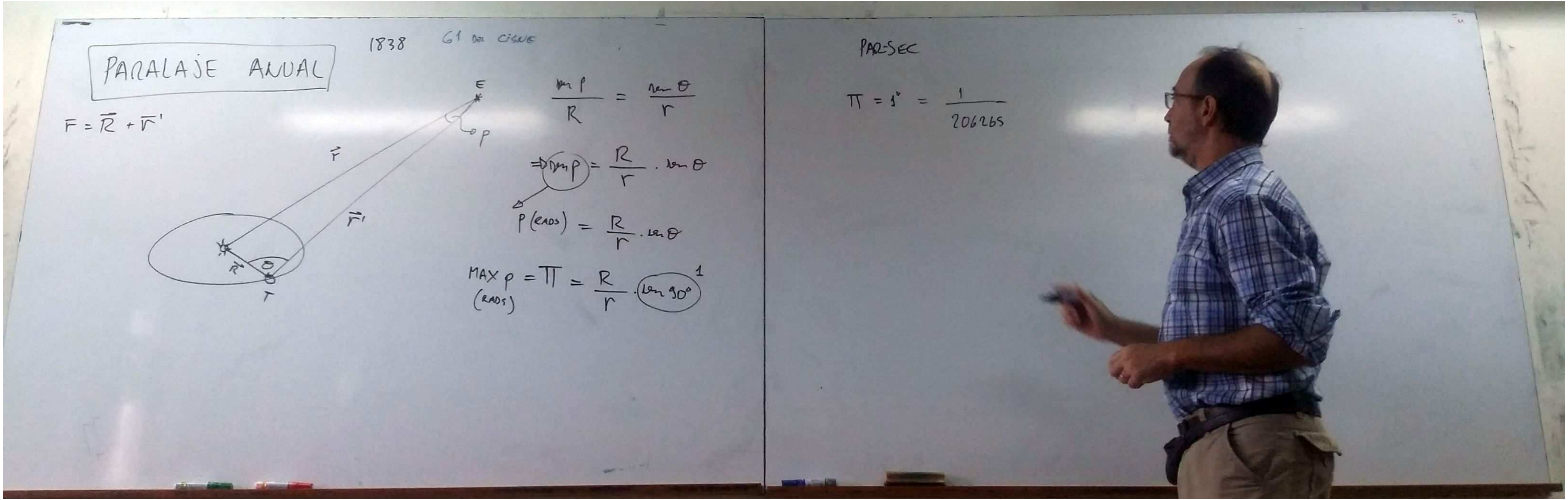
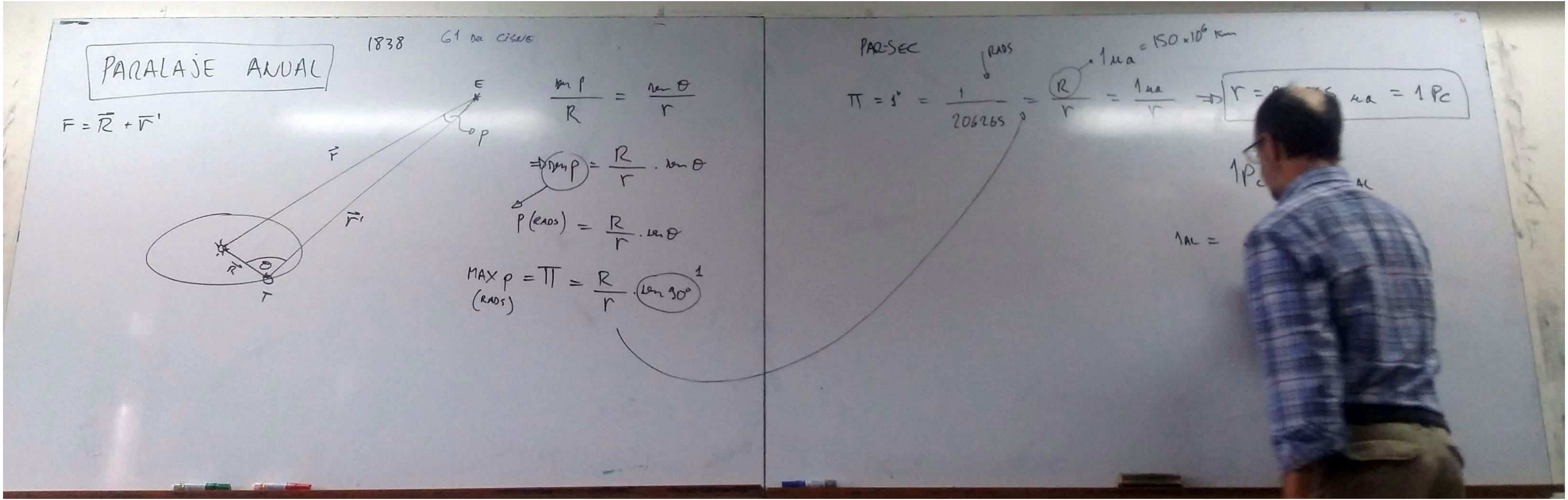
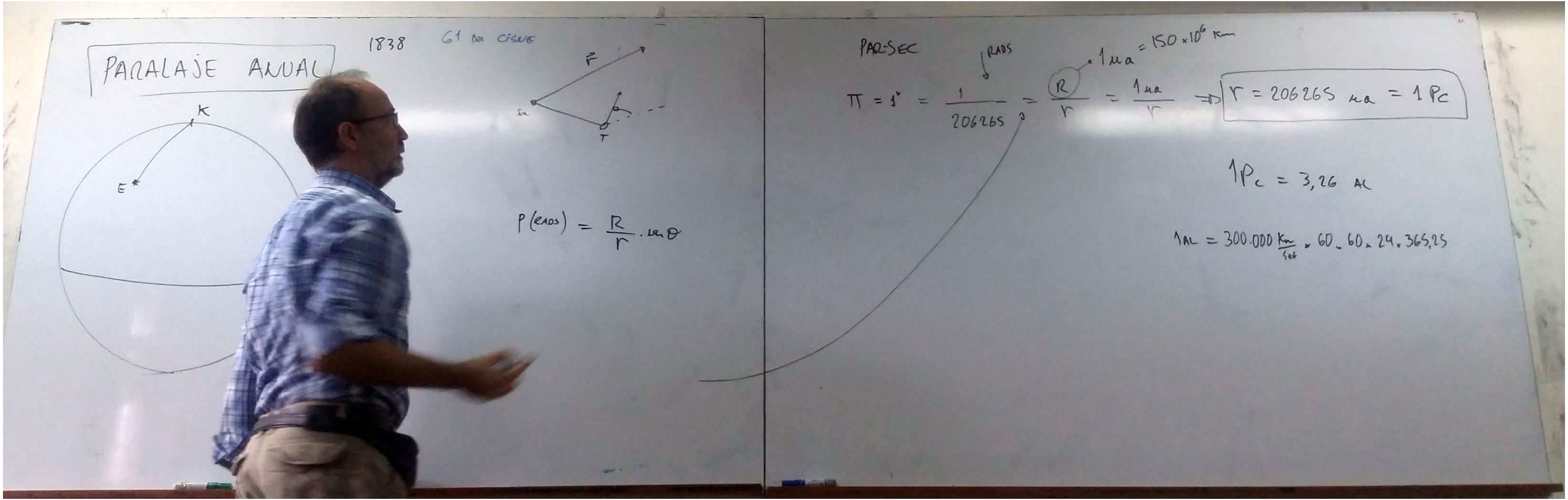
Astronomia Fundamental 2018 - clase 10



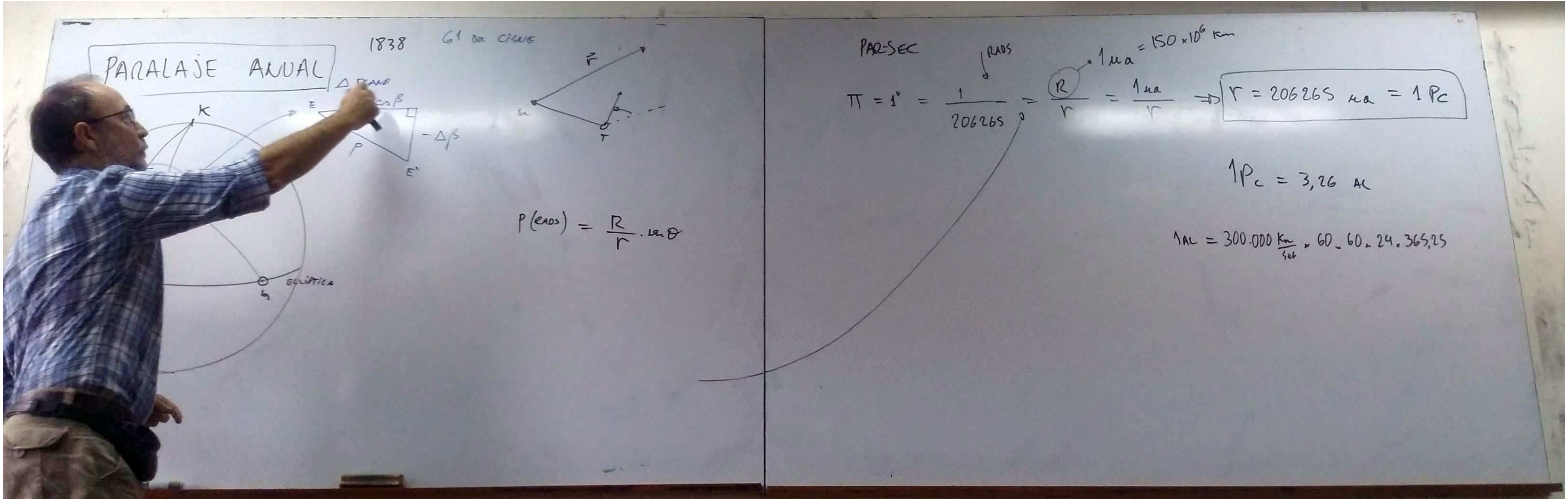
Astronomia Fundamental 2018 - clase 10



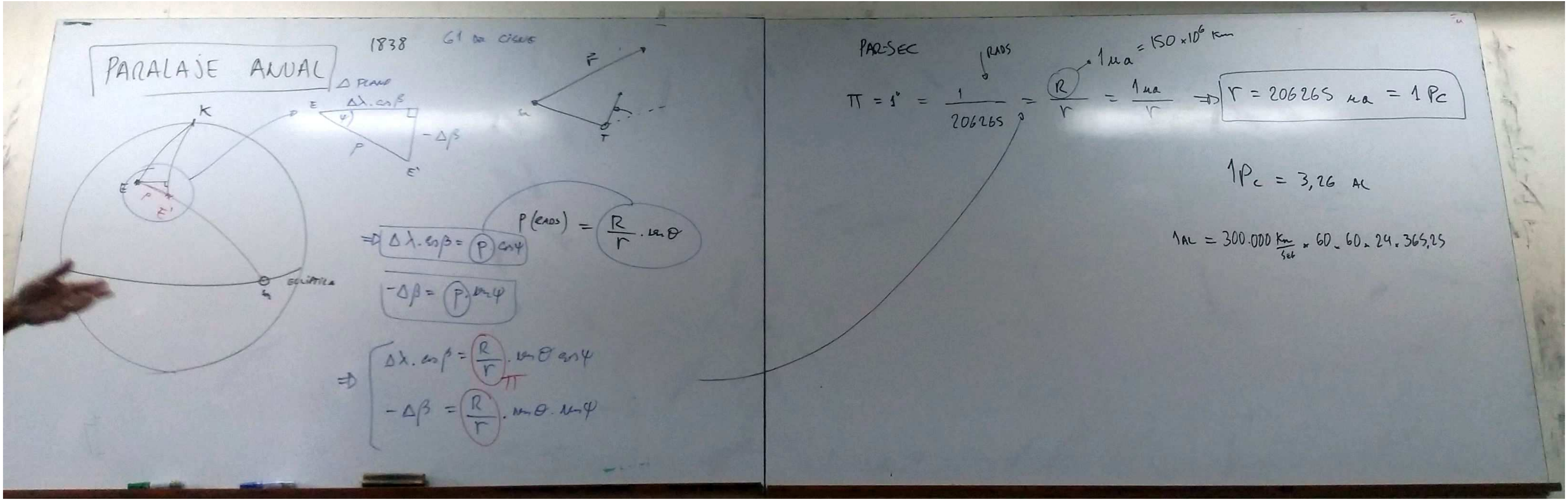
Astronomia Fundamental 2018 - clase 10



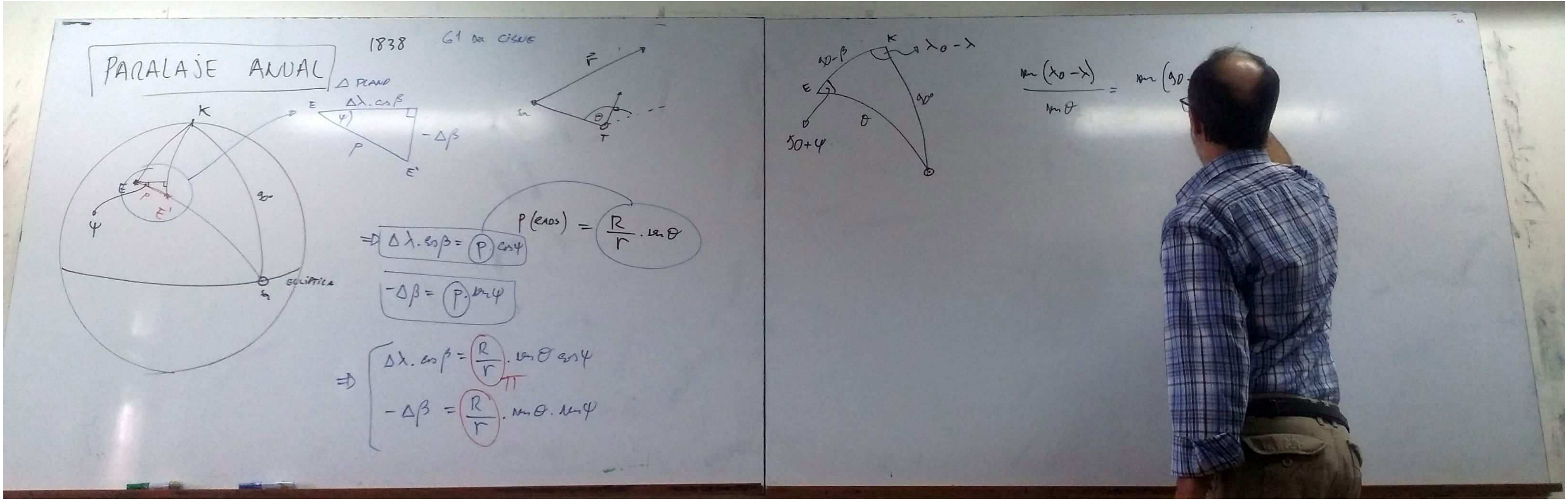
Astronomia Fundamental 2018 - clase 10



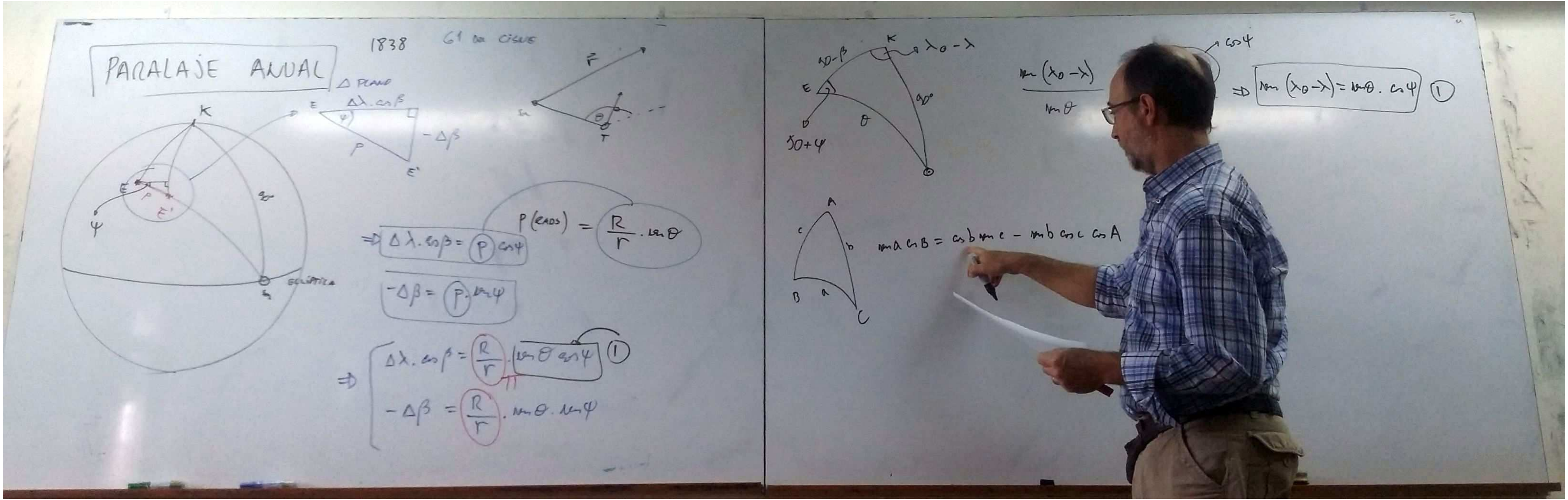
Astronomia Fundamental 2018 - clase 10

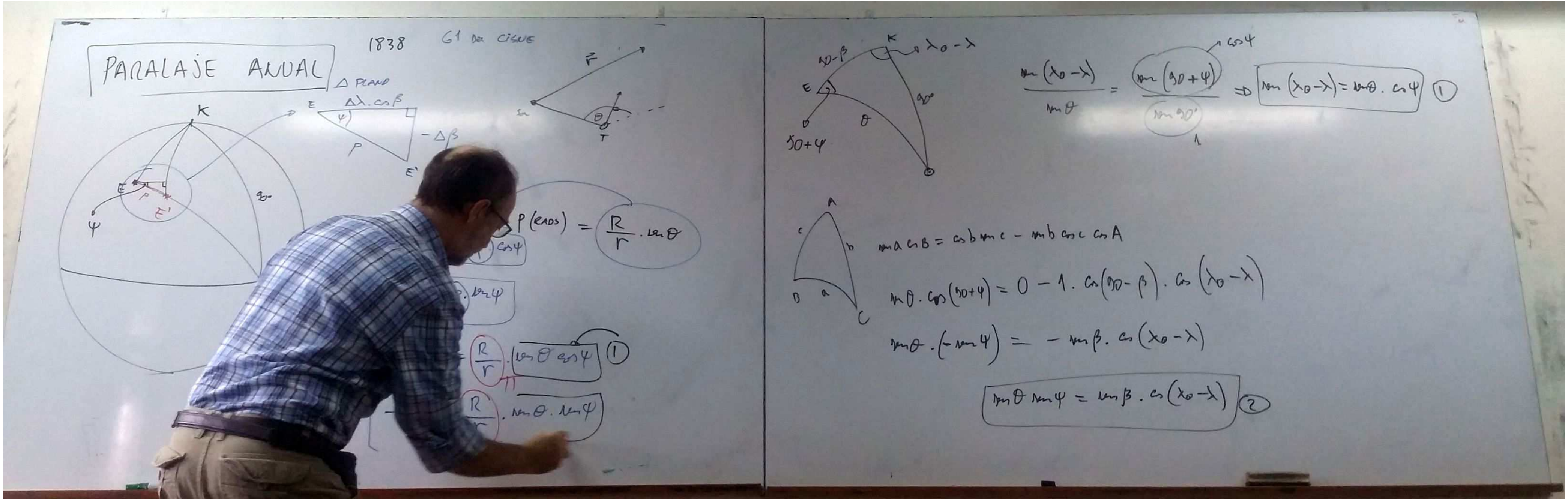


Astronomia Fundamental 2018 - clase 10

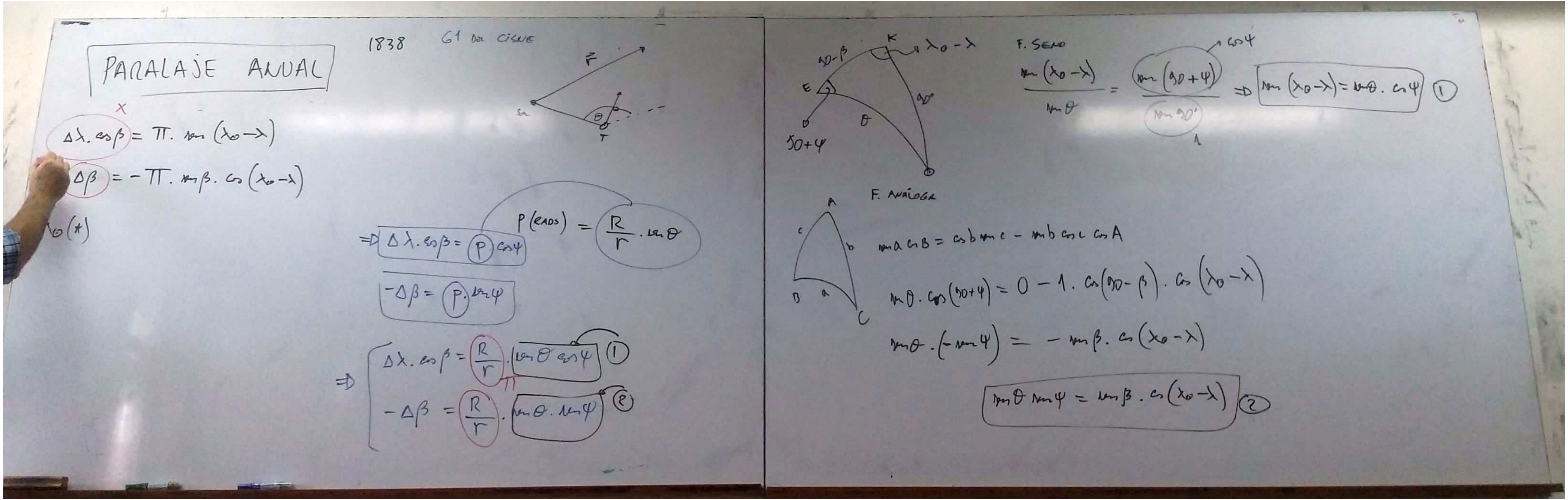


Astronomia Fundamental 2018 - clase 10

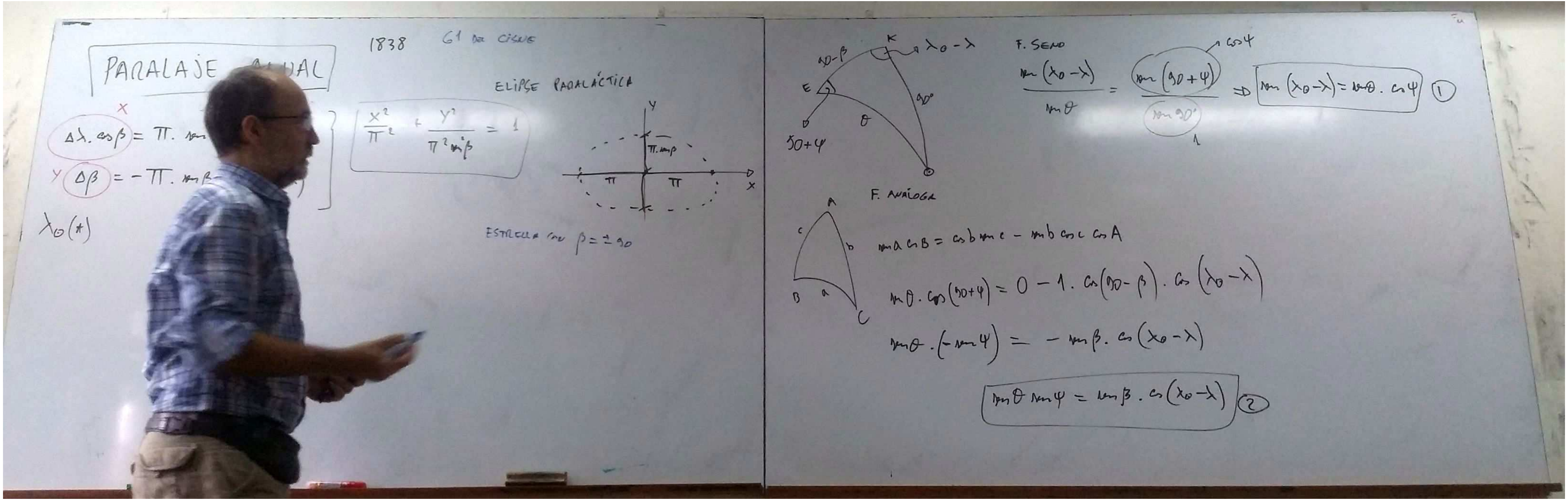


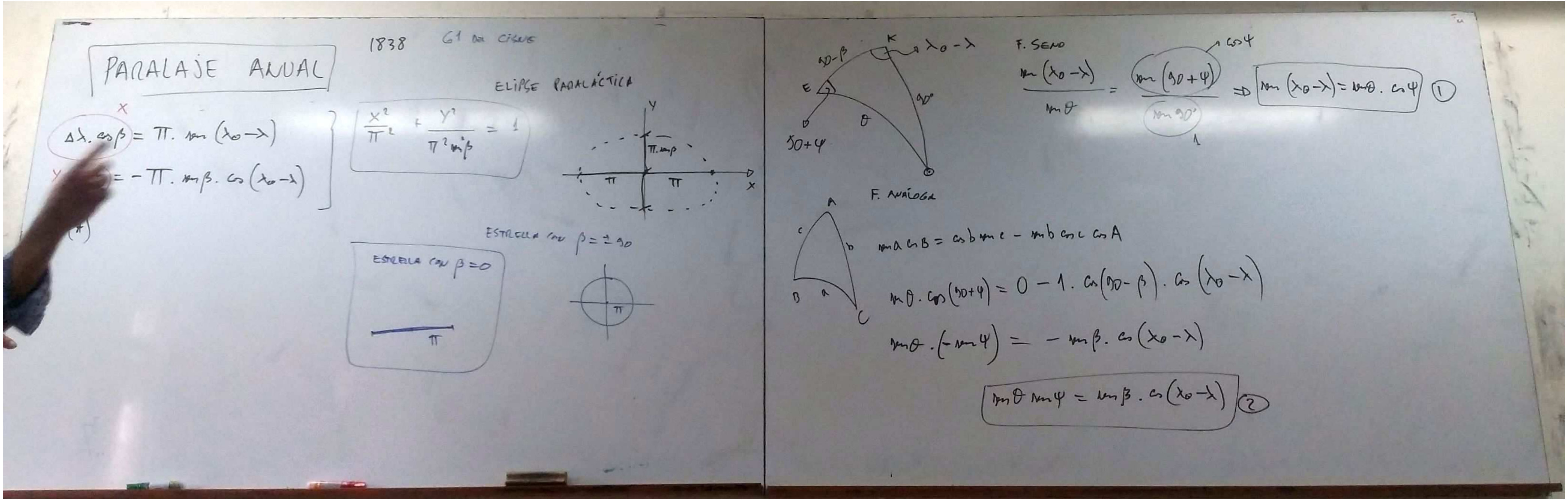


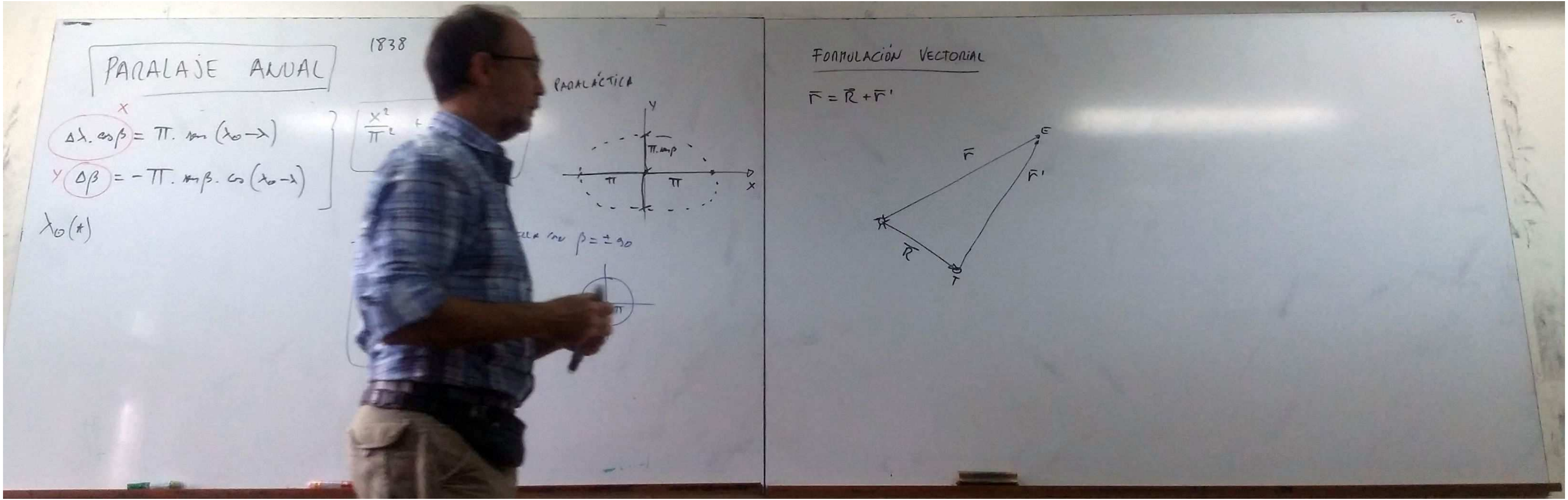
Astronomia Fundamental 2018 - clase 10

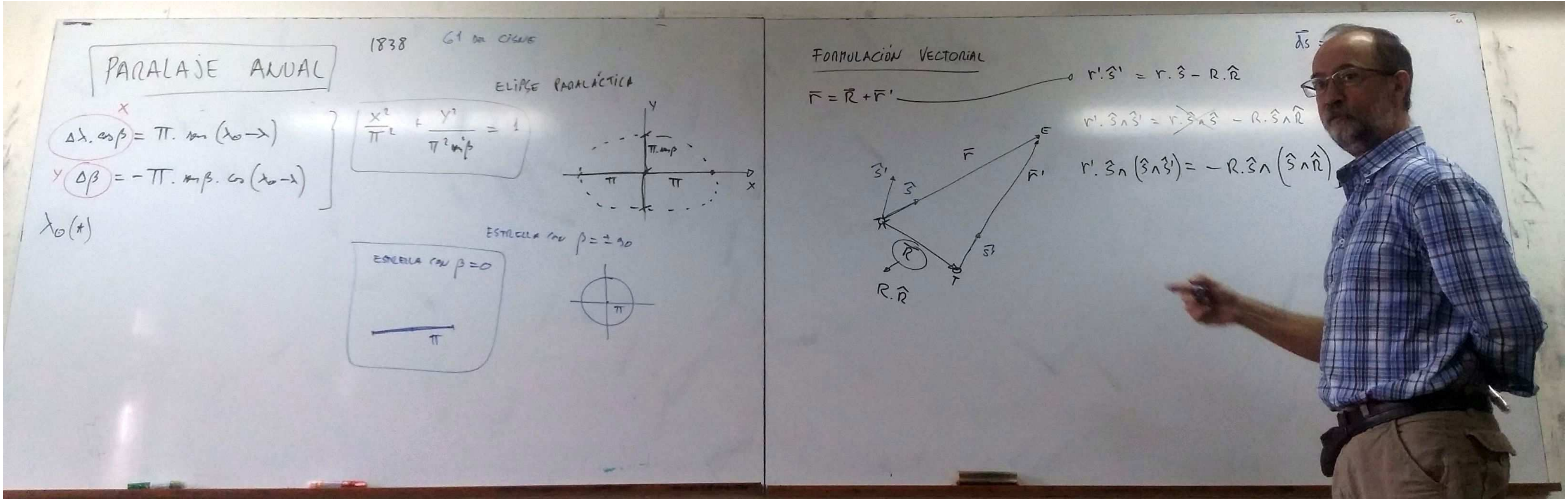


Astronomia Fundamental 2018 - clase 10

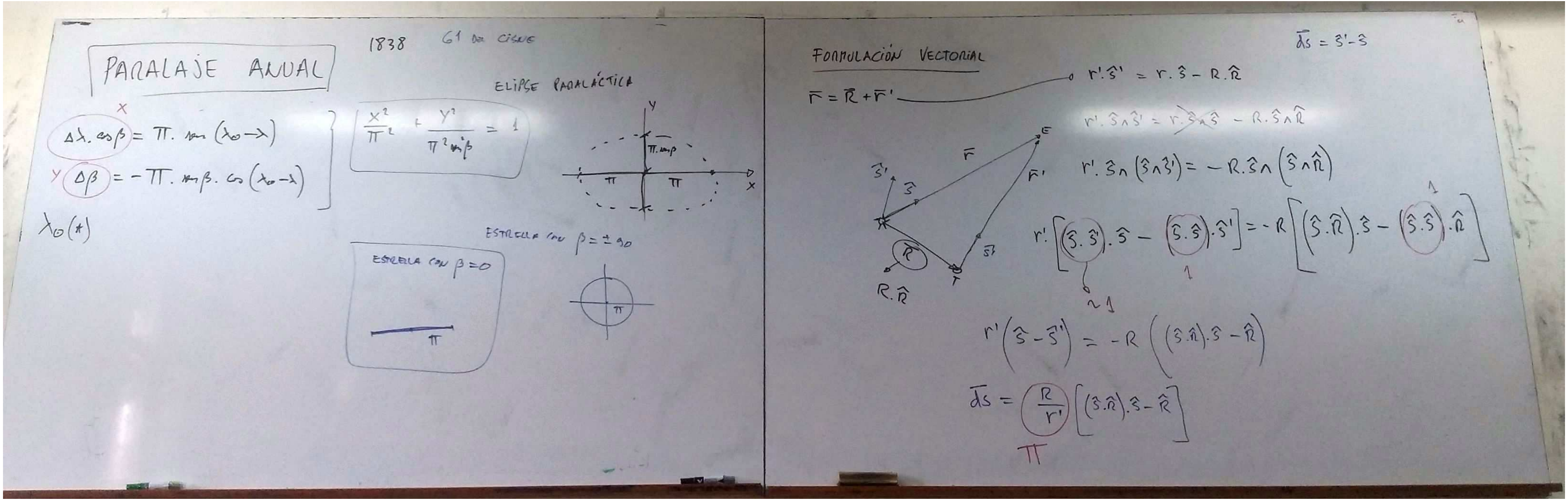


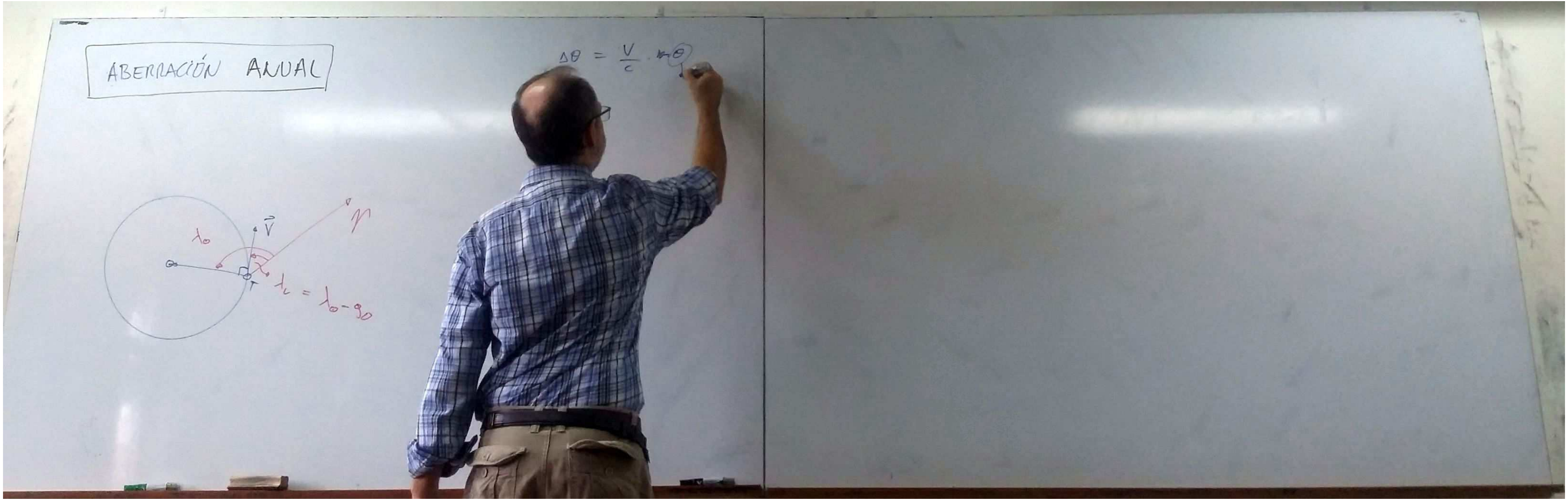

PARALAJE ANUAL
1838
61 de Cisne
Δλ. cos β = π. sen (λ☉ − λ)
= −π. sen β. cos (λ☉ − λ)
ELIPSE PARALÁCTICA
x²/π² + y²/(π² sen² β) = 1
π. sen β
π
ESTRELLA CON β = ±90
ESTRELLA CON β = 0
K
90−β
λ☉ − λ
E
90°
θ
90+ψ
F. SENO
sen (λ☉ − λ) / sen θ = sen (90 + ψ) / sen 90°
cos ψ
sen (λ☉ − λ) = sen θ . cos ψ
1
F. ANÁLOGA
A
B
C
sen a cos B = cos b sen c − sen b cos c cos A
sen θ . cos (90+ψ) = 0 − 1 . cos (90 − β) . cos (λ☉ − λ)
sen θ . (− sen ψ) = − sen β. cos (λ☉ − λ)
sen θ sen ψ = sen β . cos (λ☉ − λ)
2

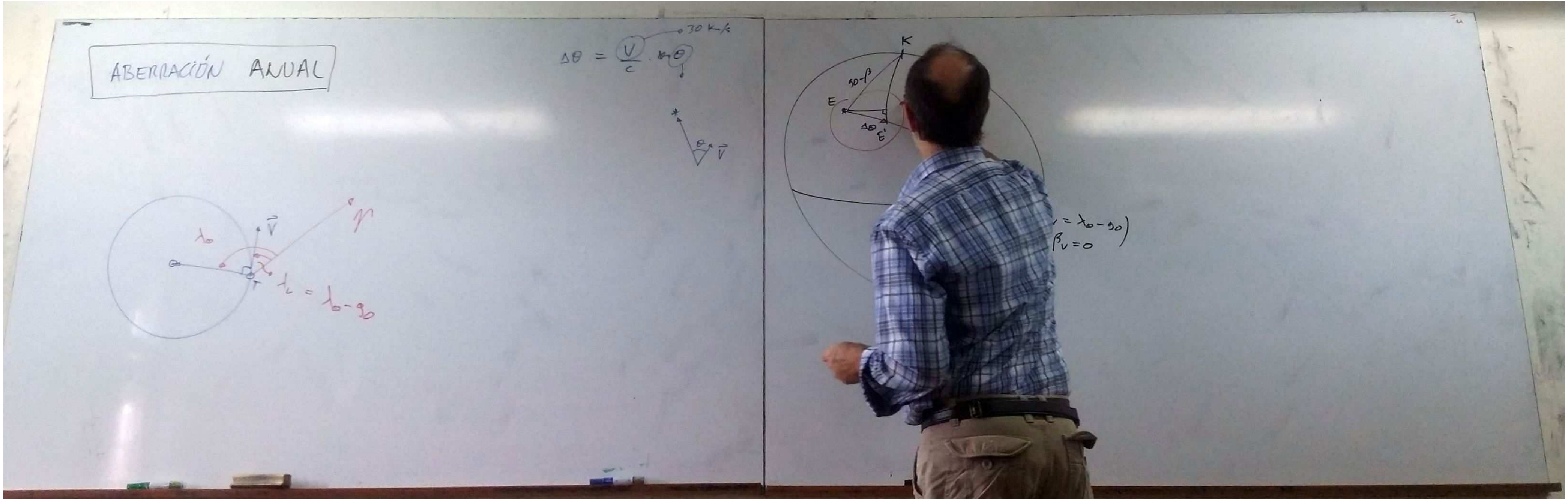

PARALAJE ANUAL
1838
PARALÁCTICA
FORMULACIÓN VECTORIAL
r = R + r'


PARALAJE ANUAL
1838
61 de Cisne
ELIPSE PARALÁCTICA
ESTRELLA CON β = 0
ESTRELLA CON β = ± 90
FORMULACIÓN VECTORIAL
R.R̂

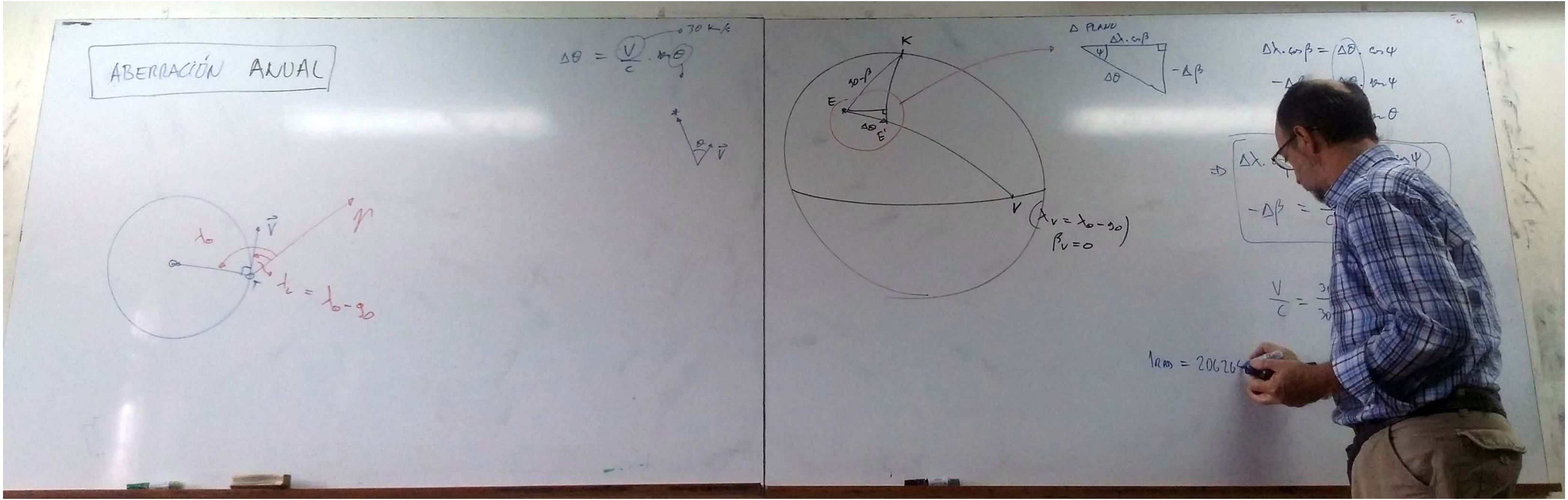
Astronomia Fundamental 2018 - clase 10



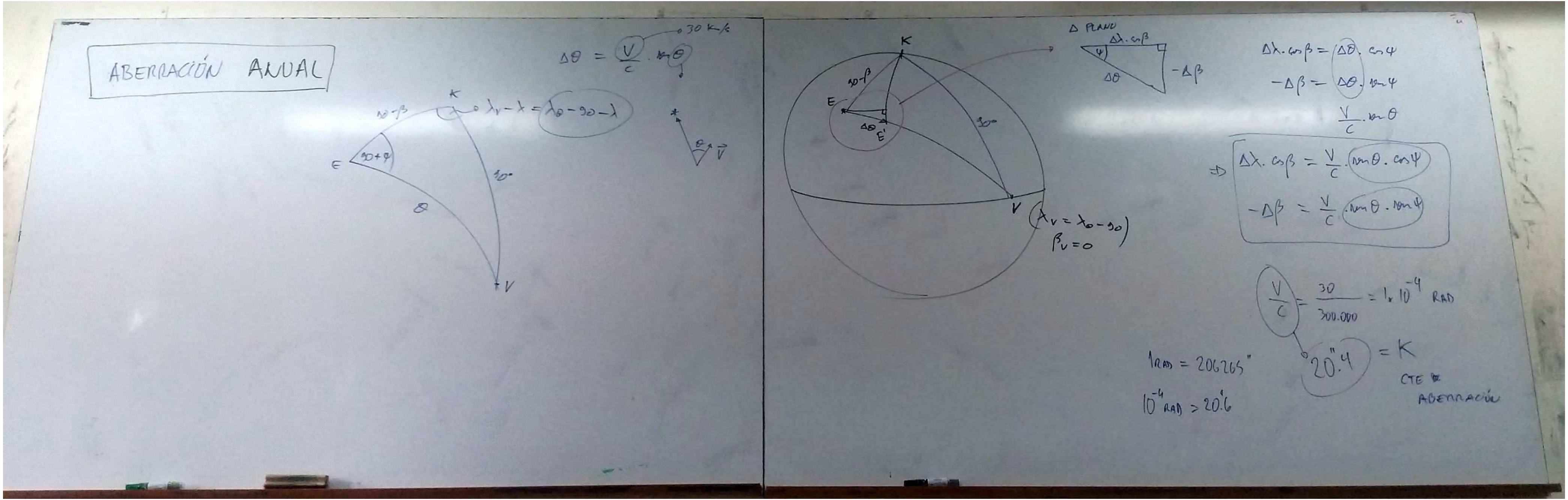

ABERRACIÓN ANUAL

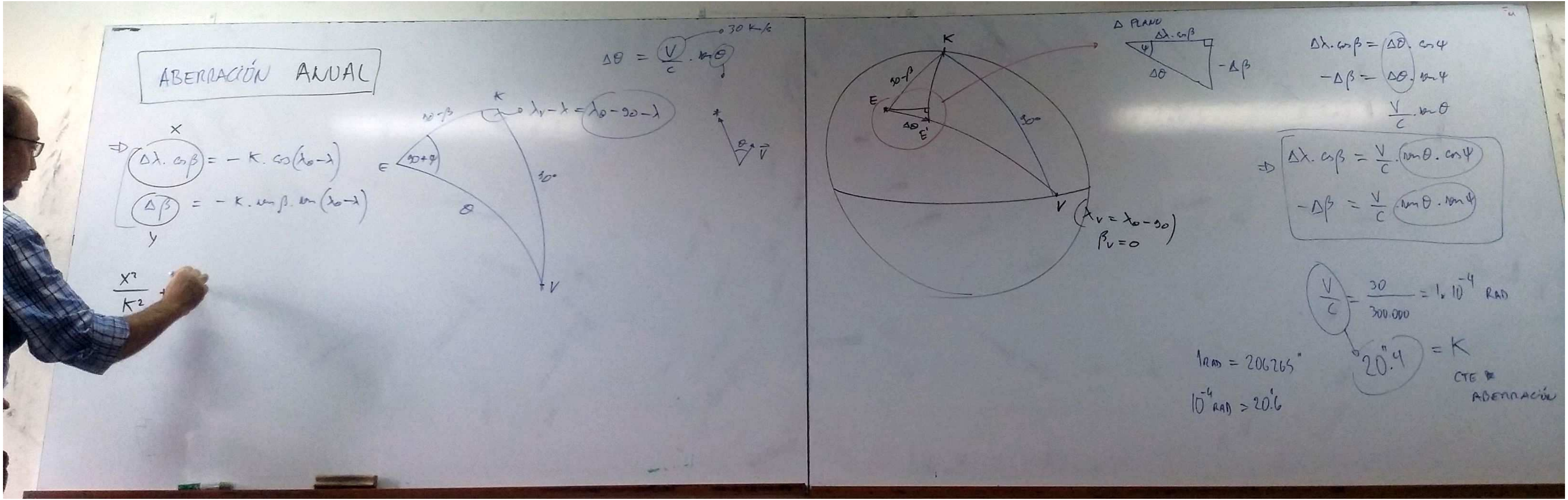

ABERRACIÓN ANUAL
$\Delta\theta = \frac{V}{c} \cdot \sin\theta$
30 km/s
$\vec{V}$
$\lambda_\odot$
$\lambda_v = \lambda_\odot - 90$
K
E
E'
$90-\beta$
$\Delta\theta$
$\beta_v = 0$

Astronomia Fundamental 2018 - clase 10

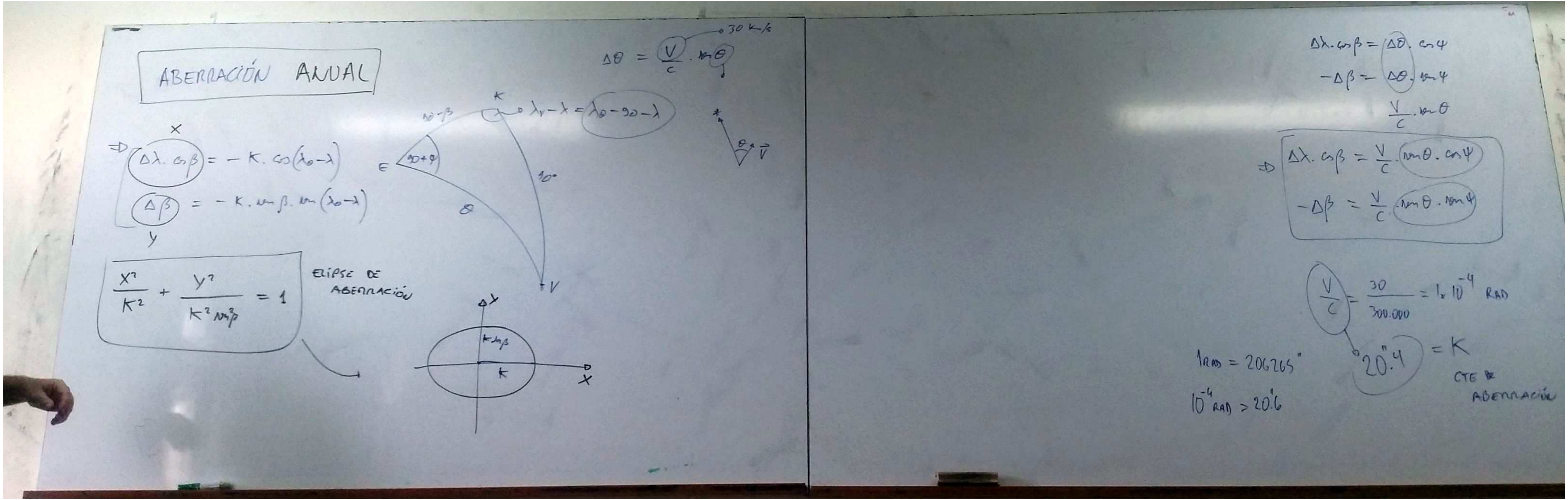


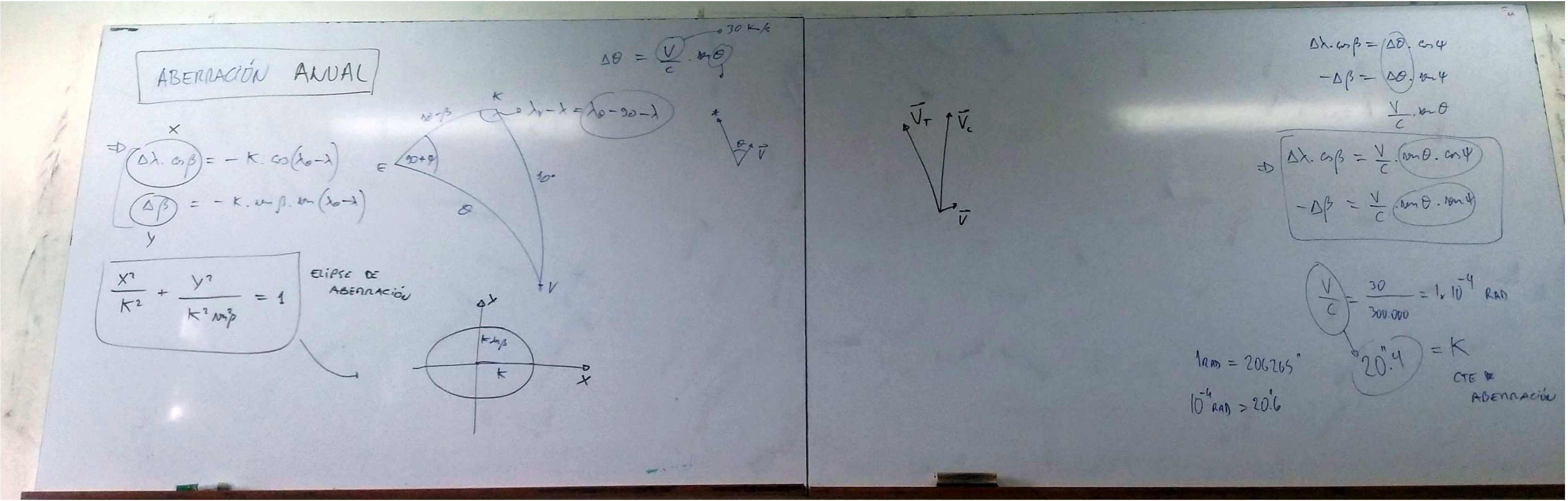
Astronomia Fundamental 2018 - clase 10

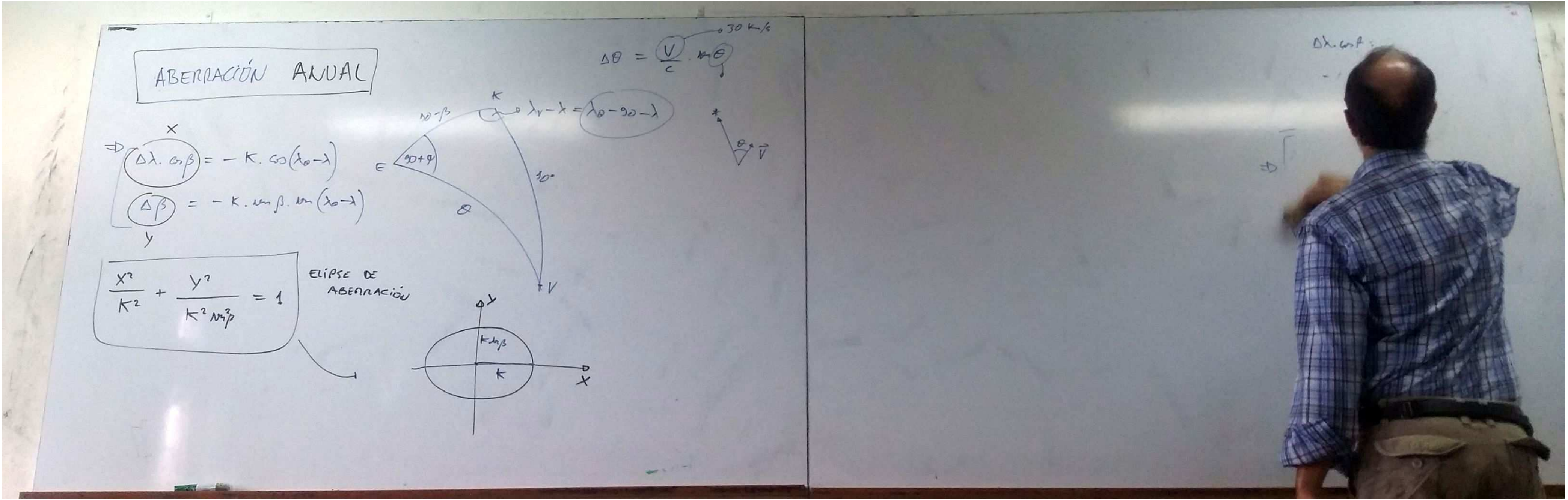



ABERRACIÓN ANUAL
Δθ = V/c . sen θ
30 km/s
λv − λ = λ☉ − 90 − λ
90 − β
90 + ψ
90°
θ
Δλ . cos β = − K . cos (λ☉ − λ)
Δβ = − K . sen β . sen (λ☉ − λ)
x
y
x²/K²
Δ PLANO
Δλ . cos β
ψ
Δθ
− Δβ
Δλ . cos β = Δθ . cos ψ
− Δβ = Δθ . sen ψ
V/c . sen θ
Δλ . cos β = V/c . sen θ . cos ψ
− Δβ = V/c . sen θ . sen ψ
K
E
E'
V
λv = λ☉ − 90
βv = 0
V/c = 30/300.000 = 1 . 10⁻⁴ RAD
1 RAD = 206265"
10⁻⁴ RAD = 20.6"
20".4 = K
CTE DE ABERRACIÓN

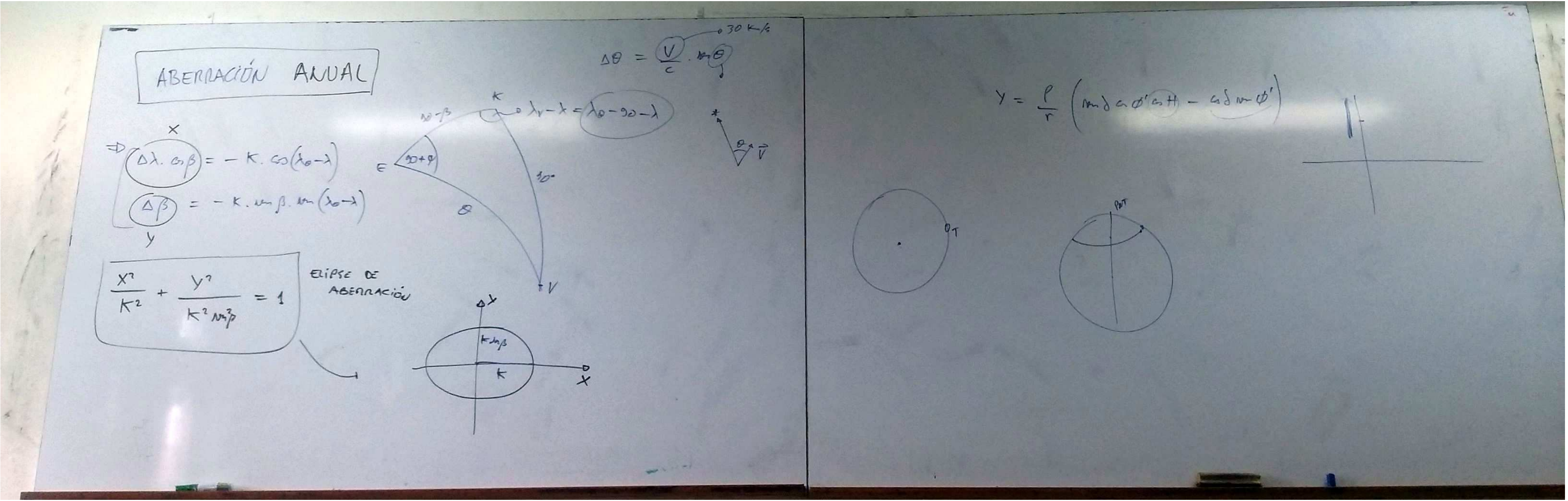
Astronomia Fundamental 2018 - clase 10



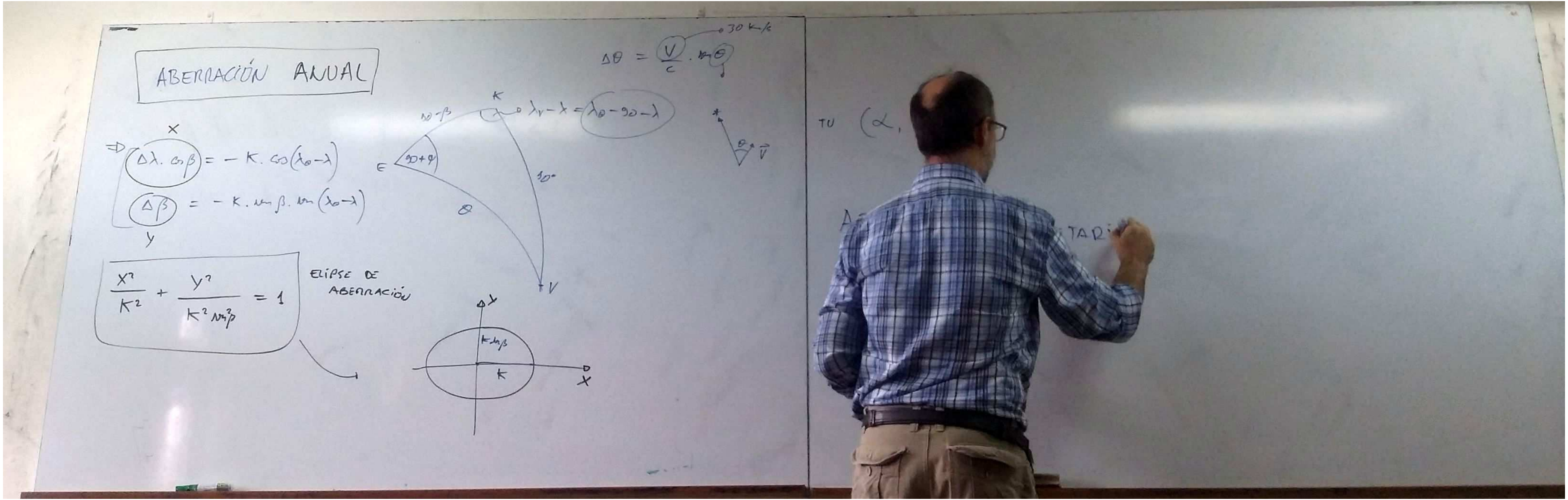

ABERRACIÓN ANUAL
Δθ = V/c . sen θ
30 km/s
Δλ. cos β = − K. cos(λ⊙ − λ)
Δβ = − K. sen β. sen(λ⊙ − λ)
λ₁ − λ = λ⊙ − 90 − λ
90 − β
90 + ψ
90°
X²/K² + Y²/(K² sen²β) = 1
ELIPSE DE ABERRACIÓN
K sen β
K
Δλ. cos β = Δθ. cos ψ
− Δβ = Δθ. sen ψ
V/c . sen θ
Δλ. cos β = V/c . sen θ. cos ψ
− Δβ = V/c . sen θ . sen ψ
V/c = 30/300.000 = 1 x 10⁻⁴ RAD
1 RAD = 206265"
10⁻⁴ RAD ≈ 20.6
20".4 = K
CTE DE ABERRACIÓN


ABERRACIÓN ANUAL
ELIPSE DE ABERRACIÓN
30 km/s

Astronomia Fundamental 2018 - clase 10



Astronomia Fundamental 2018 - clase 10



Astronomia Fundamental 2018 - clase 10