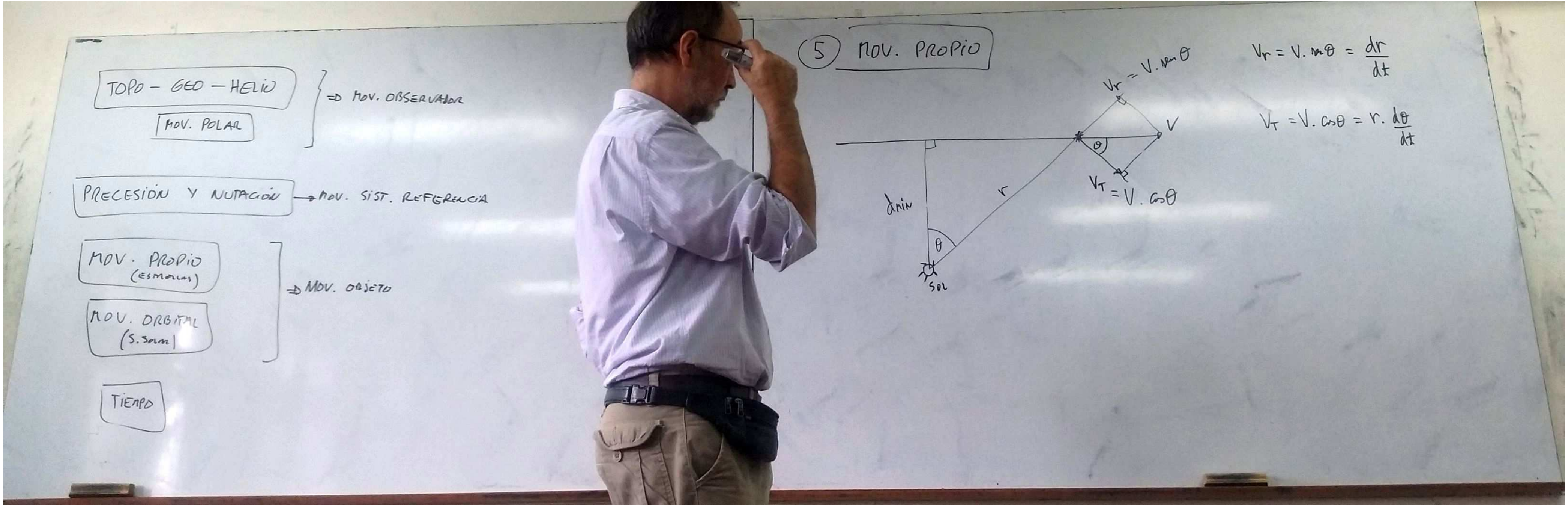
Astronomia Fundamental 2018 - clase 11



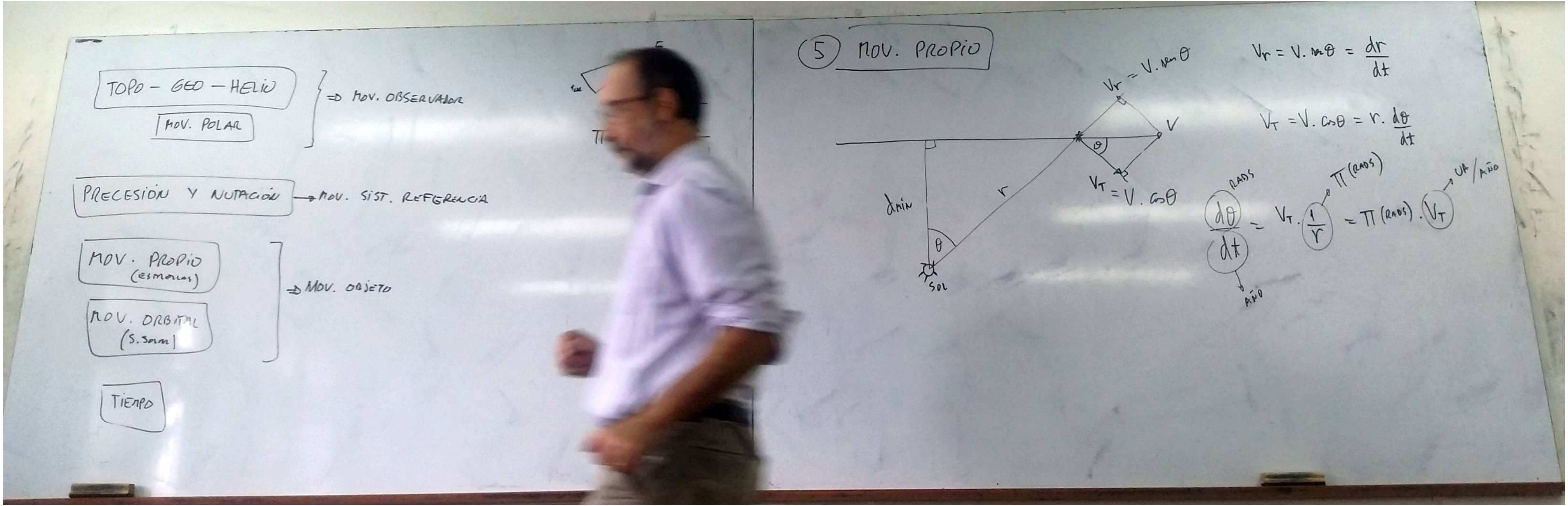
Astronomia Fundamental 2018 - clase 11

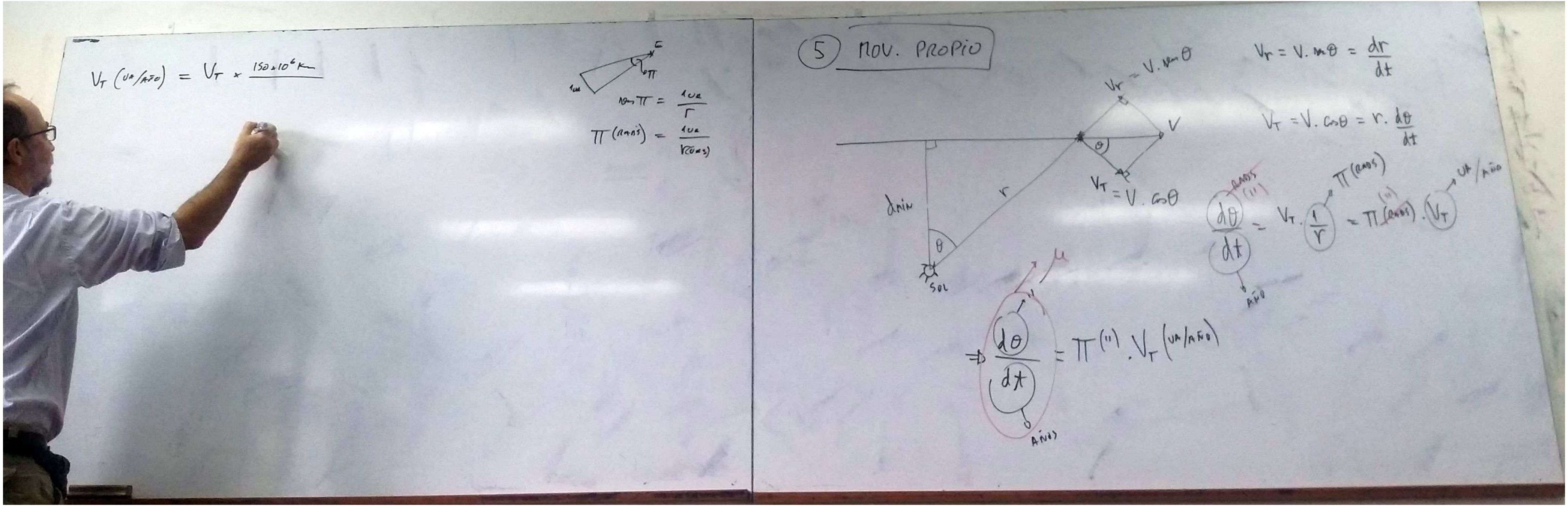


Astronomia Fundamental 2018 - clase 11

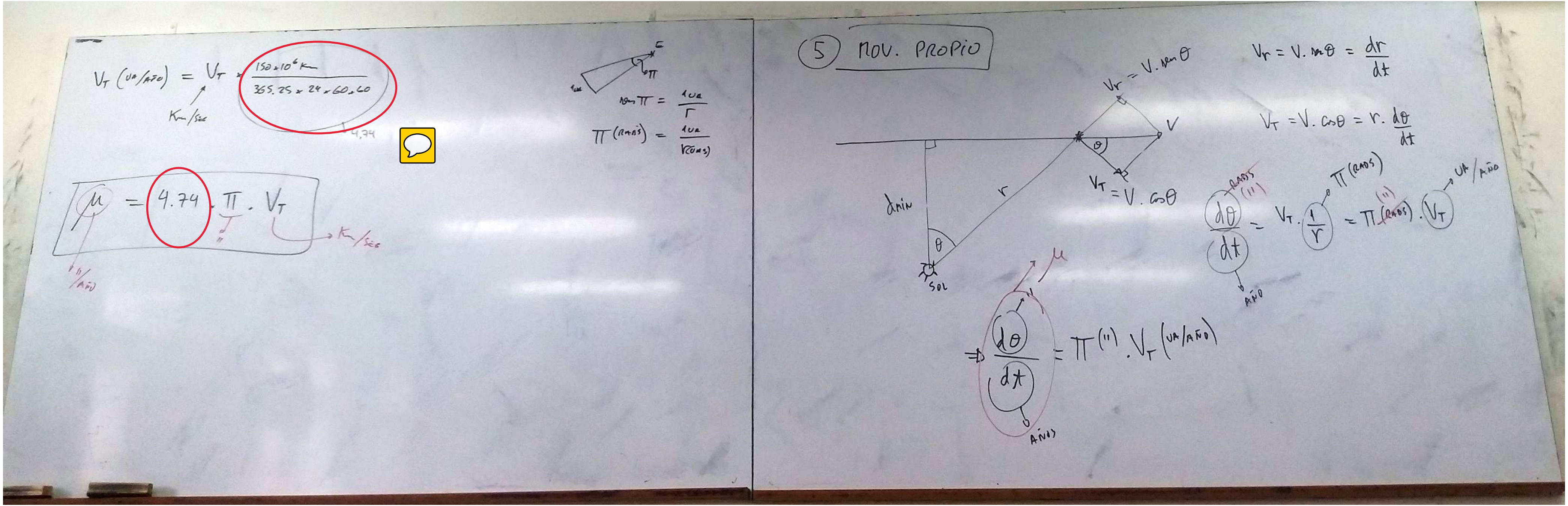


Astronomia Fundamental 2018 - clase 11

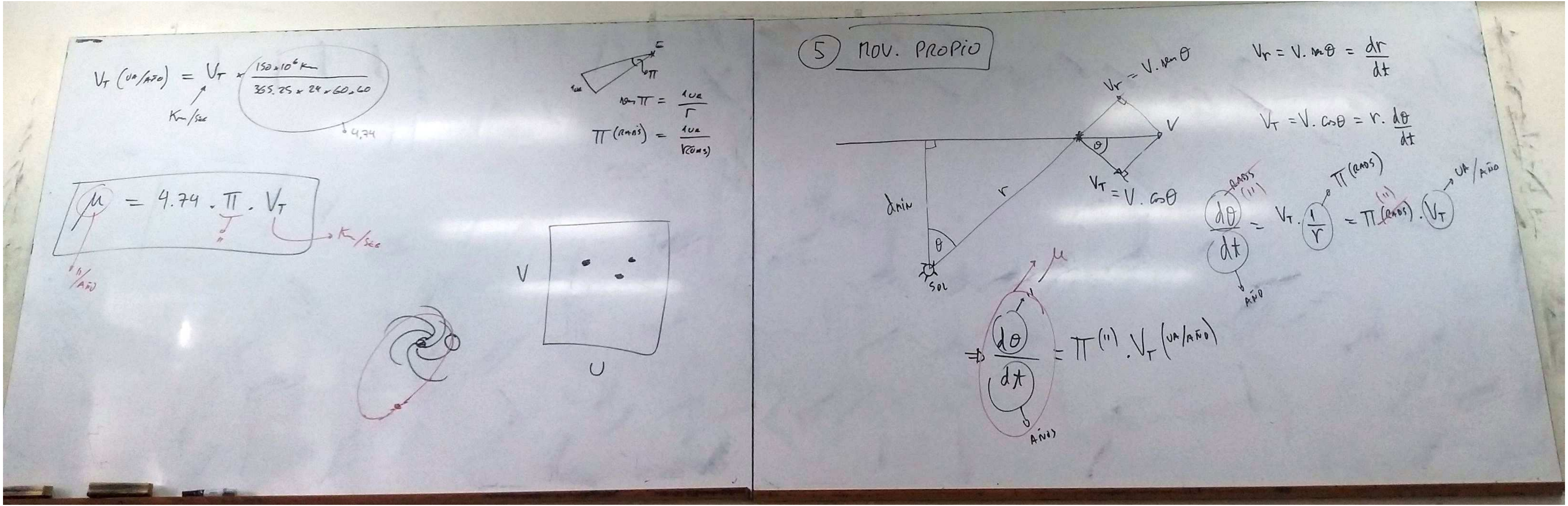


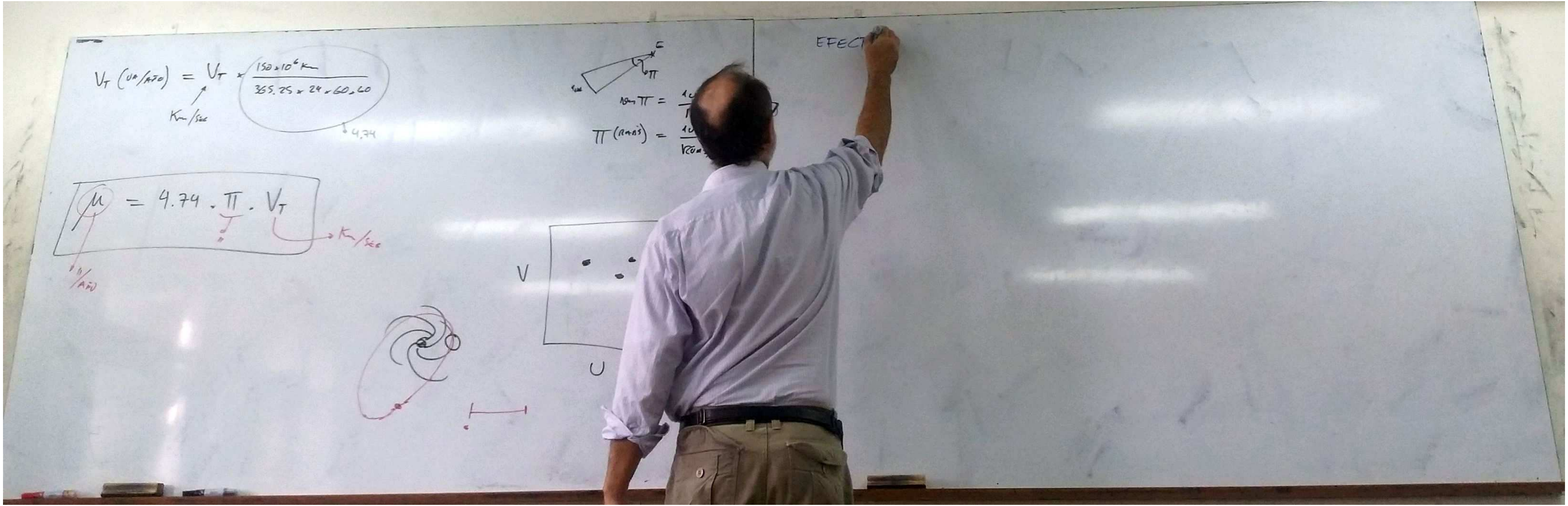

5 MOV. PROPIO
SOL
r
θ
V
$V_r = V.\sin\theta = \frac{dr}{dt}$
$V_T = V.\cos\theta = r.\frac{d\theta}{dt}$

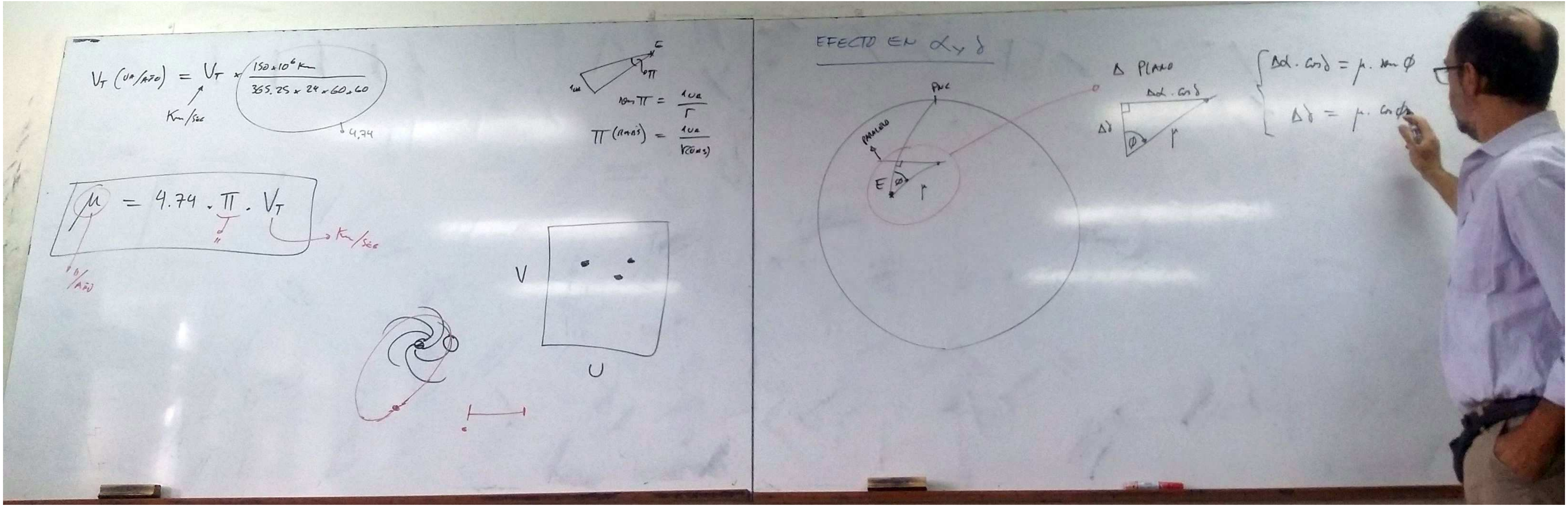
Astronomia Fundamental 2018 - clase 11

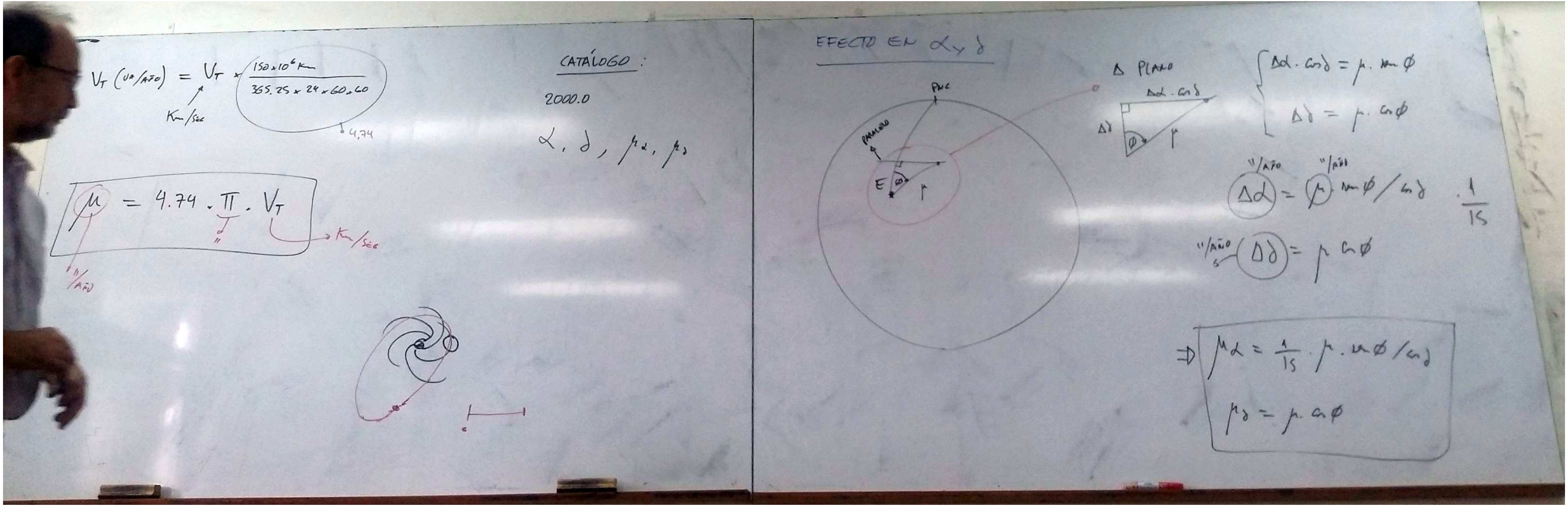


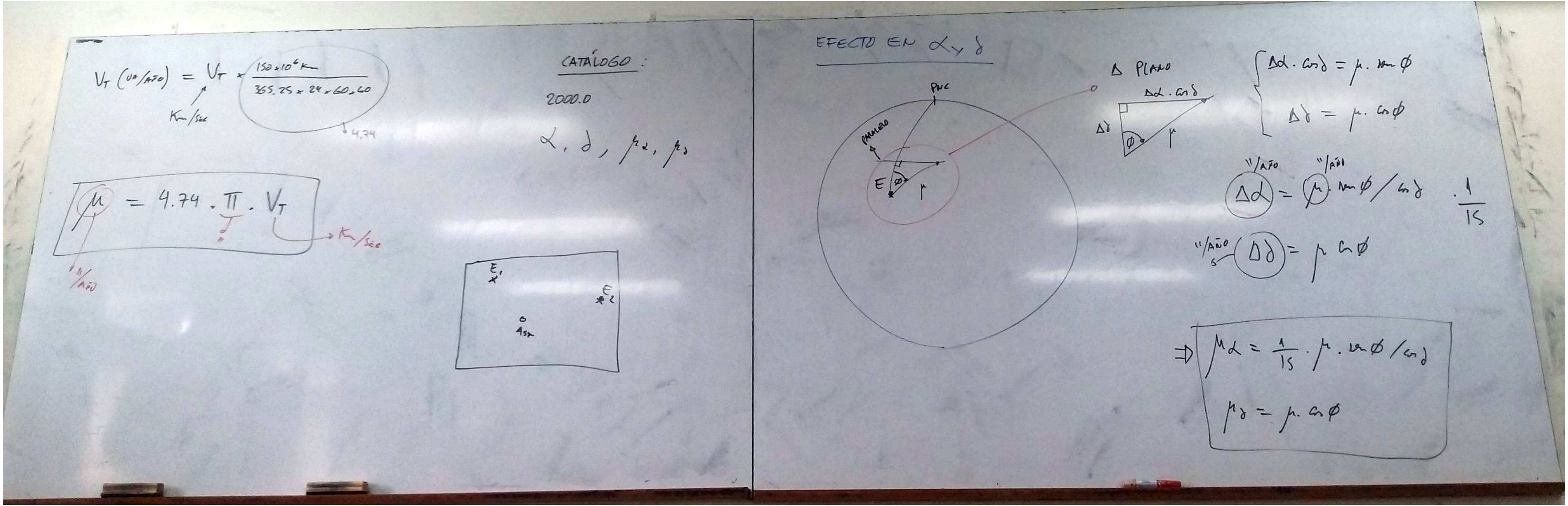
Astronomia Fundamental 2018 - clase 11

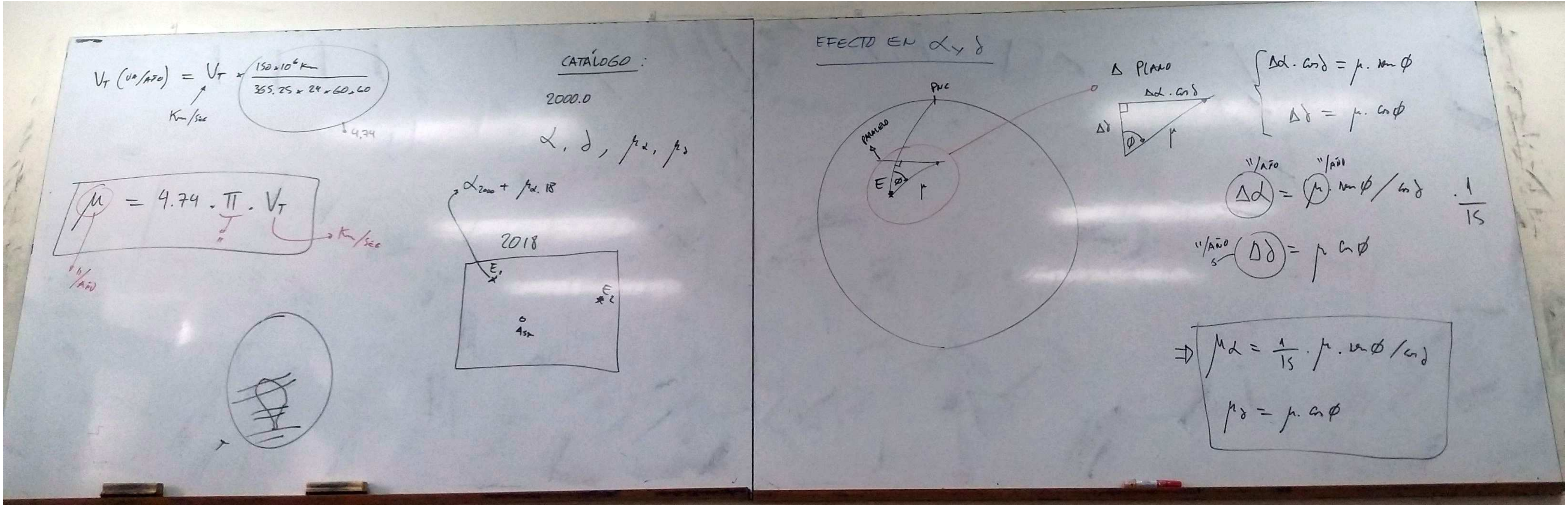


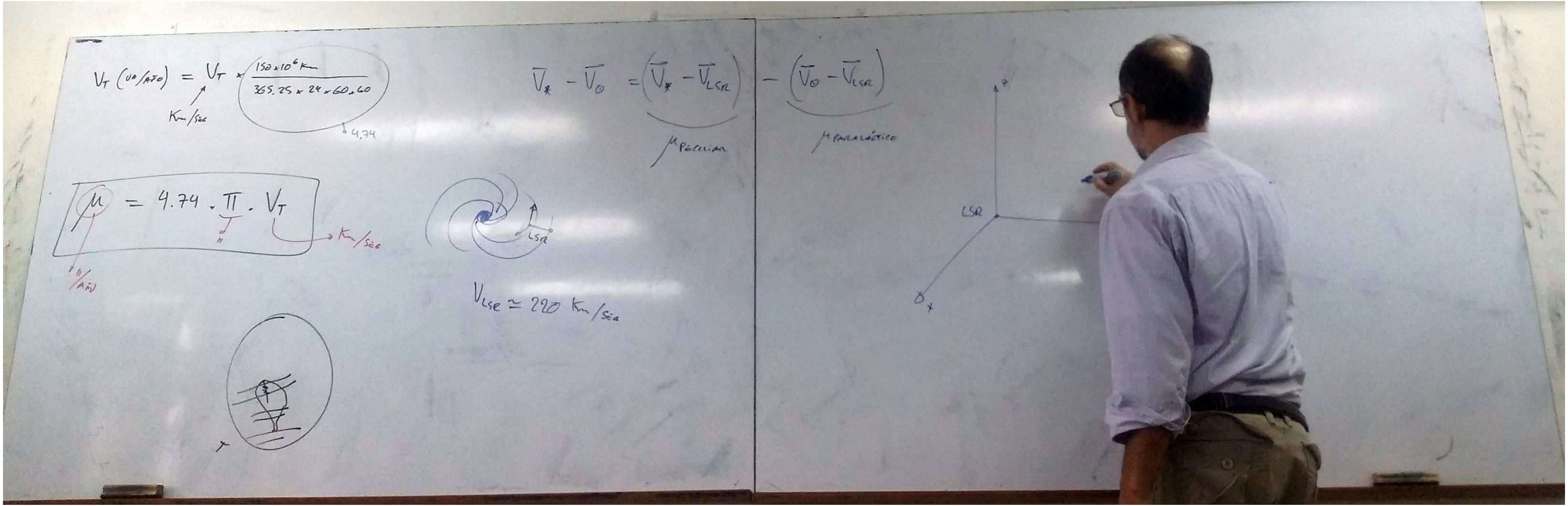

EFECT
V
U
4.74
Km/sec

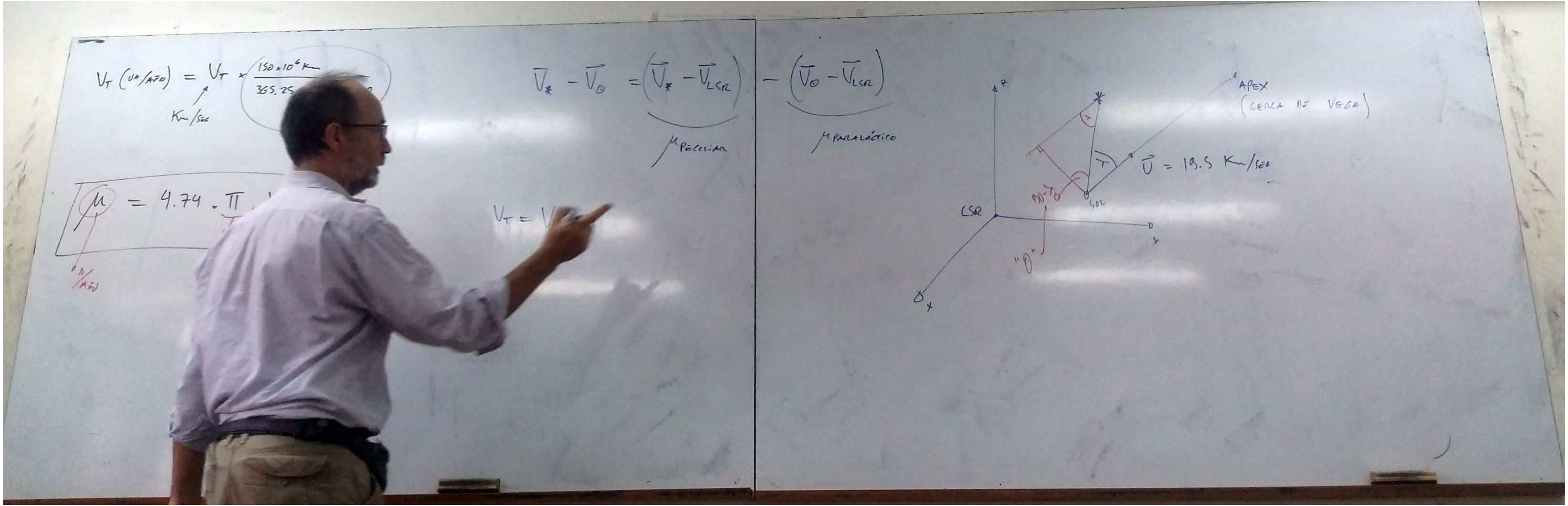

EFECTO EN α y δ
Δ PLANO
PNC
PARALELO
μ = 4.74 . π . V_T
Km/seg
V
U

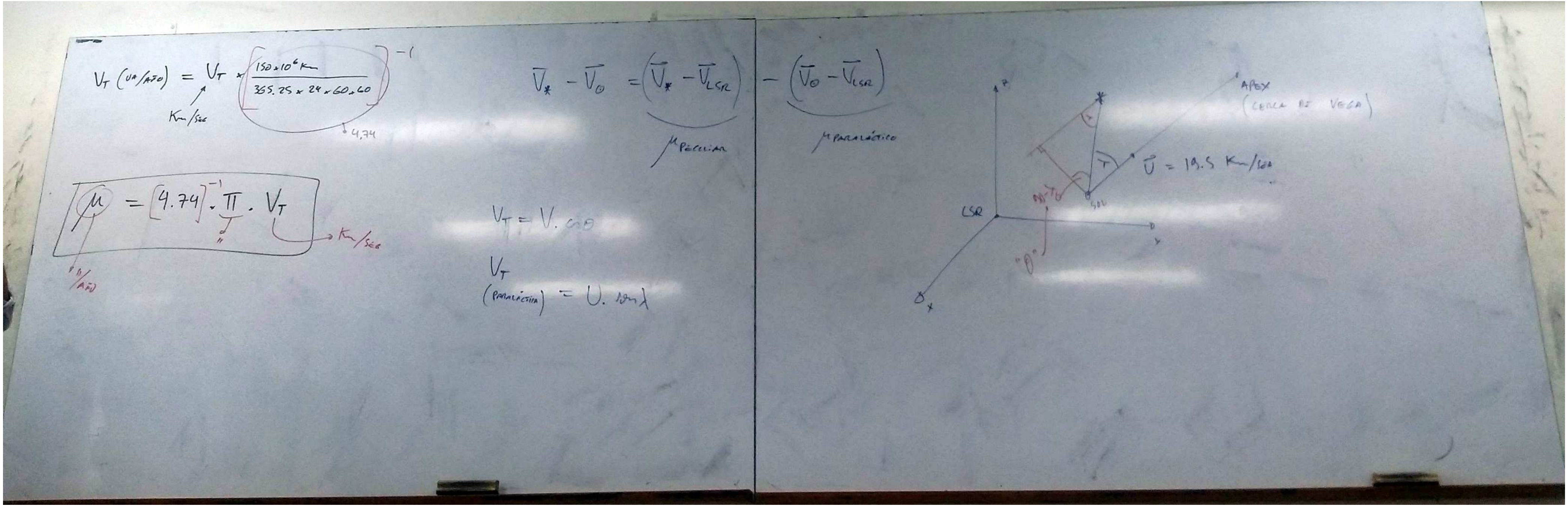

CATÁLOGO :
2000.0
EFECTO EN α y δ
PNC
PARALELO
E
Δ PLANO
4,74
Km/seg
"/AÑO

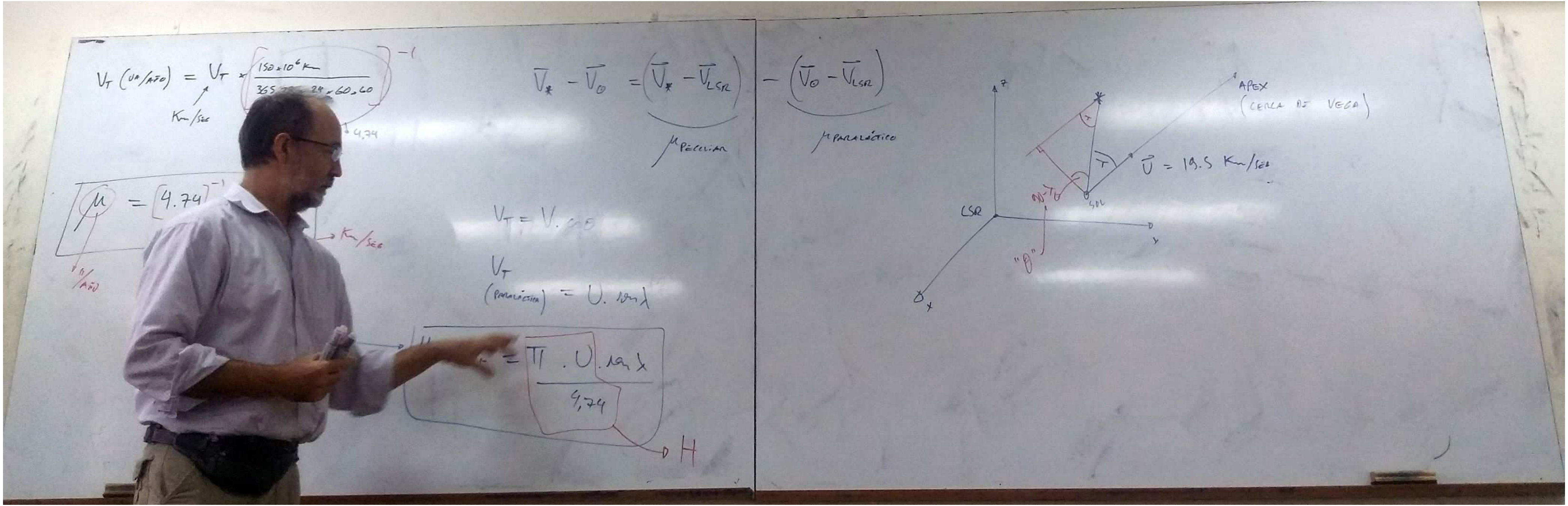

V_T (UA/AÑO) = V_T × 150×10^6 Km / 365.25 × 24 × 60 × 60
Km/sec
4.74
μ = 4.74 . π . V_T
"/AÑO
Km/sec
CATÁLOGO:
2000.0
α, δ, μα, μδ
E1
E2
Ast
EFECTO EN α y δ
PNC
PARALELO
E
μ
Δ PLANO
Δα . cos δ
Δδ
Δα . cos δ = μ . sen φ
Δδ = μ . cos φ
"/AÑO
Δα = μ . sen φ / cos δ
. 1/15
Δδ = μ cos φ
μα = 1/15 . μ . sen φ / cos δ
μδ = μ . cos φ

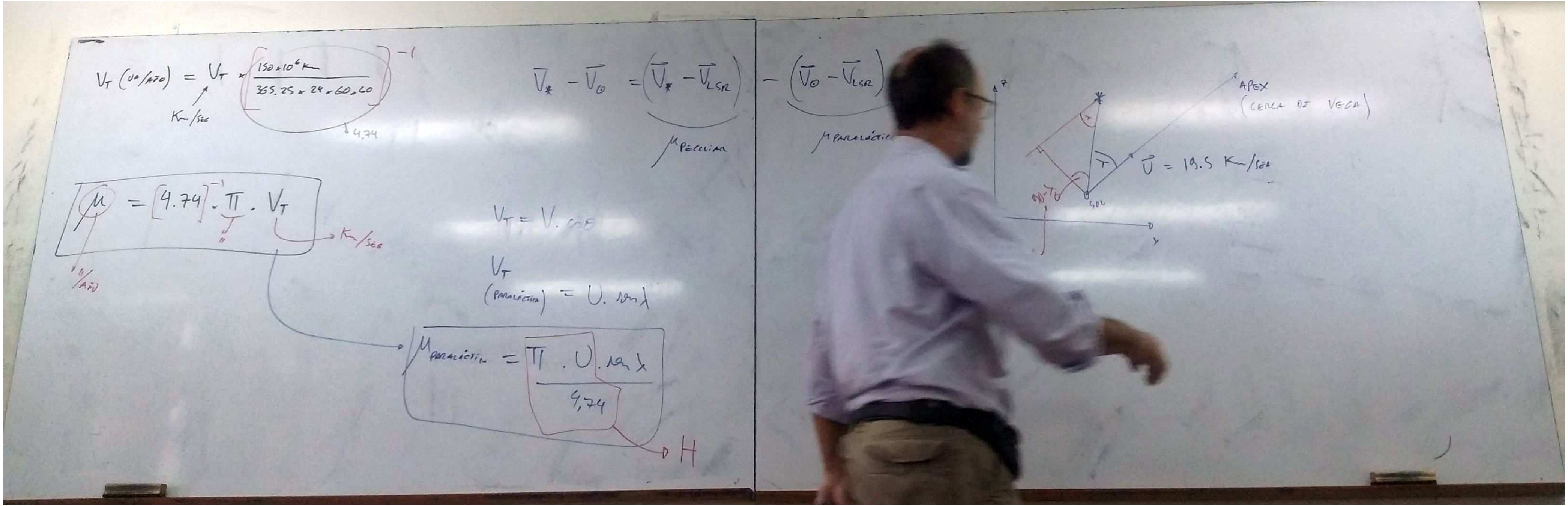

VT (UA/año) = VT × 150×10^6 km / 365.25 × 24 × 60 × 60
Km/seg
4,74
μ = 4.74 . π . VT
"/año
Km/seg
CATÁLOGO:
2000.0
α, δ, μα, μδ
α2000 + μα. 18
2018
E1
E2
Ast
EFECTO EN α y δ
PNC
PARALELO
E
μ
Δ PLANO
Δα . cos δ
Δδ
Δα . cos δ = μ . sen φ
Δδ = μ . cos φ
"/año
Δα = μ . sen φ / cos δ
. 1/15
Δδ = μ cos φ
μα = 1/15 . μ . sen φ / cos δ
μδ = μ . cos φ

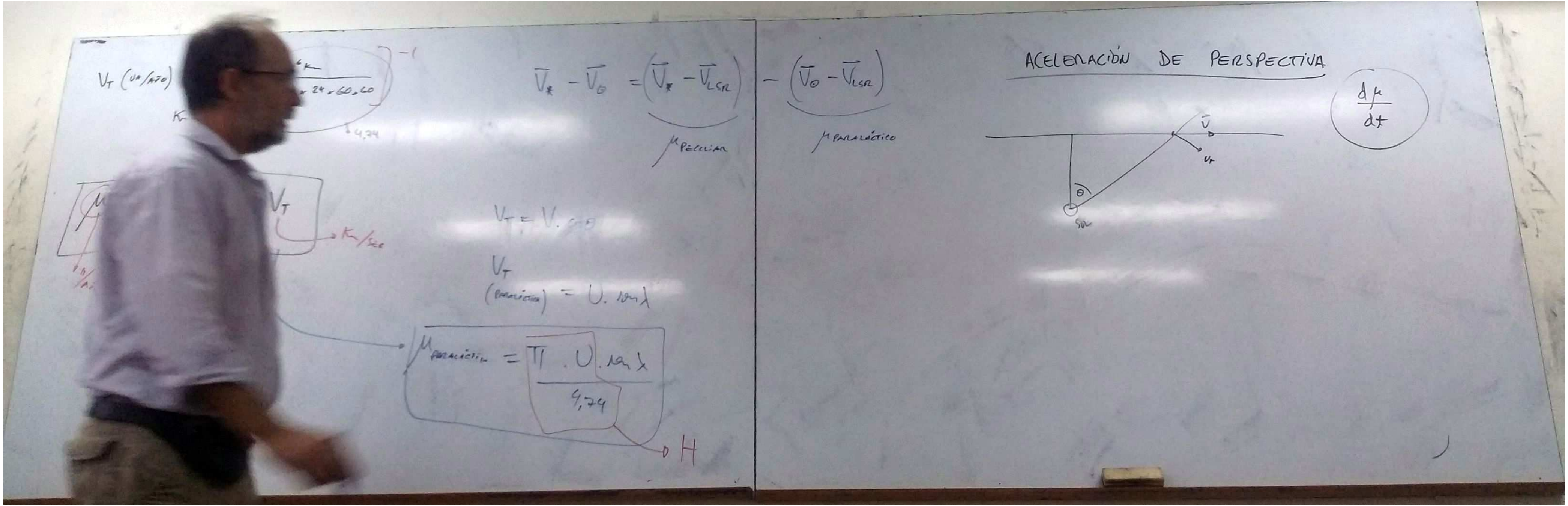

V_T (UA/año) = V_T × 150×10^6 Km / 365.25 × 24 × 60 × 60
Km/seg
4.74
μ = 4.74 · π · V_T
"/año
"
Km/seg
LSR
V_LSR ≃ 220 Km/seg
V_* − V_⊙ = (V_* − V_LSR) − (V_⊙ − V_LSR)
μ peculiar
μ paraláctico
LSR


V_T (UA/AÑO) = V_T × 150×10^6 Km / 365.25
Km/seg
μ = 4.74 . π
V_T = V
V* - V⊙ = (V* - V_LSR) - (V⊙ - V_LSR)
μ PECULIAR
μ PARALÁCTICO
APEX
(CERCA DE VEGA)
U = 19.5 Km/seg
LSR
SOL
"θ"

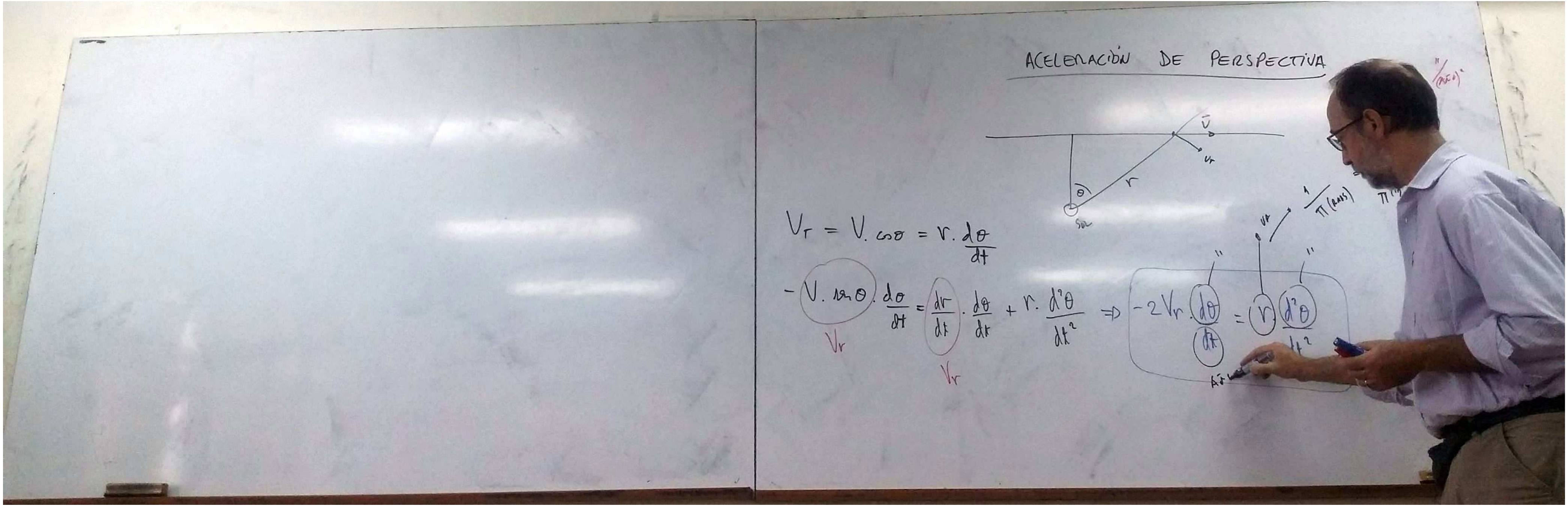

V_T (UA/año) = V_T × [150×10^6 Km / 365.25 × 24 × 60 × 60]^-1
Km/seg
4,74
μ = [4.74]^-1 · π · V_T
"/año
"
Km/seg
V̄* − V̄⊙ = (V̄* − V̄LSR) − (V̄⊙ − V̄LSR)
μ peculiar
μ paraláctico
V_T = V. cos θ
V_T (paraláctica) = U. sen λ
APEX
(CERCA DE VEGA)
U = 19.5 Km/seg
LSR
SOL
90-λ
"θ"
z
y
x

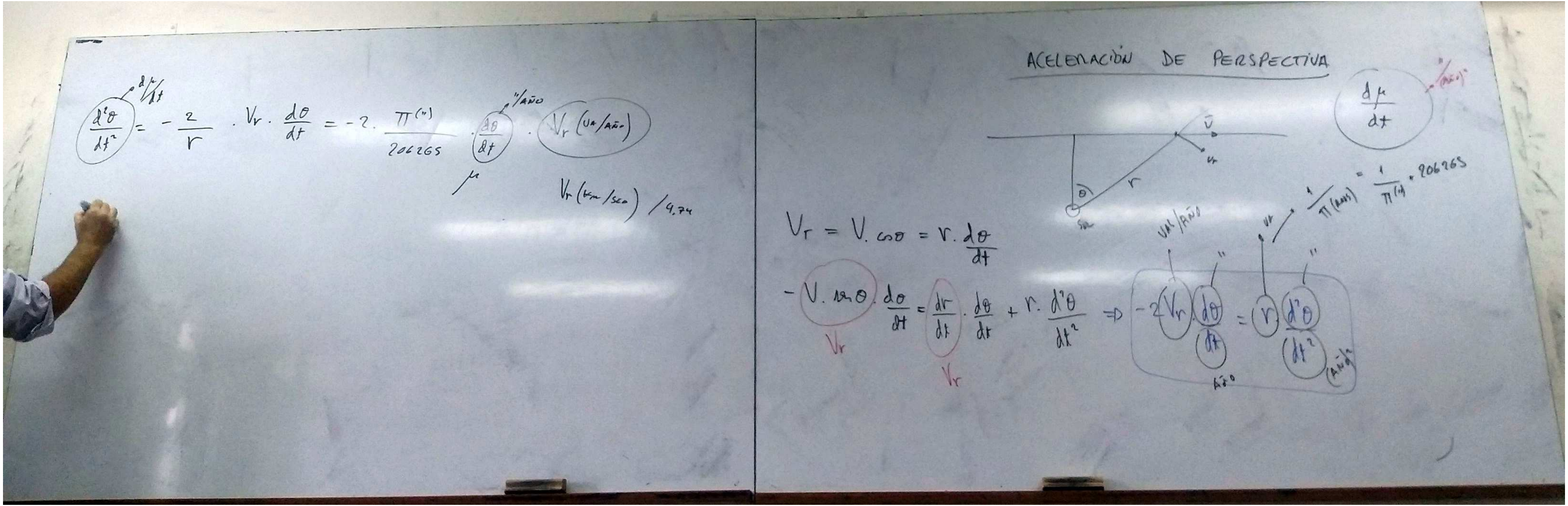

V_T (UA/AÑO) = V_T × [150×10^6 Km / 365 ... 24 × 60 × 60]^-1
Km/SEG
4,74
μ = [4.74]^-1
Km/SEG
"/AÑO
V_* - V_⊙ = (V_* - V_LSR) - (V_⊙ - V_LSR)
μ PECULIAR
μ PARALÁCTICO
V_T = V. sen θ
V_T (paraláctica) = U. sen λ
= π . U. sen λ / 4,74
H
APEX
(CERCA DE VEGA)
U = 19.5 Km/SEG
SOL
LSR
"θ"


V_T (UA/año) = V_T × [150×10^6 Km / 365.25 × 24 × 60 × 60]^-1
Km/seg
4,74
μ = [4.74]^-1 . π . V_T
''/año
Km/seg
V̄* − V̄⊙ = (V̄* − V̄LSR) − (V̄⊙ − V̄LSR)
μ peculiar
μ paraláctico
V_T = V. cos θ
V_T (paraláctica) = U. sen λ
μ paraláctico = π . U . sen λ / 4,74
H
APEX (CERCA DE VEGA)
U = 19.5 Km/seg
λ
sol
z
y

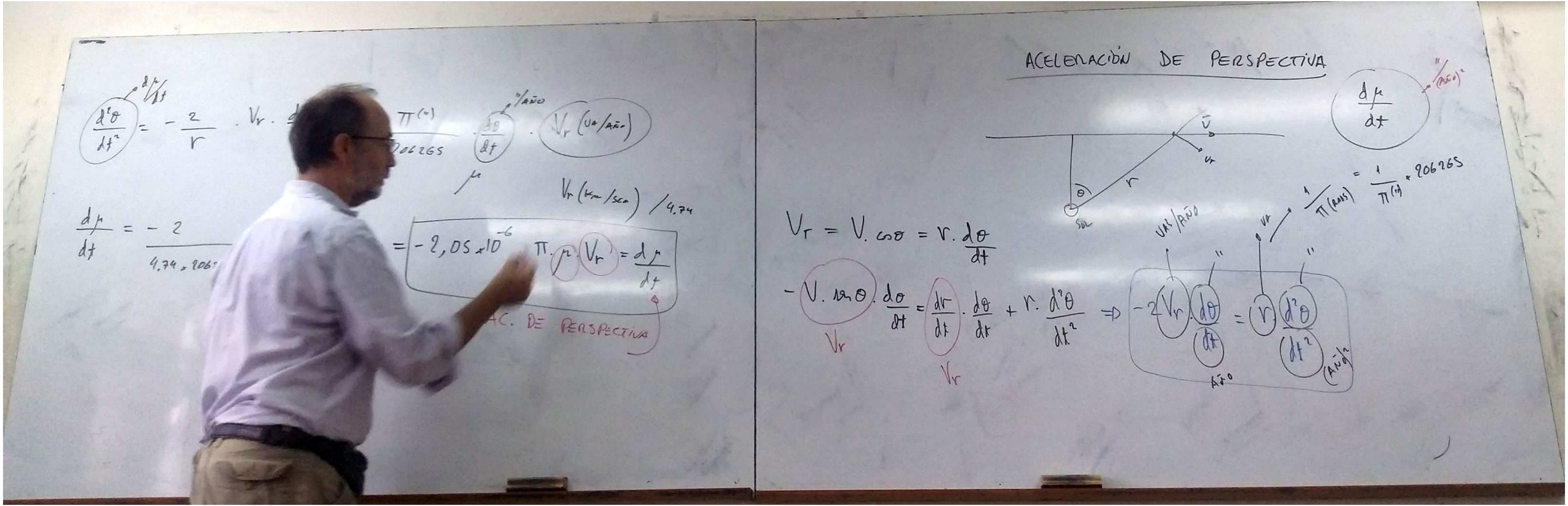

ACELERACIÓN DE PERSPECTIVA
$\frac{d\mu}{dt}$
$\vec{V}_* - \vec{V}_\odot = (\vec{V}_* - \vec{V}_{LSR}) - (\vec{V}_\odot - \vec{V}_{LSR})$
μ PECULIAR
μ PARALÁCTICO
$V_T = V \cdot \sin\theta$
V_T (paraláctica) $= U \cdot \sin\lambda$
$\mu_{paraláctico} = \frac{\pi \cdot U \cdot \sin\lambda}{4{,}74}$
H
4,74
Km/seg
SOL
θ

Astronomia Fundamental 2018 - clase 11

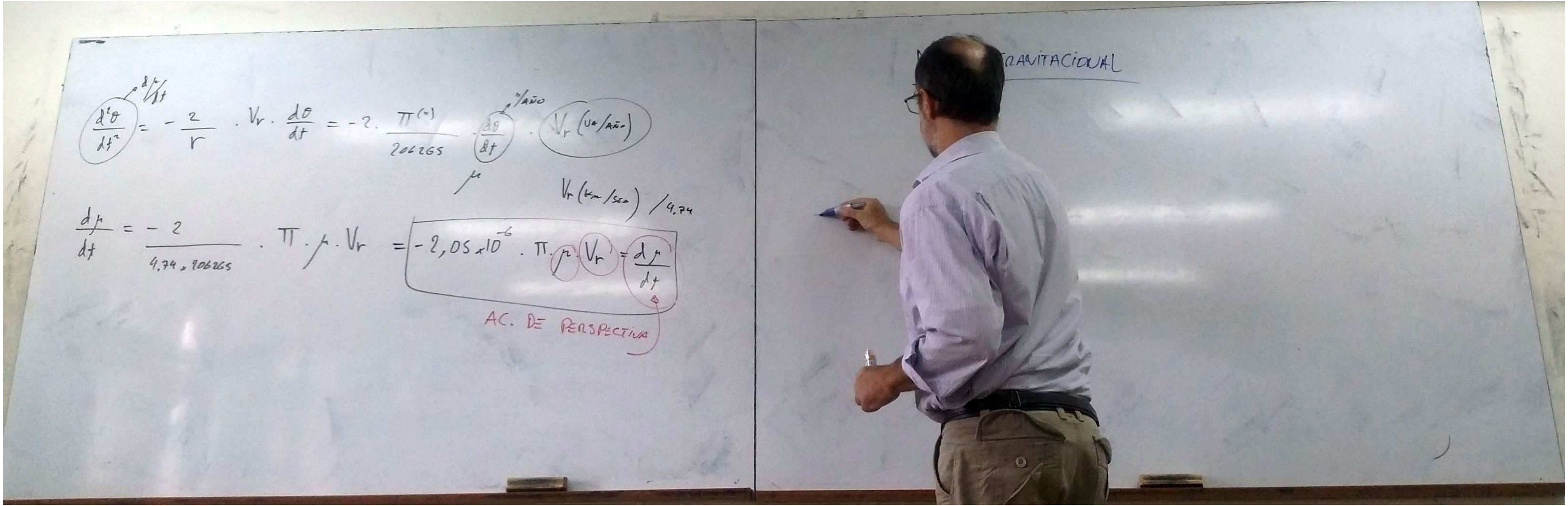


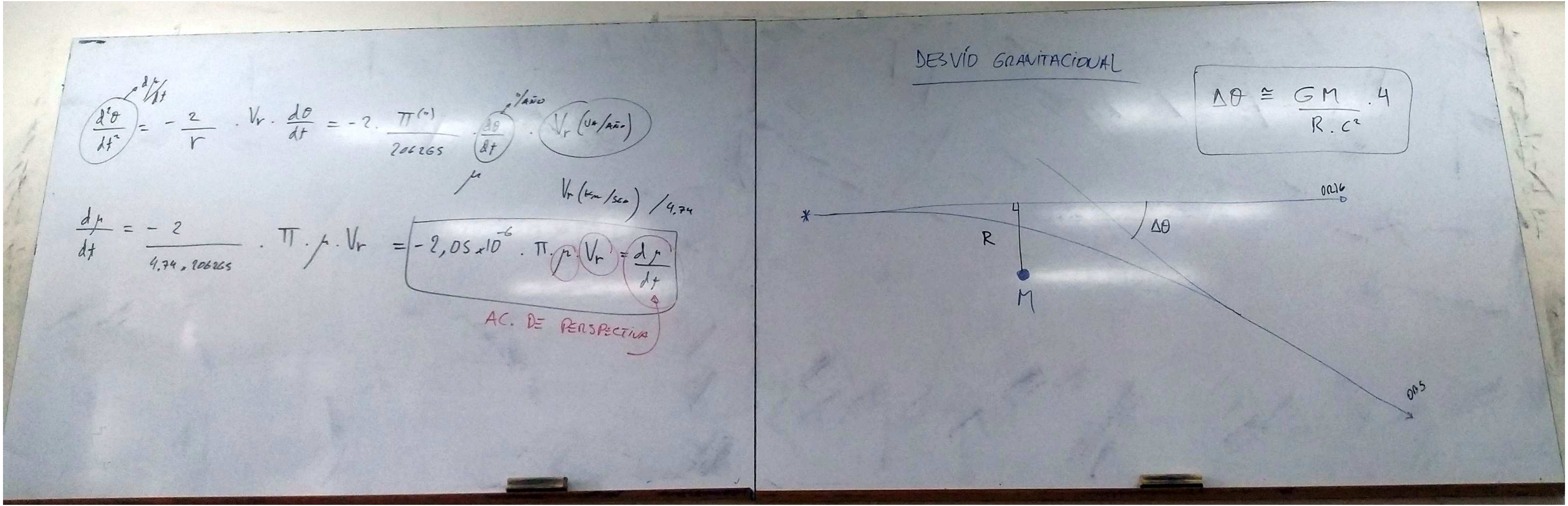

ACELERACIÓN DE PERSPECTIVA
$\frac{d^2\theta}{dt^2} = -\frac{2}{r} \cdot V_r \cdot \frac{d\theta}{dt} = -2 \cdot \frac{\pi('')}{206265} \cdot \frac{d\theta}{dt} \cdot V_r\,(UA/año)$
$d\mu/dt$
"/año
μ
$V_r\,(km/seg)\;/4{,}74$
$V_r = V \cdot \cos\theta = r \cdot \frac{d\theta}{dt}$
$-V \cdot \sin\theta \cdot \frac{d\theta}{dt} = \frac{dr}{dt} \cdot \frac{d\theta}{dt} + r \cdot \frac{d^2\theta}{dt^2} \Rightarrow -2\,V_r\,\frac{d\theta}{dt} = r\,\frac{d^2\theta}{dt^2}$
V_r
V_r
$\frac{d\mu}{dt}$
$\bar{V}$
V_r
r
θ
Sol
UA/año
$\frac{1}{\pi\,(rad)} = \frac{1}{\pi('')} \cdot 206265$
año
(año)²

Astronomia Fundamental 2018 - clase 11



Astronomia Fundamental 2018 - clase 11




dμ/dt
"/AÑO
d²θ/dt² = − 2/r . Vr . dθ/dt = − 2 . π(")/206265 . dθ/dt . Vr (UA/AÑO)
μ
Vr (km/seg) /4,74
dμ/dt = − 2/(4,74 . 206265) . π . μ . Vr = −2,05 x10⁻⁶ . π . μ . Vr = dμ/dt
AC. DE PERSPECTIVA
DESVÍO GRAVITACIONAL
Δθ ≅ GM/(R . c²) . 4
ORIG
Δθ
R
M
OBS