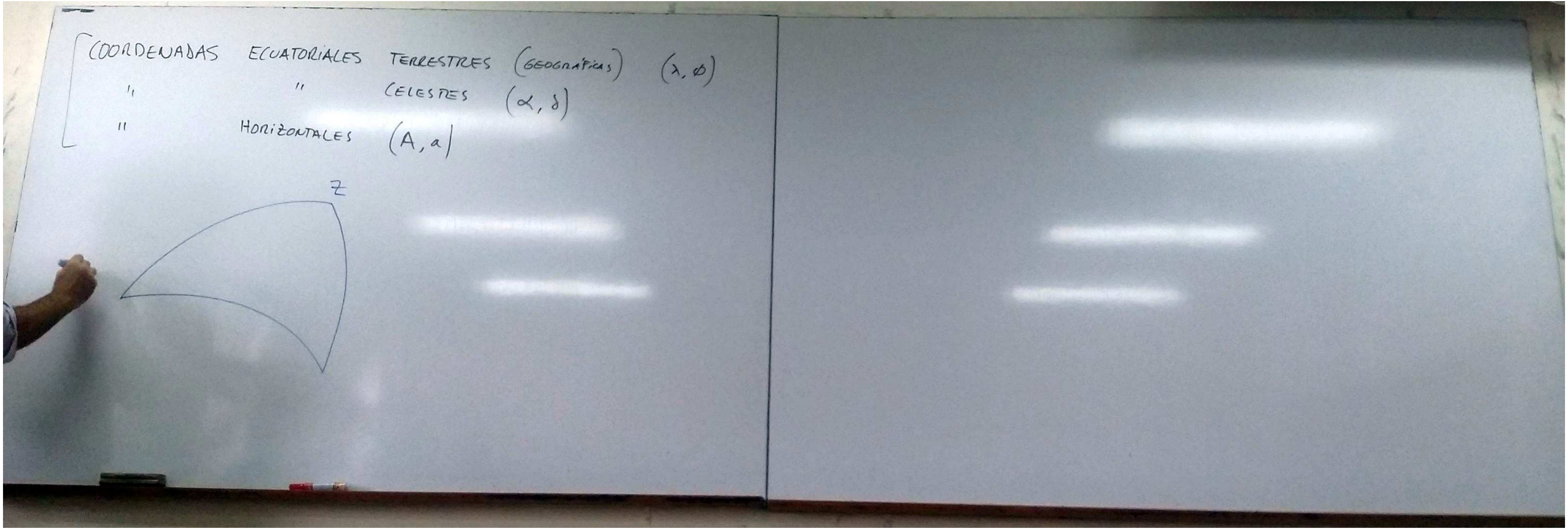
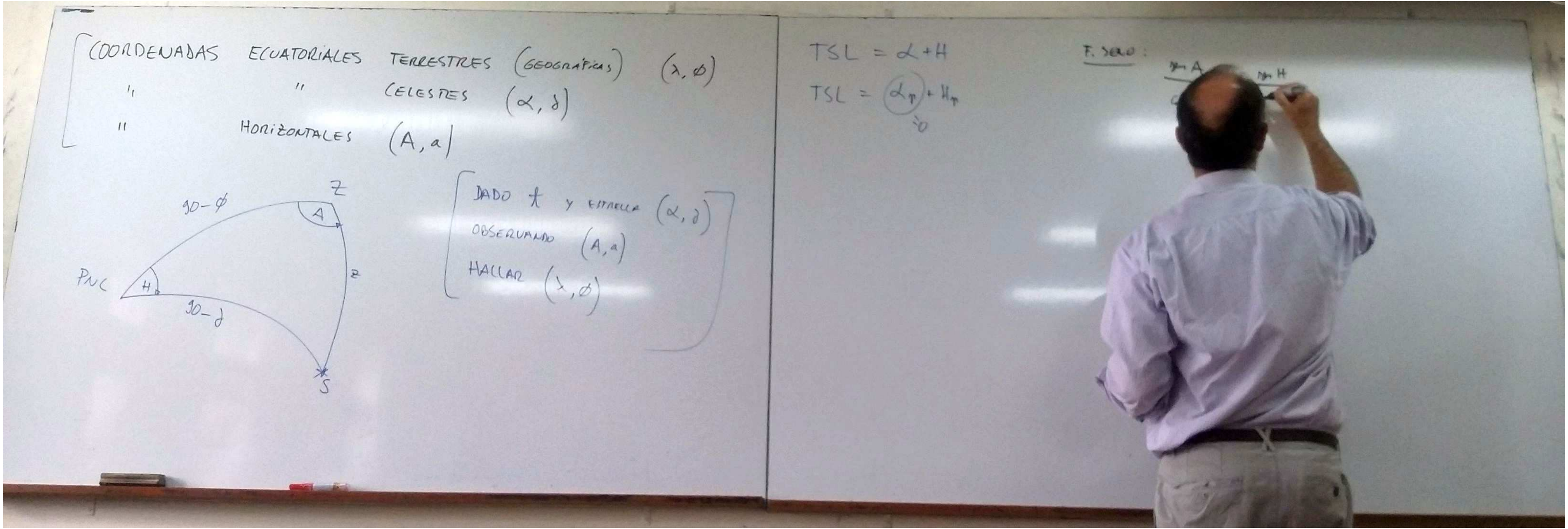
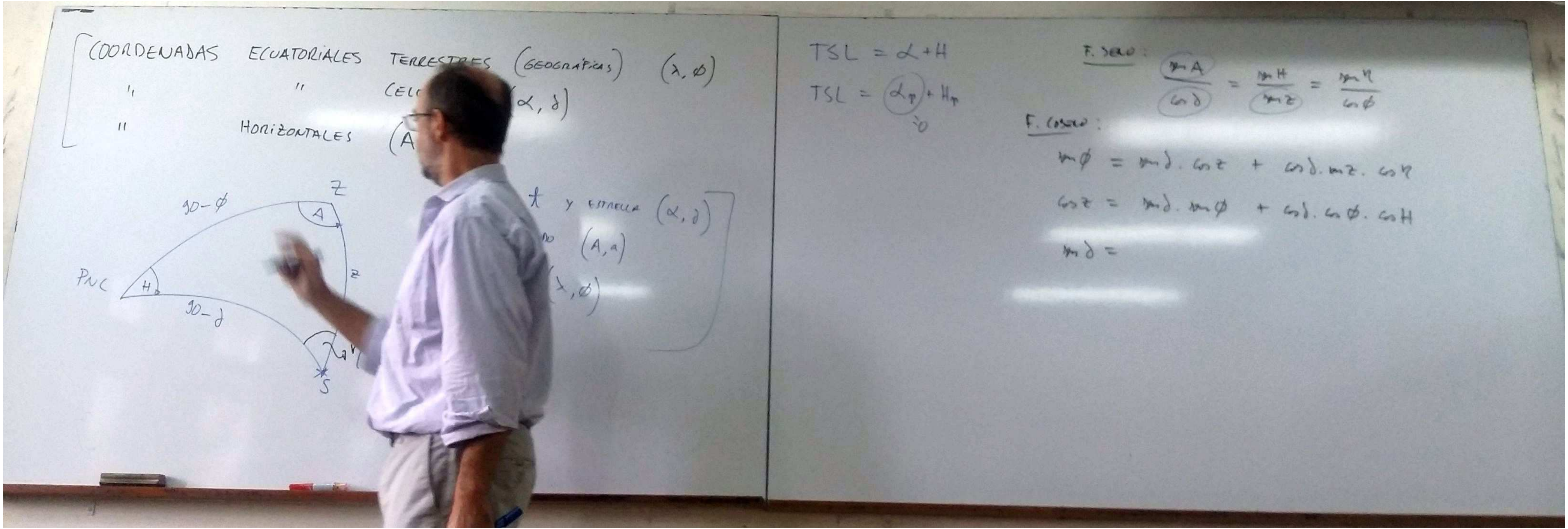
Astronomia Fundamental 2018 - clase 4

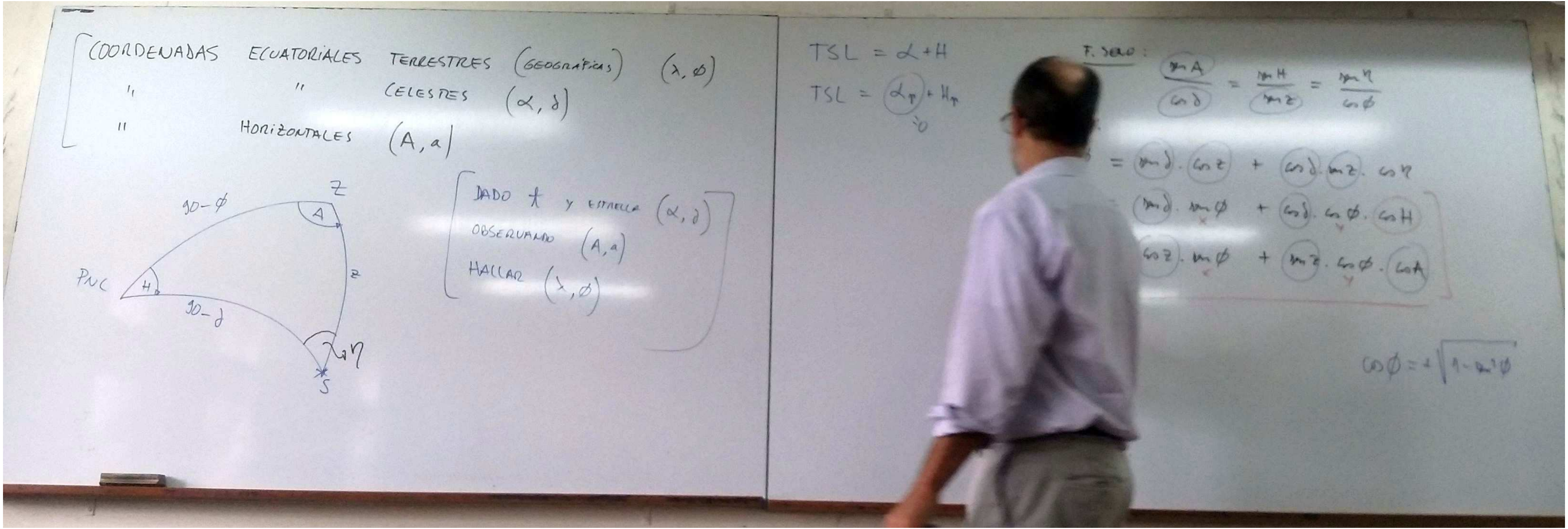


Astronomia Fundamental 2018 - clase 4

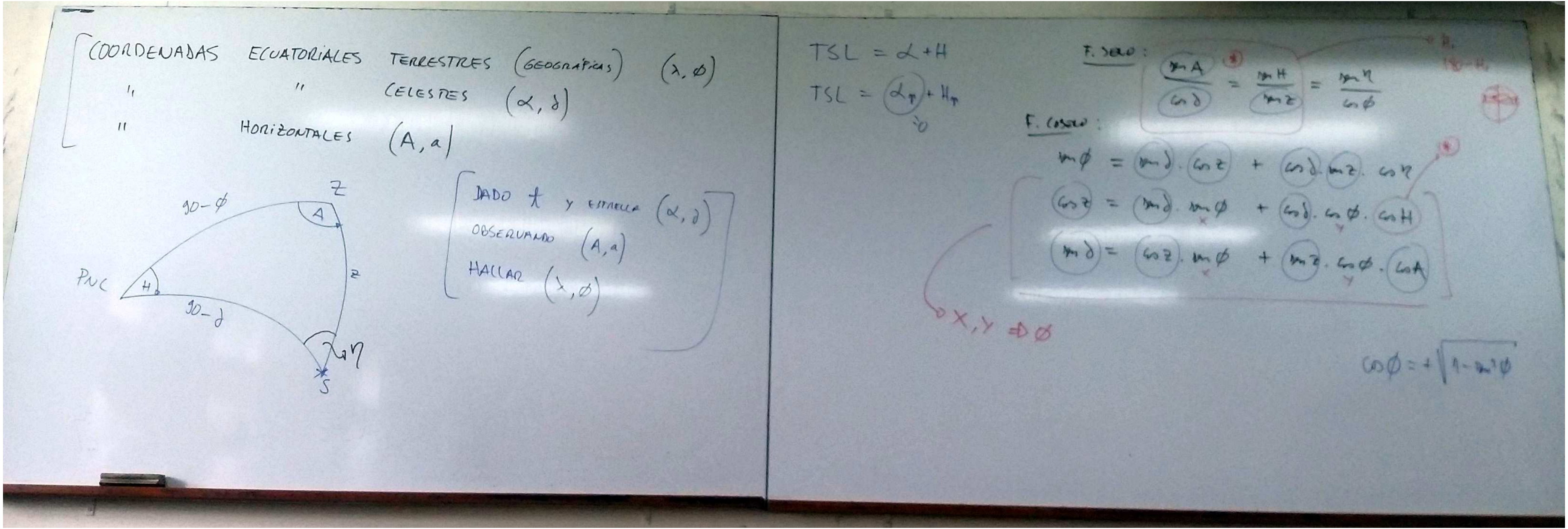



COORDENADAS ECUATORIALES TERRESTRES (GEOGRÁFICAS) (λ, φ)
" " CELESTES (α, δ)
" HORIZONTALES (A, a)
90 − φ
Z
A
z
PNC
H
90 − δ
S
TSL = α + H
F. SENO:
F. COSENO:

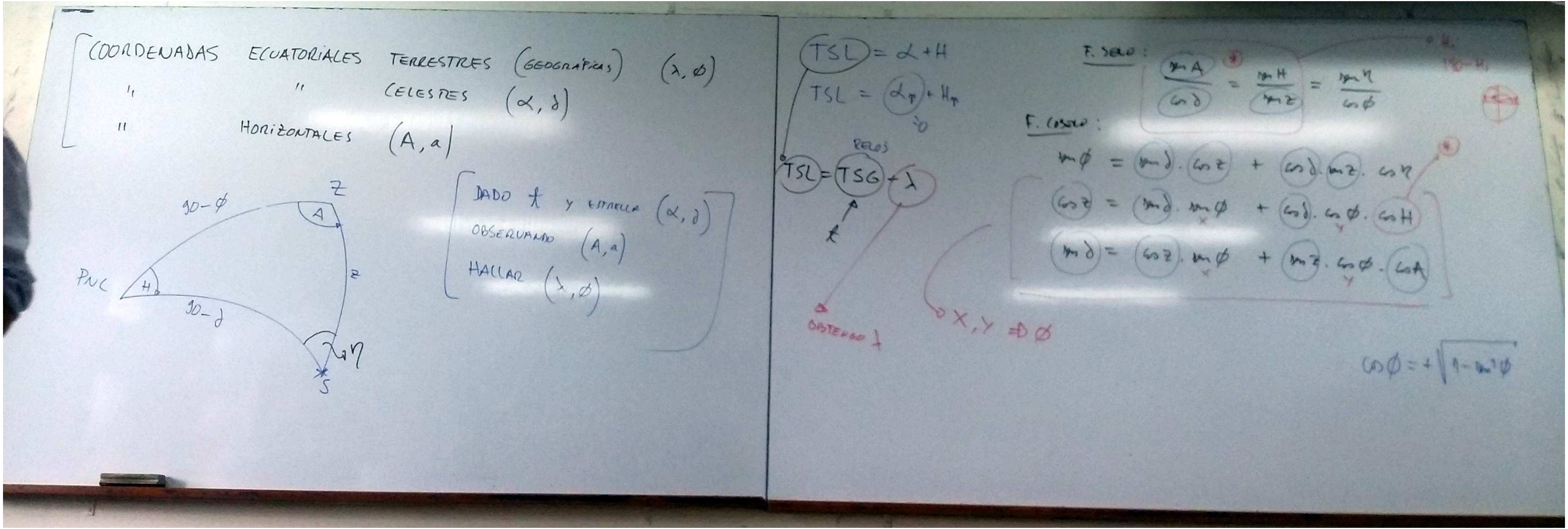
Astronomia Fundamental 2018 - clase 4



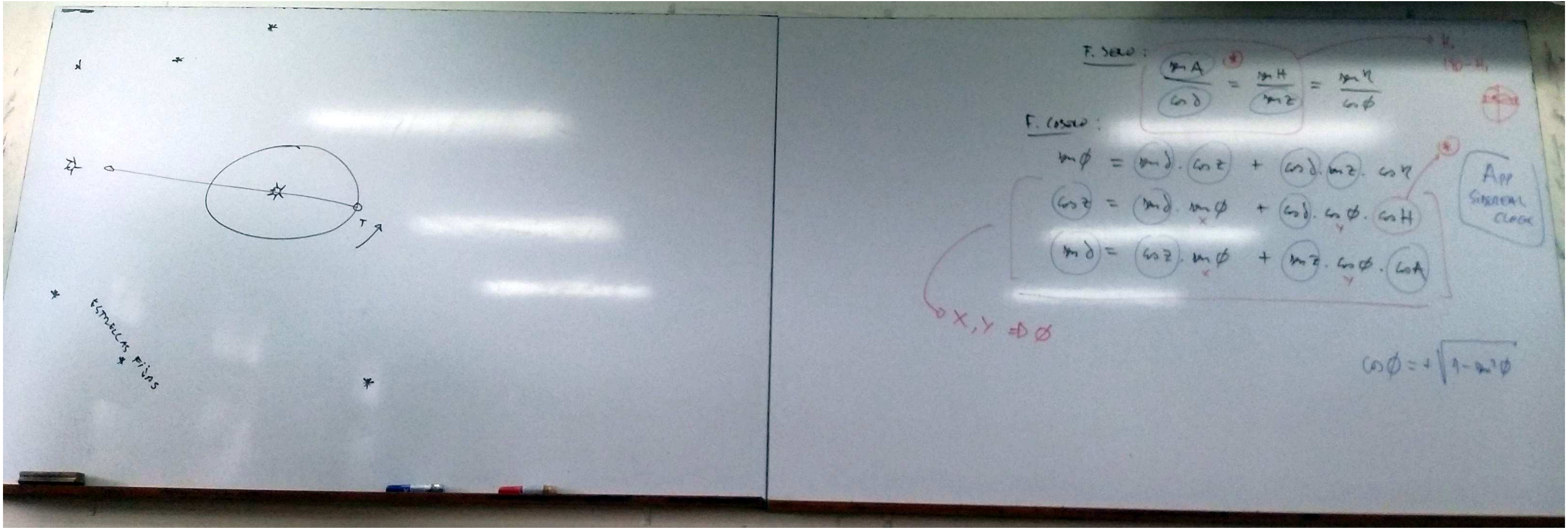
Astronomia Fundamental 2018 - clase 4



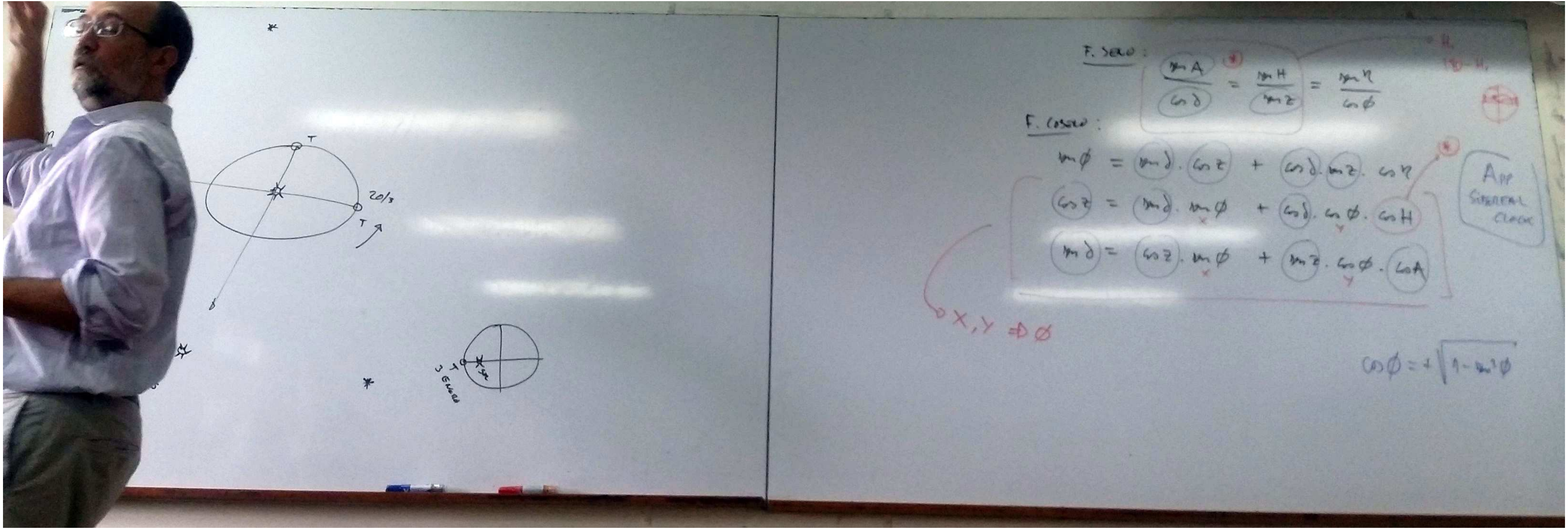
Astronomia Fundamental 2018 - clase 4



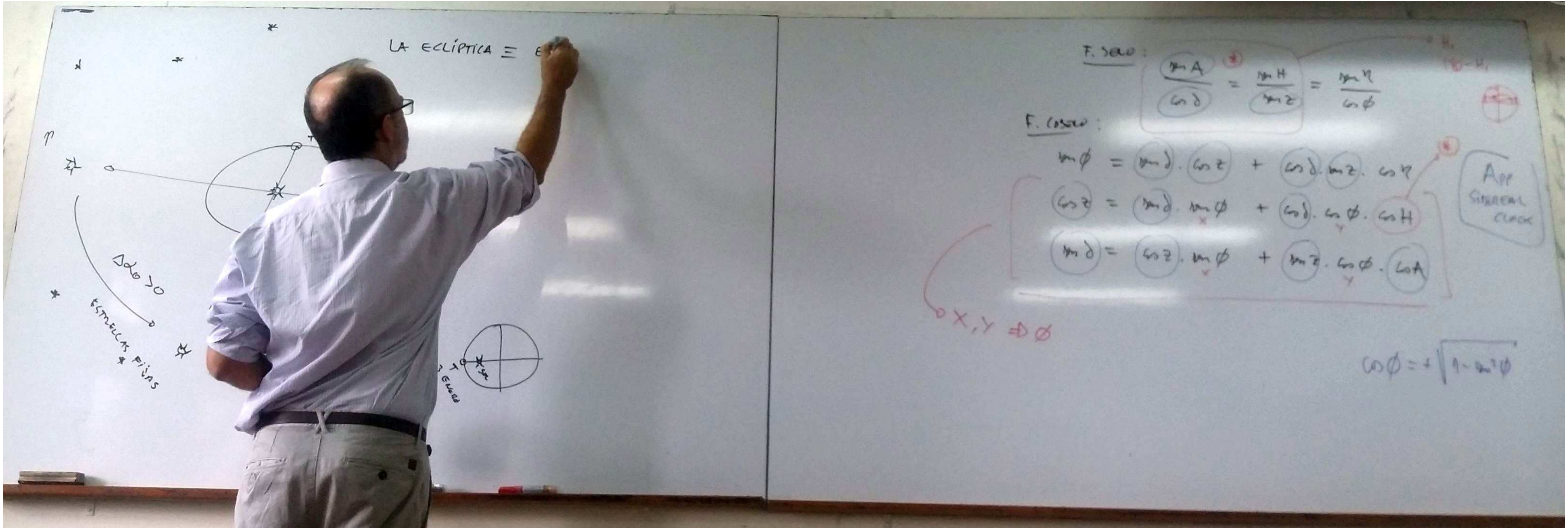
Astronomia Fundamental 2018 - clase 4



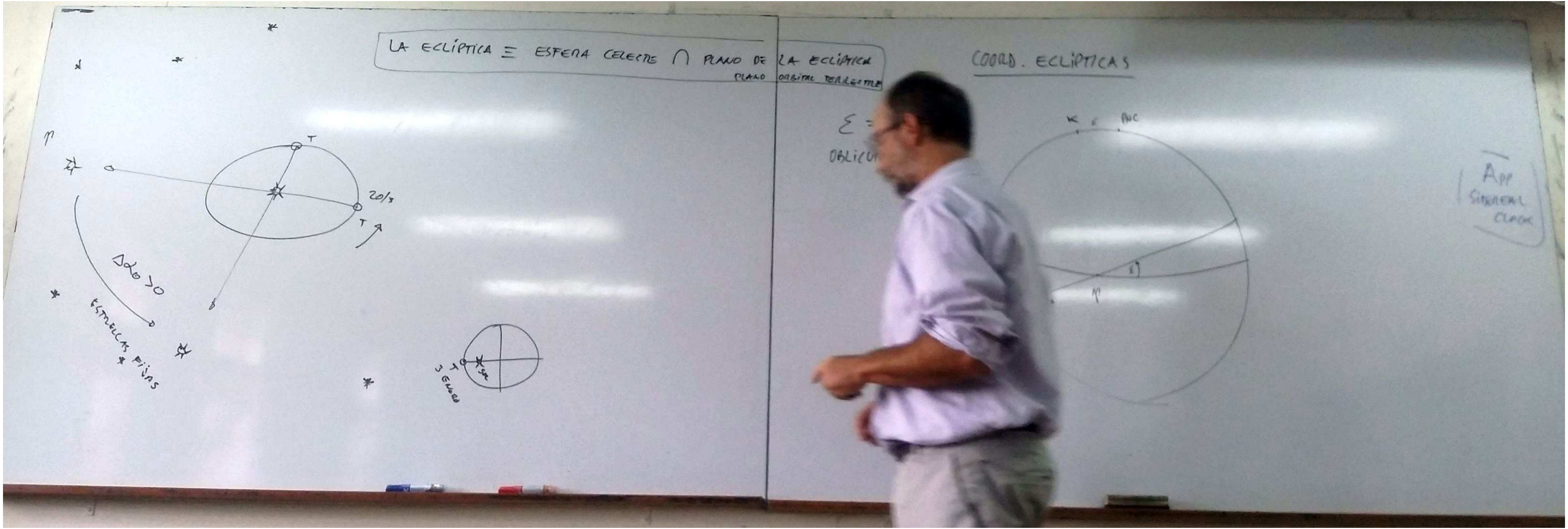
Astronomia Fundamental 2018 - clase 4



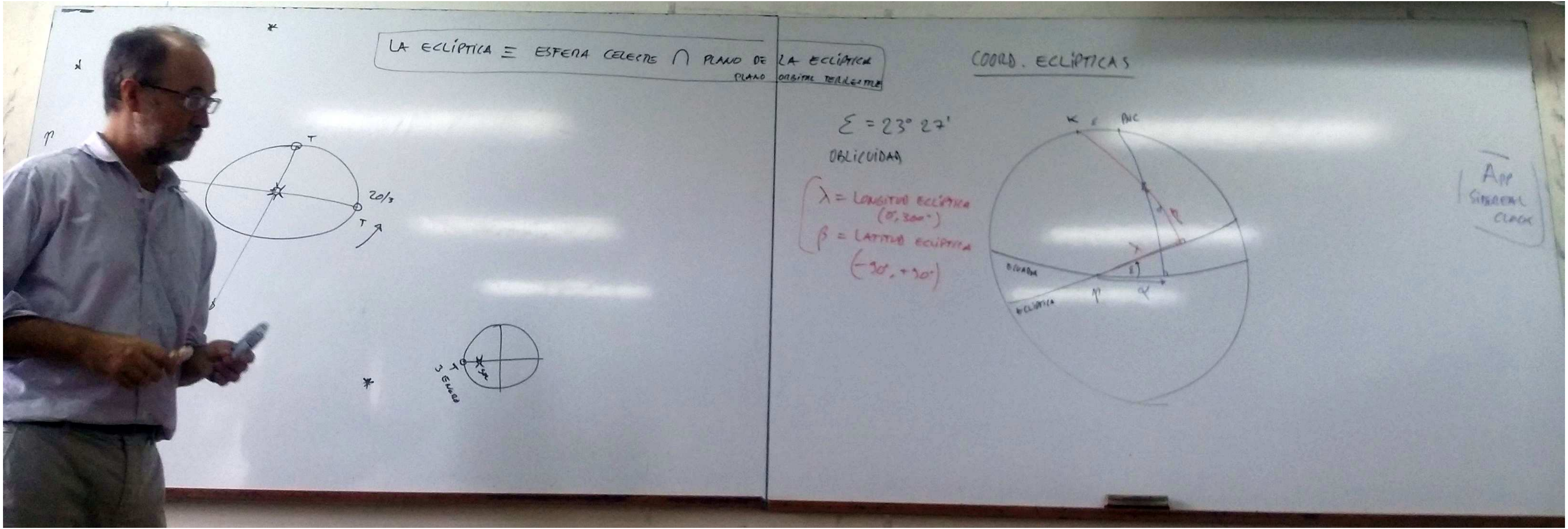
Astronomia Fundamental 2018 - clase 4



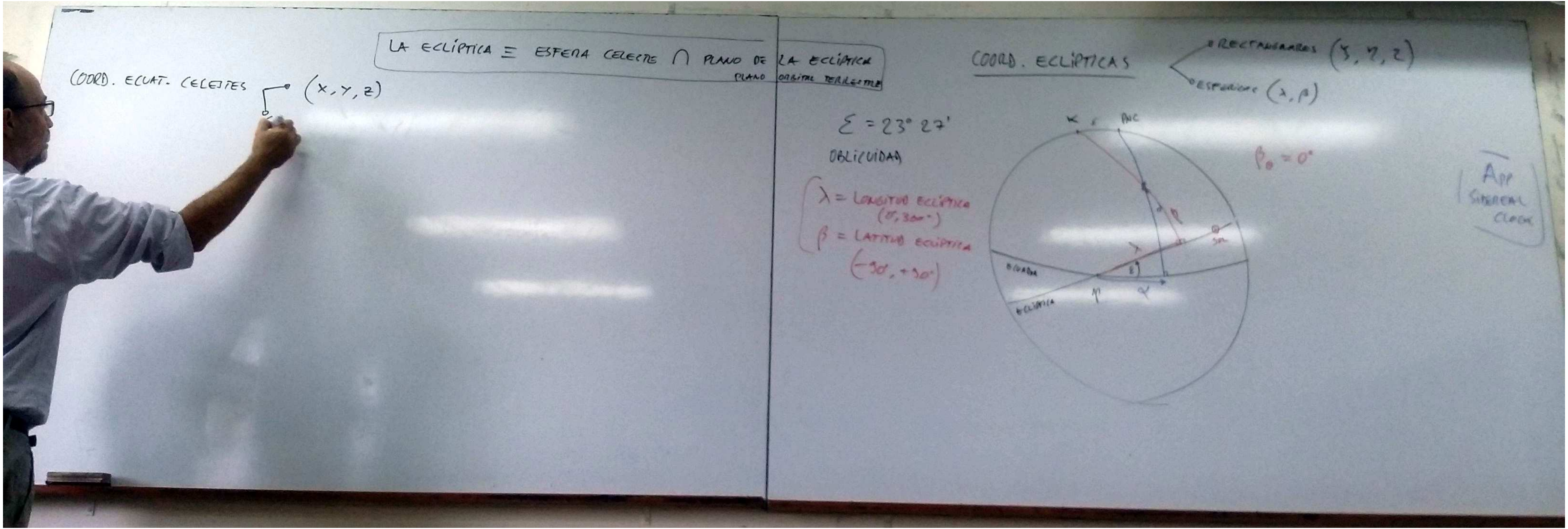
Astronomia Fundamental 2018 - clase 4

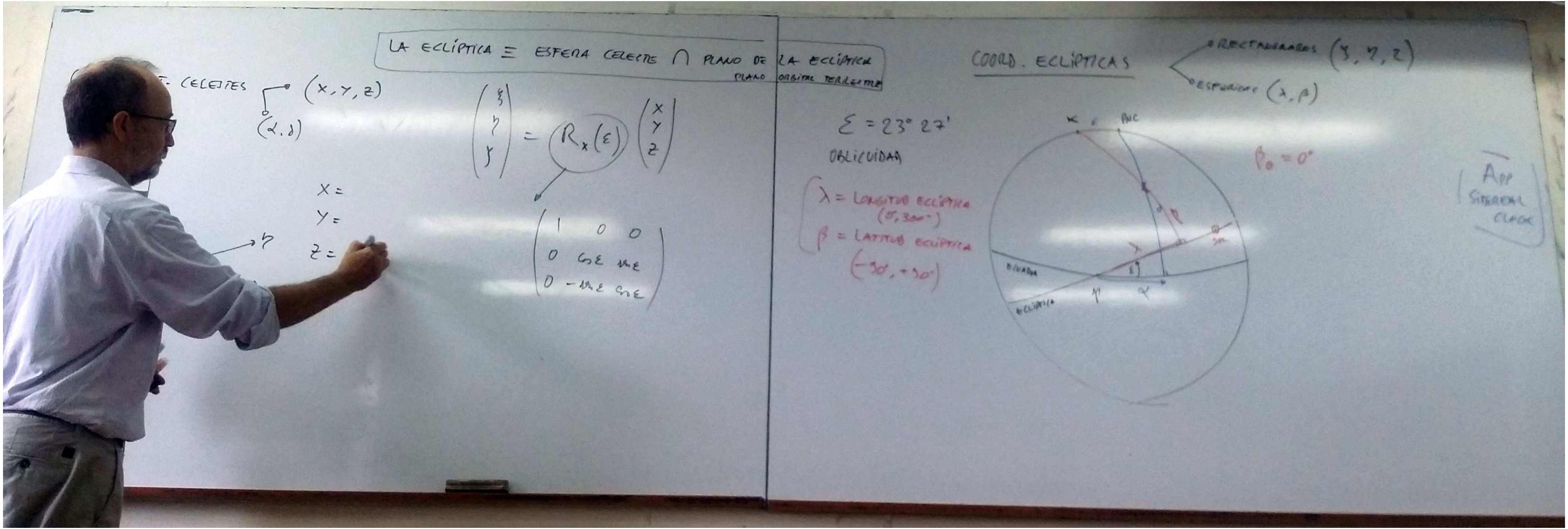


Astronomia Fundamental 2018 - clase 4

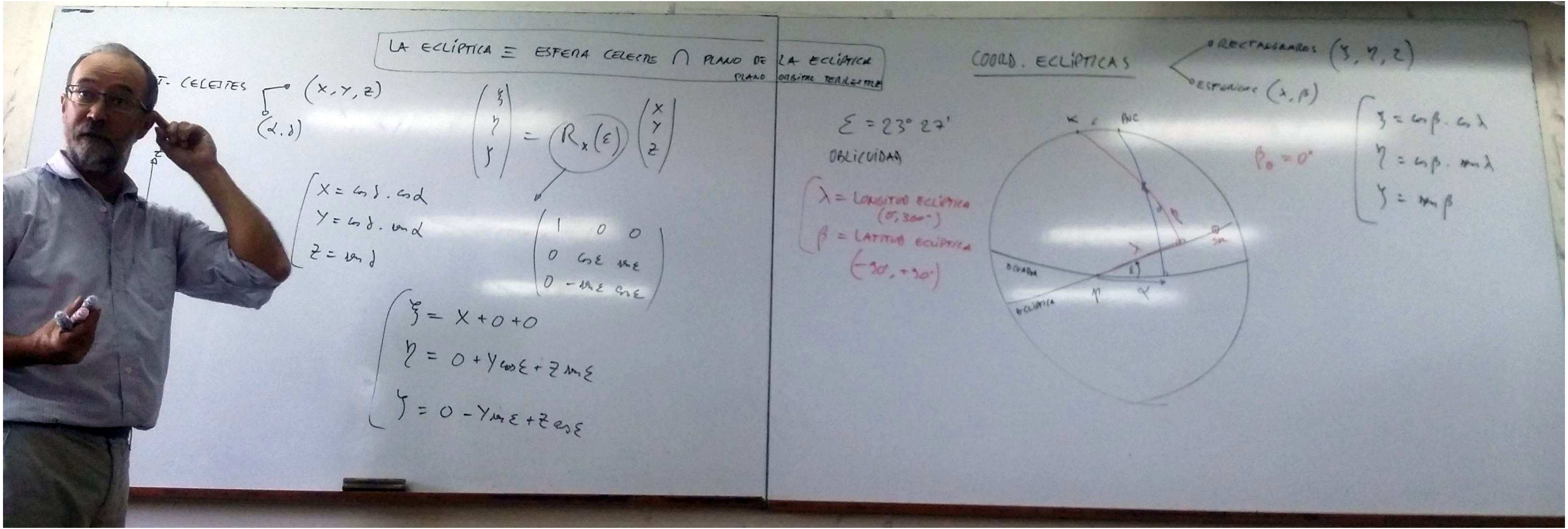


Astronomia Fundamental 2018 - clase 4

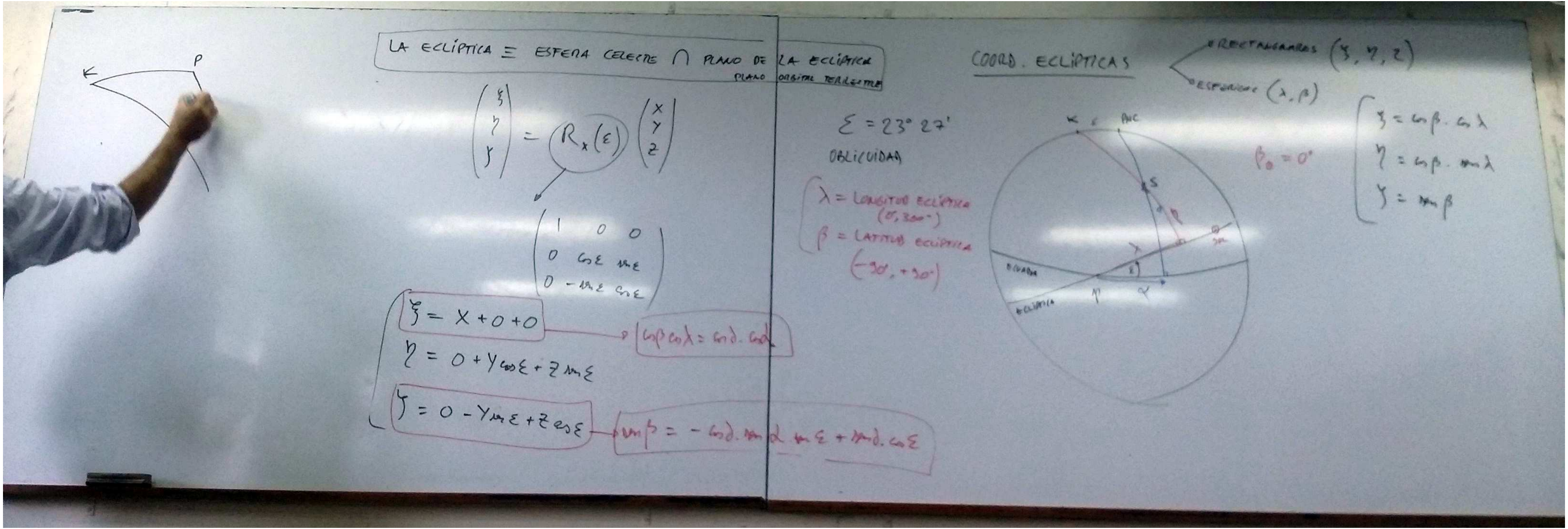


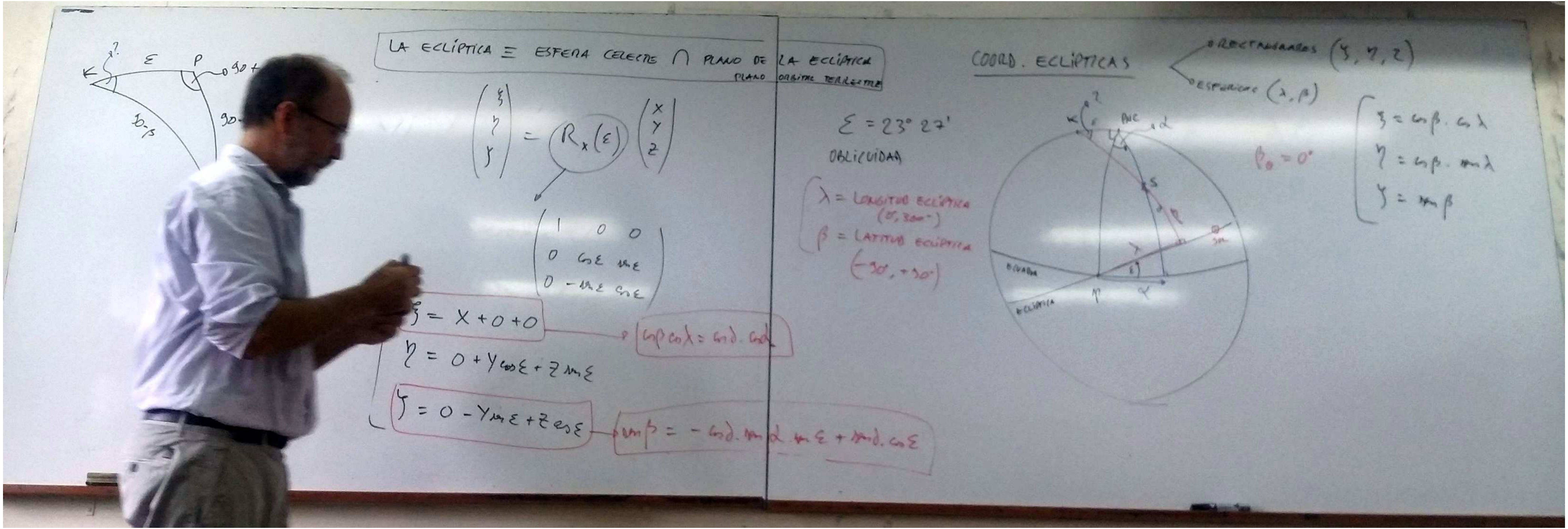

LA ECLÍPTICA ≡ ESFERA CELESTE ∩ PLANO DE LA ECLÍPTICA
PLANO ORBITAL TERRESTRE
(x, y, z)
(α, δ)
x =
y =
z =
= Rx(ε)
COORD. ECLÍPTICAS
RECTANGULARES (ξ, η, ζ)
ESFÉRICAS (λ, β)
ε = 23° 27'
OBLICUIDAD
λ = LONGITUD ECLÍPTICA (0°, 360°)
β = LATITUD ECLÍPTICA (−90°, +90°)
PNC
ECUADOR
ECLÍPTICA
β☉ = 0°
App SIDEREAL CLOCK

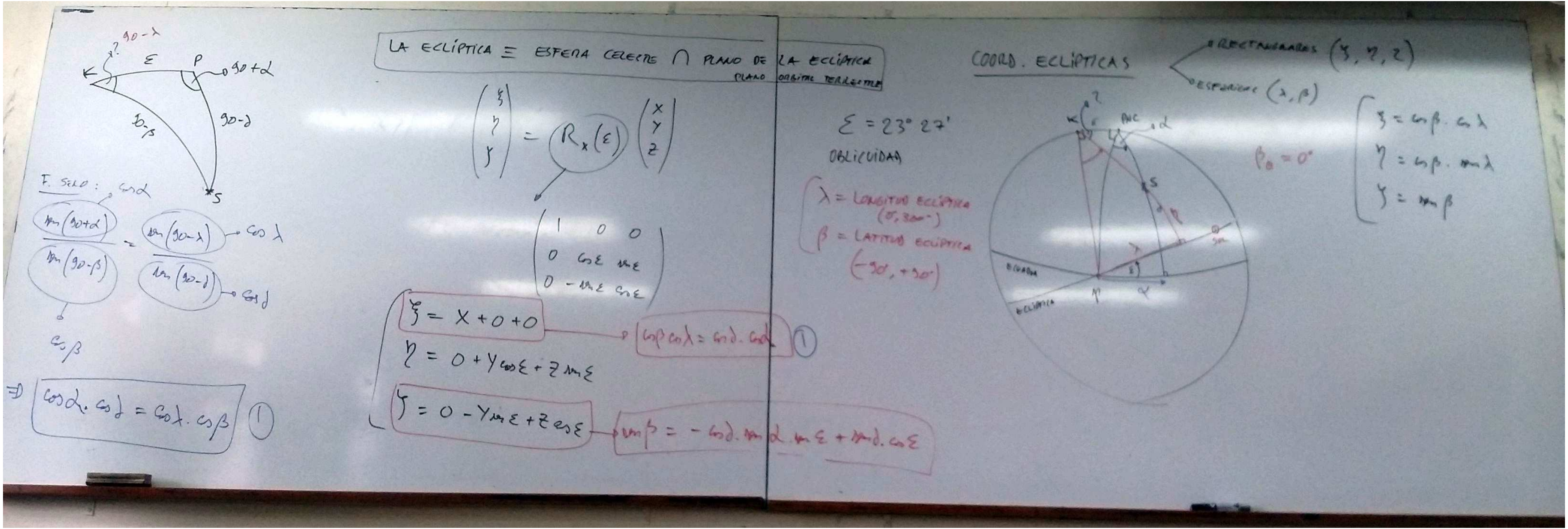
Astronomia Fundamental 2018 - clase 4



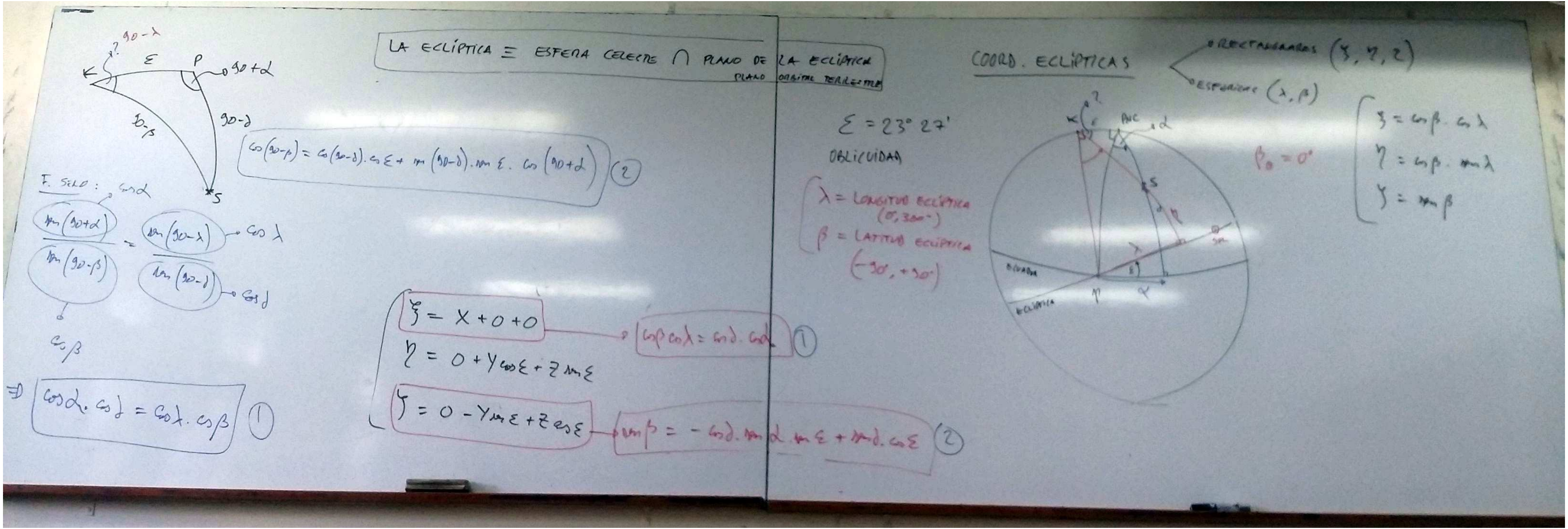
Astronomia Fundamental 2018 - clase 4



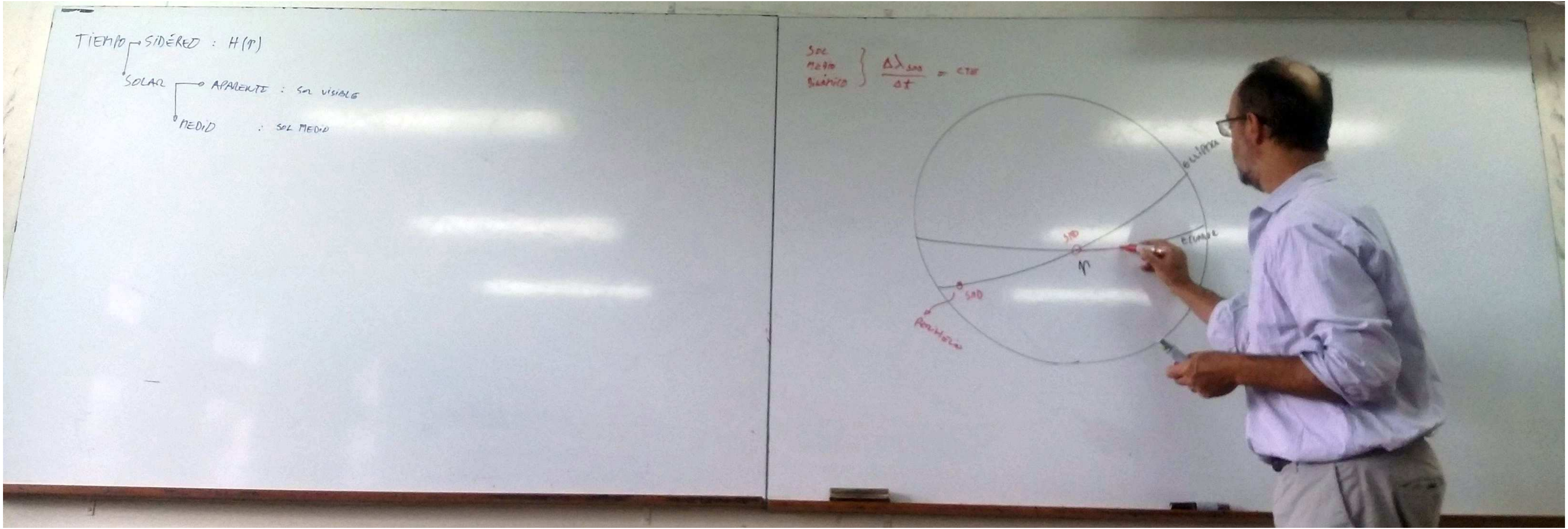

LA ECLÍPTICA ≡ ESFERA CELESTE ∩ PLANO DE LA ECLÍPTICA
PLANO ORBITAL TERRESTRE
COORD. ECLÍPTICAS
RECTANGULARES (ξ, η, ζ)
ESFÉRICAS (λ, β)
ε = 23° 27'
OBLICUIDAD
λ = LONGITUD ECLÍPTICA
β = LATITUD ECLÍPTICA
ECLÍPTICA
ξ = X + 0 + 0
η = 0 + Y cos ε + Z sen ε
ζ = 0 − Y sen ε + Z cos ε



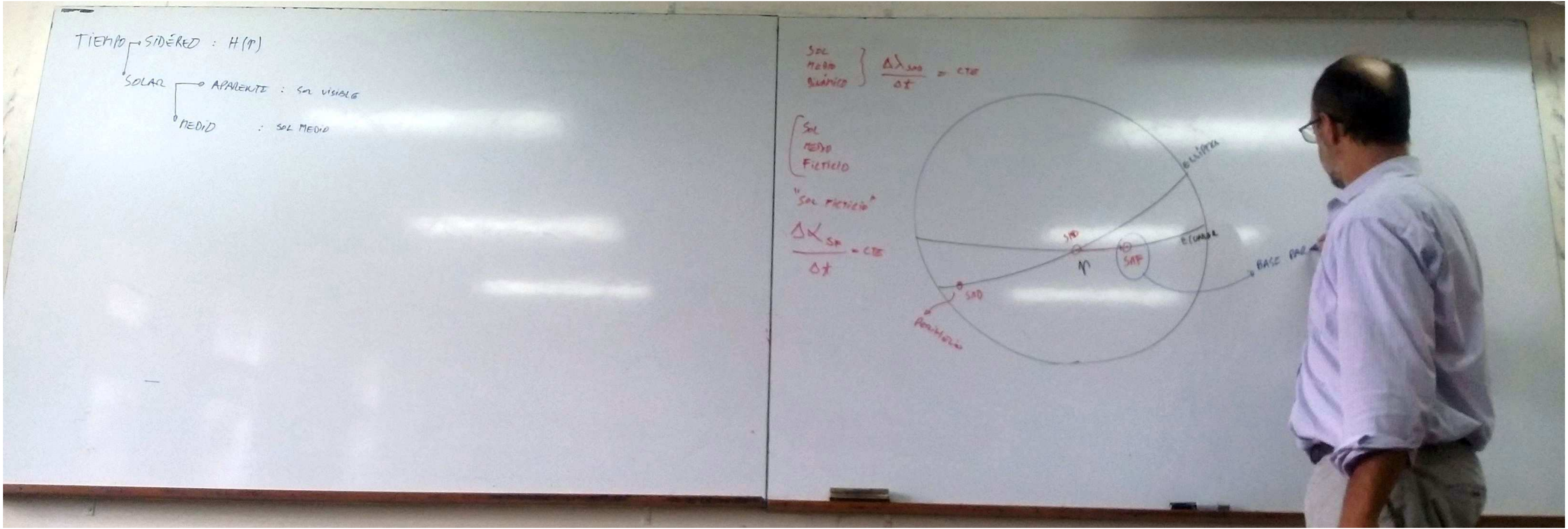
LA ECLÍPTICA ≡ ESFERA CELESTE ∩ PLANO DE LA ECLÍPTICA
PLANO ORBITAL TERRESTRE
ε = 23° 27'
OBLICUIDAD
λ = LONGITUD ECLÍPTICA (0°, 360°)
β = LATITUD ECLÍPTICA (-90°, +90°)
COORD. ECLÍPTICAS
RECTANGULARES (ξ, η, ζ)
ESFÉRICAS (λ, β)
ξ = cos β . cos λ
η = cos β . sen λ
ζ = sen β
β☉ = 0°
F. SENO:
cos α . cos δ = cos λ . cos β
ξ = X + 0 + 0
η = 0 + Y cos ε + Z sen ε
ζ = 0 - Y sen ε + Z cos ε
cos β cos λ = cos δ . cos α
sen β = - cos δ . sen α . sen ε + sen δ . cos ε
ECUADOR
ECLÍPTICA


LA ECLÍPTICA ≡ ESFERA CELESTE ∩ PLANO DE LA ECLÍPTICA
PLANO ORBITAL TERRESTRE
COORD. ECLÍPTICAS
RECTANGULARES (ξ, η, ζ)
ESFÉRICAS (λ, β)
ε = 23° 27'
OBLICUIDAD
λ = LONGITUD ECLÍPTICA (0°, 360°)
β = LATITUD ECLÍPTICA (-90°, +90°)
β₀ = 0°
ξ = cos β . cos λ
η = cos β . sin λ
ζ = sin β
F. SENO :
ξ = X + 0 + 0
η = 0 + Y cos ε + Z sin ε
ζ = 0 - Y sin ε + Z cos ε
cos β cos λ = cos δ . cos α
cos α . cos δ = cos λ . cos β
ECUADOR
ECLÍPTICA

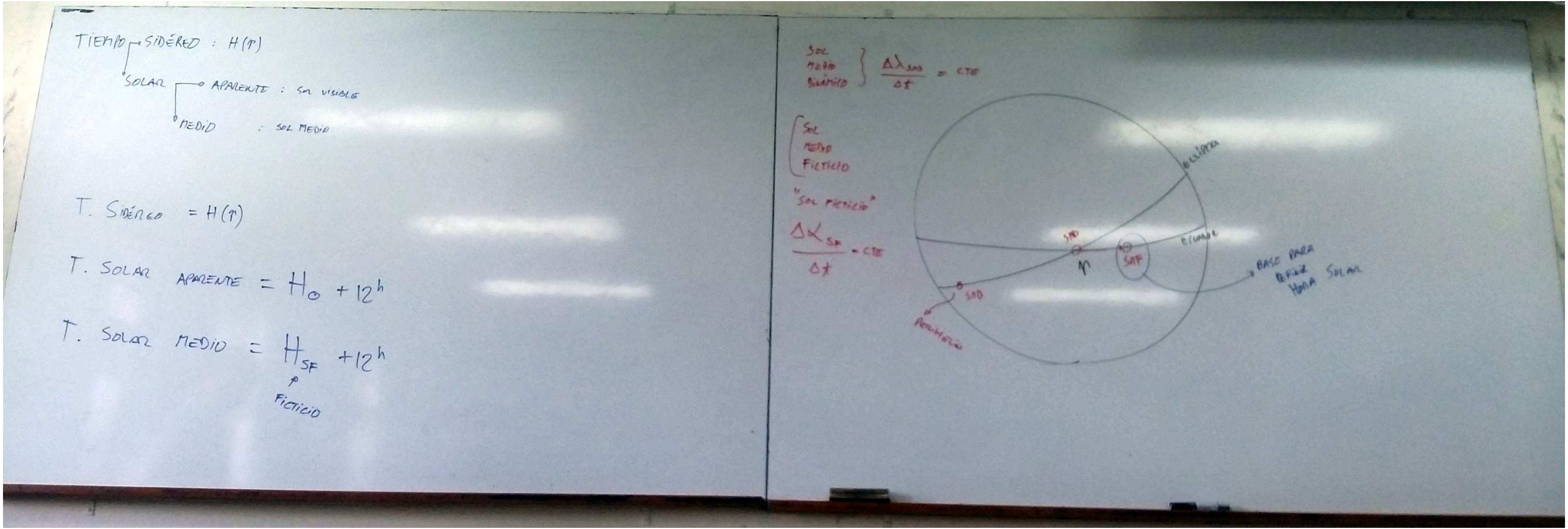
Astronomia Fundamental 2018 - clase 4



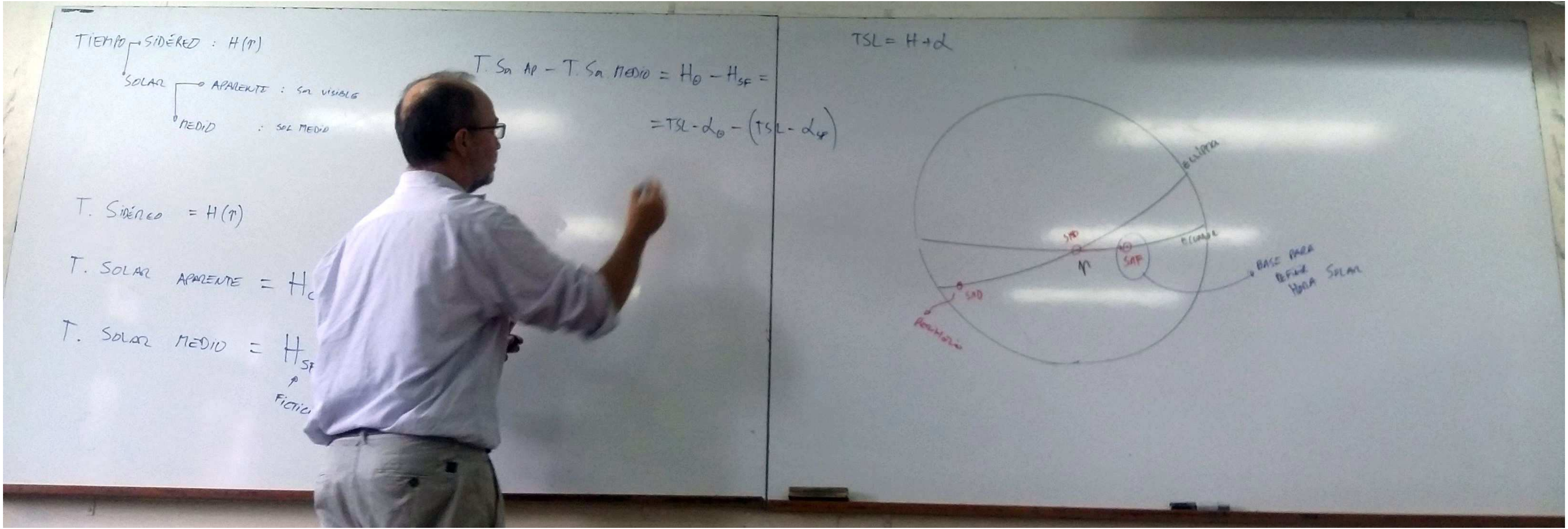
Astronomia Fundamental 2018 - clase 4



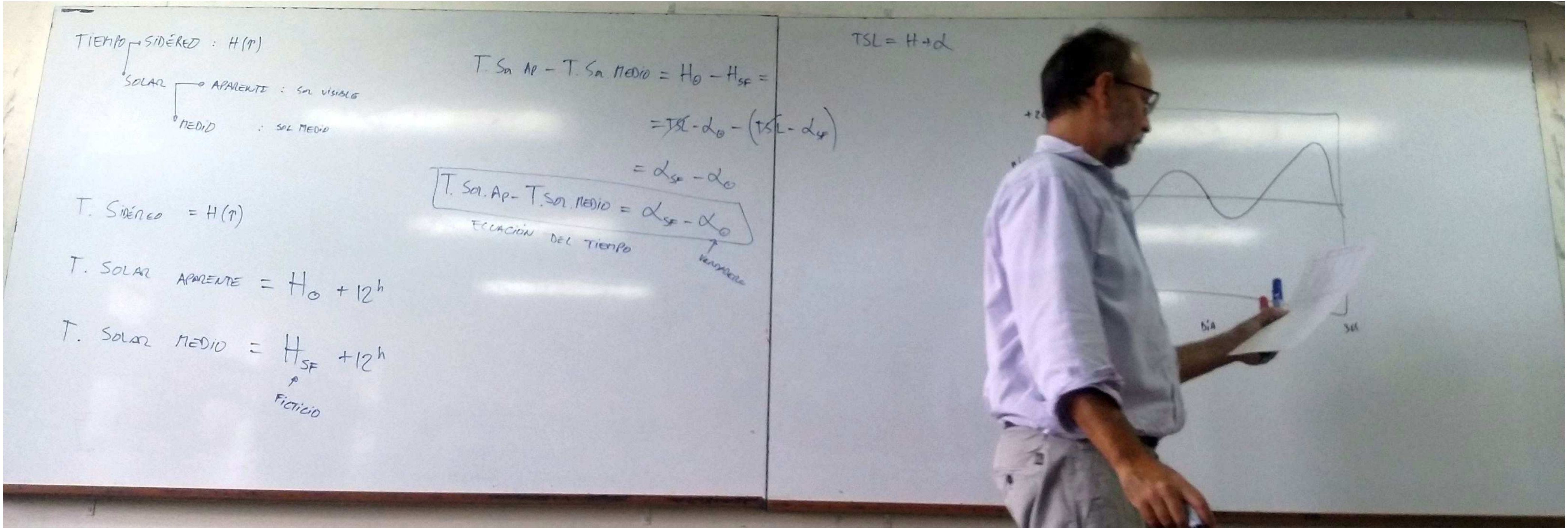
Astronomia Fundamental 2018 - clase 4



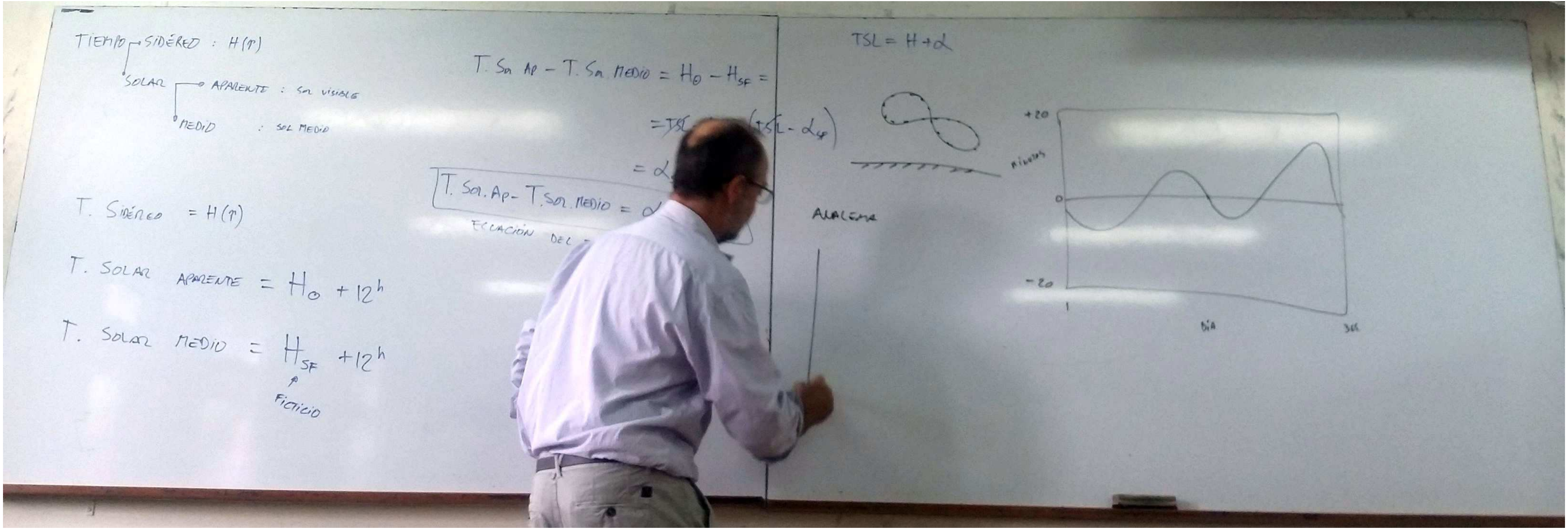
Astronomia Fundamental 2018 - clase 4

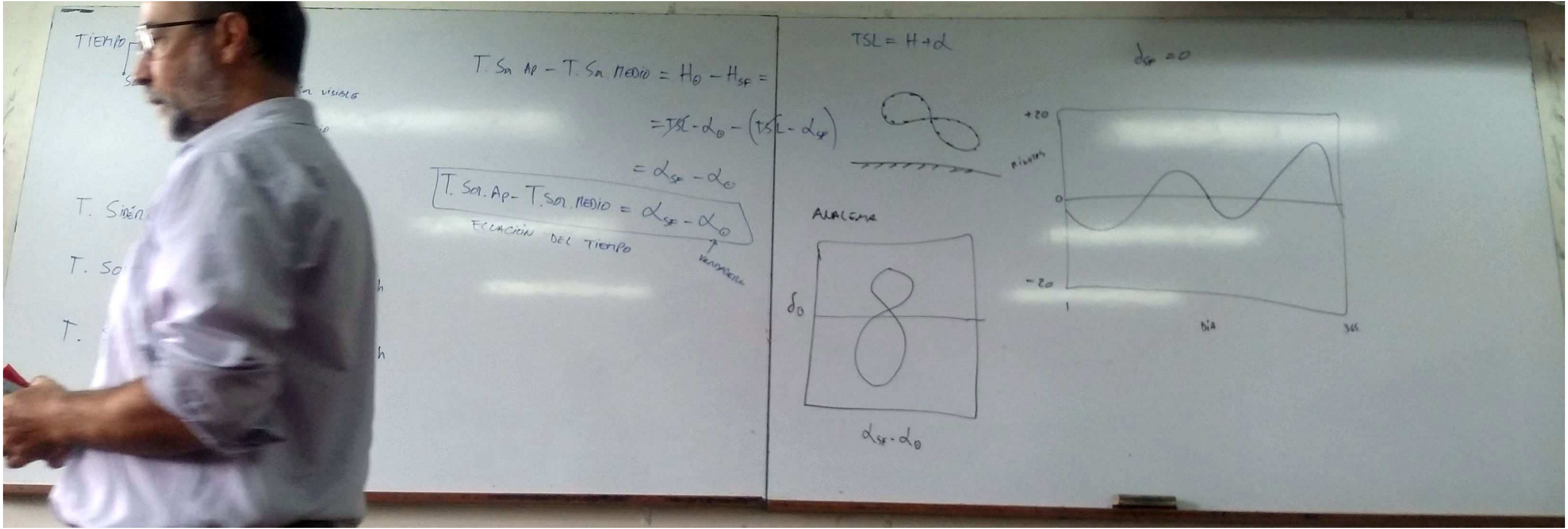


Astronomia Fundamental 2018 - clase 4



Astronomia Fundamental 2018 - clase 4




TIEMPO
T. SOL AP − T. SOL MEDIO = H⊙ − H_SF =
= TSL − α⊙ − (TSL − α_SF)
= α_SF − α⊙
T. SOL. AP − T. SOL. MEDIO = α_SF − α⊙
ECUACIÓN DEL TIEMPO
TSL = H + α
δ_SF = 0
ANALEMA
δ⊙
α_SF − α⊙
+20
0
−20
1
DÍA
365

Astronomia Fundamental 2018 - clase 4