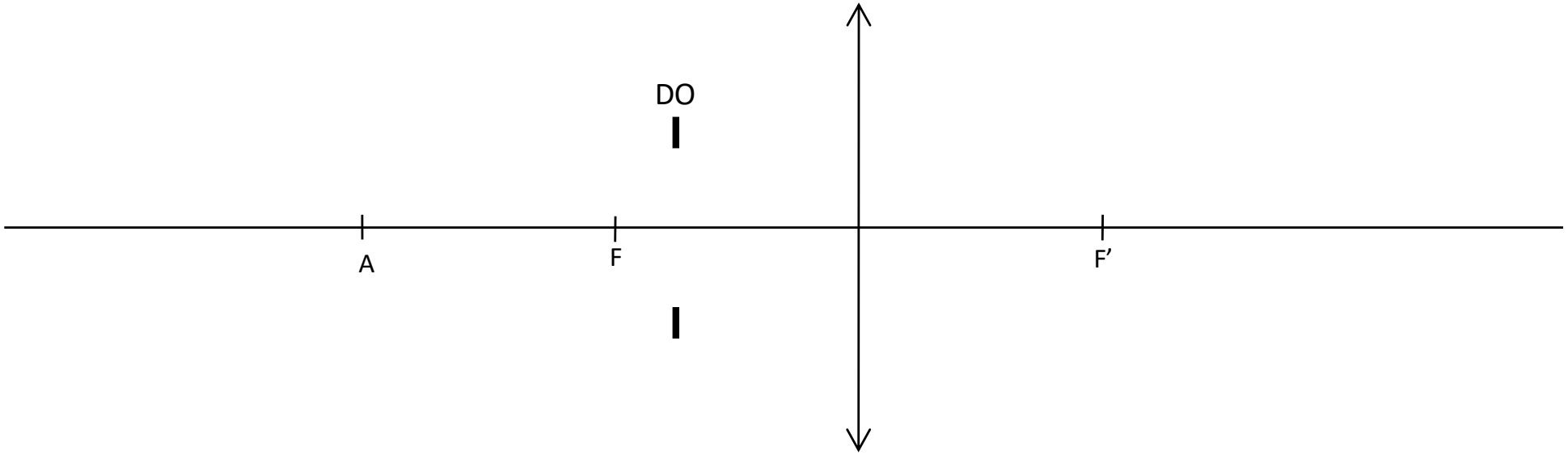
Entrainement aux constructions géométriques des champs transversaux

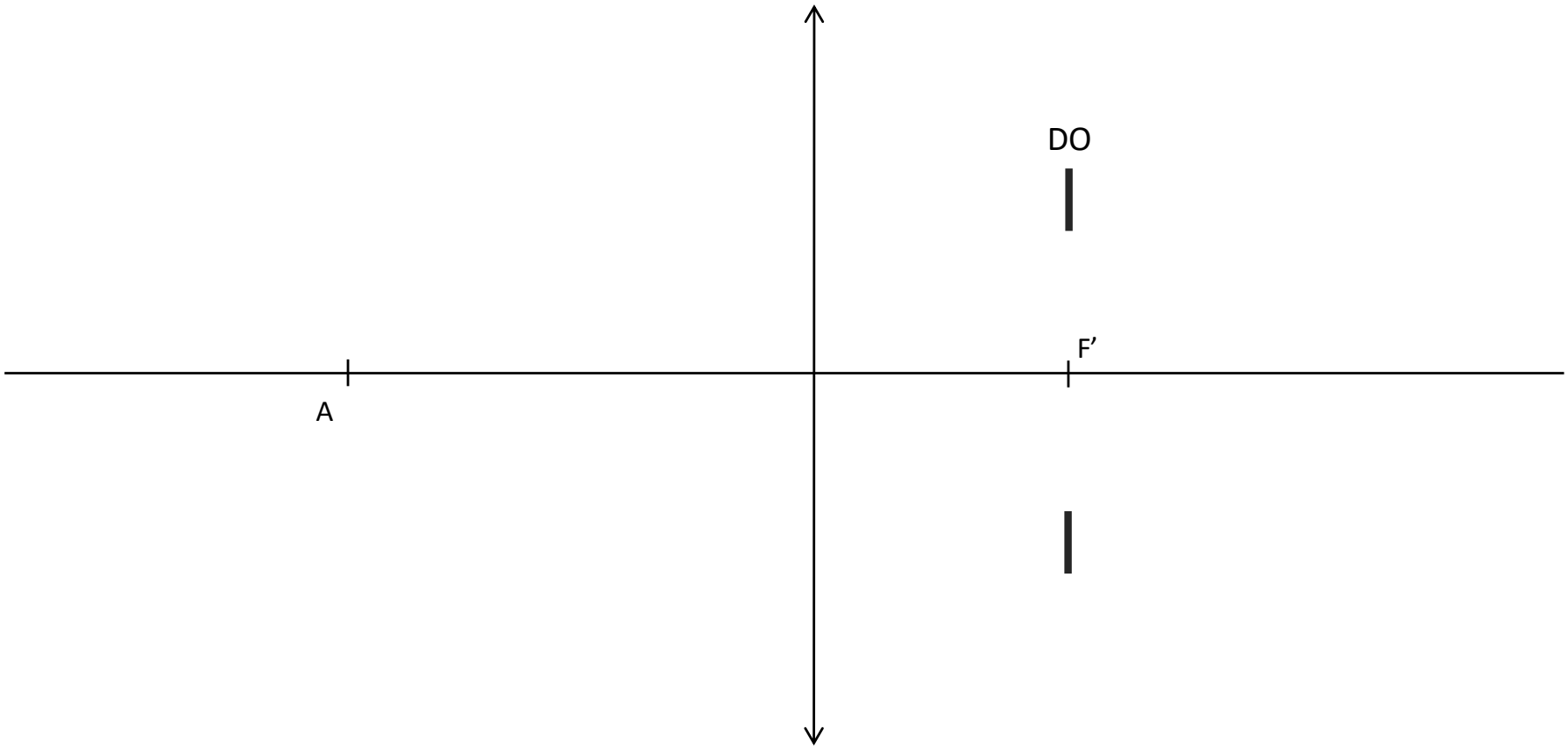
- Positionner les pupilles.

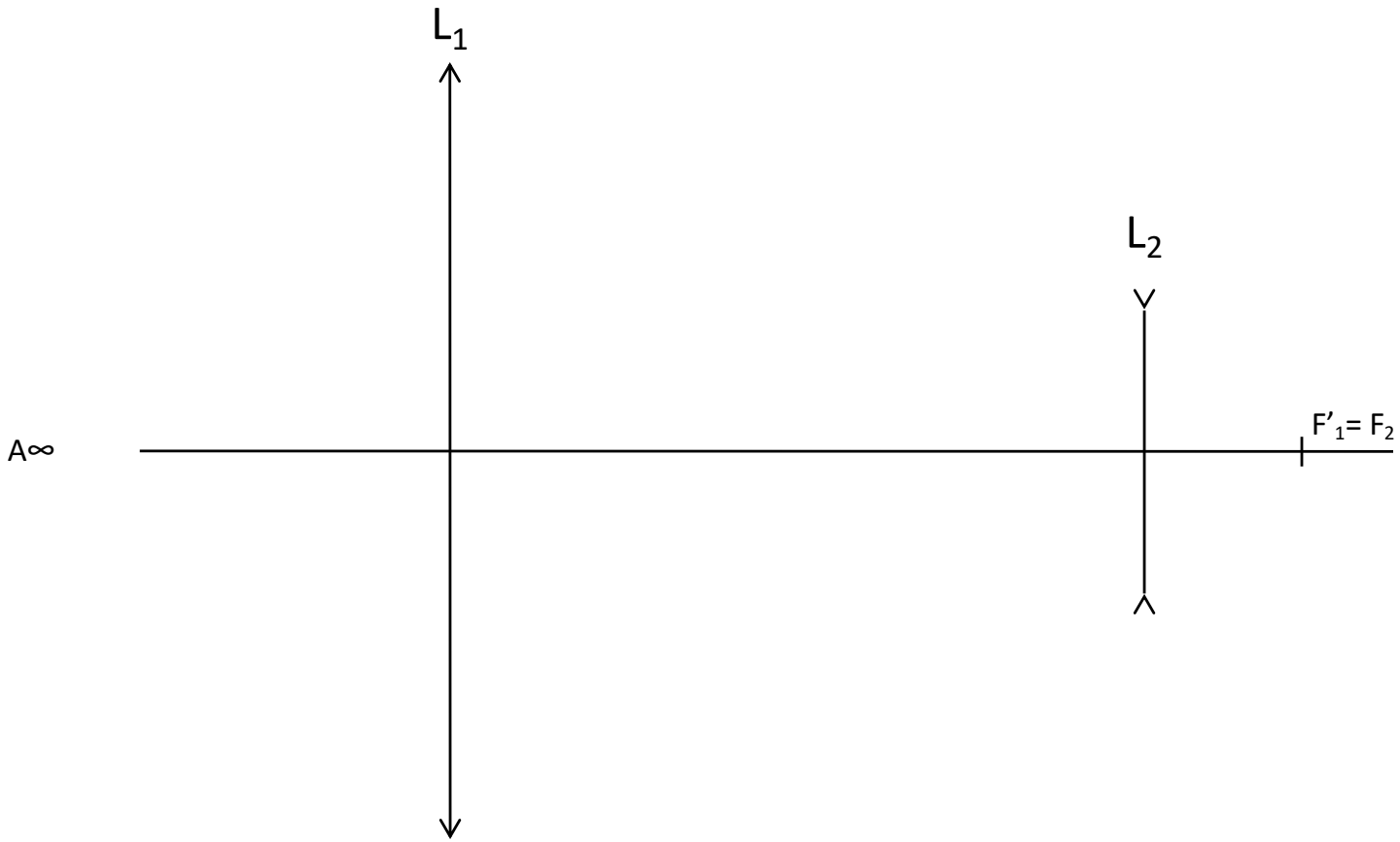
- Tracer deux rayons s'appuyant sur les deux bords de la pupille d'entrée, et traversant tout l'objectif, provenant d’un objet ponctuel (A) positionné sur l’axe.

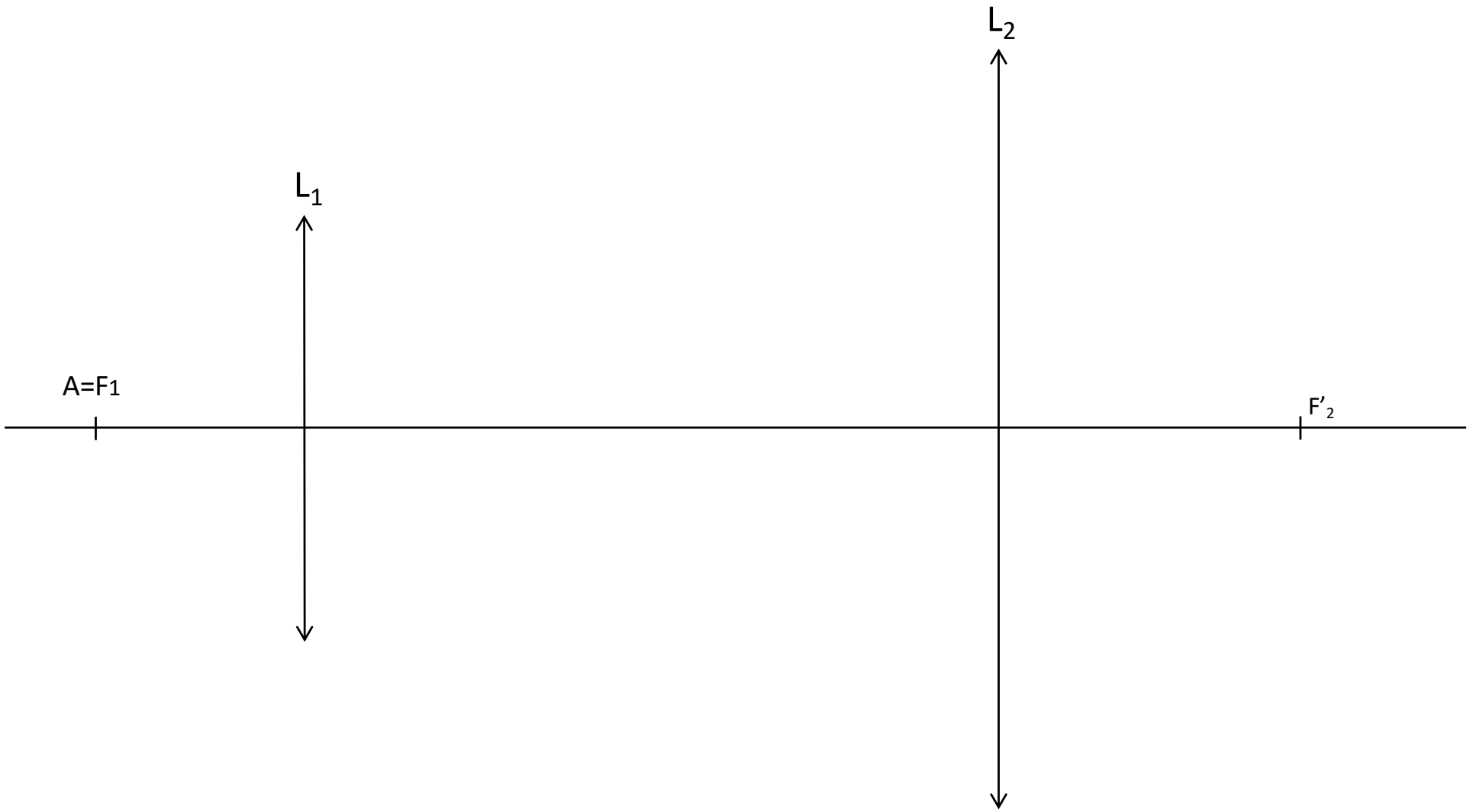
- Tracer deux rayons s'appuyant sur les deux bords de la pupille d'entrée, et traversant tout le système, provenant d’un objet ponctuel (A) positionné en bord du champ de pleine lumière.

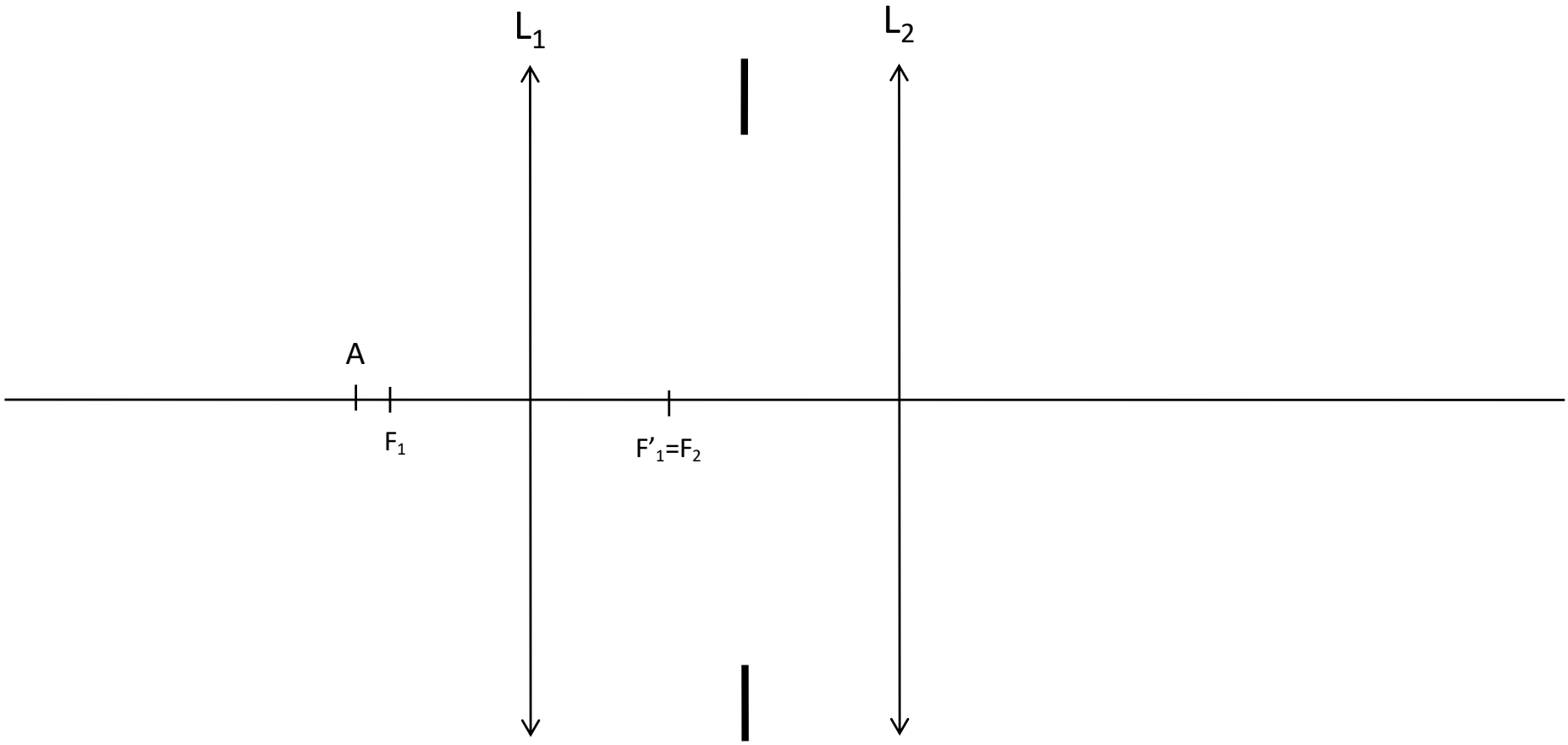
- Tracer le rayon qui délimite le champ total.


DO
A
F
F’

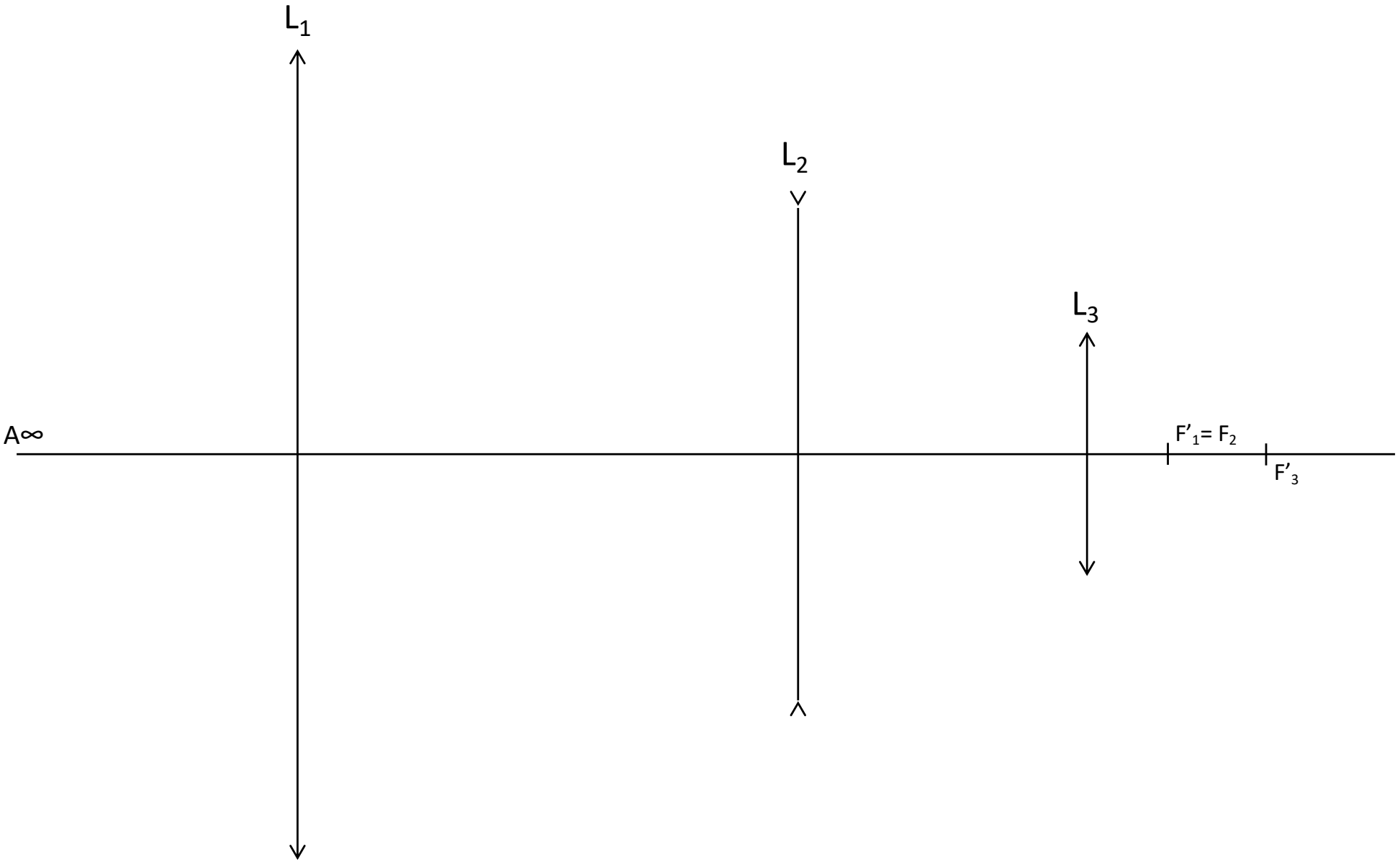

DO
F’
A


L1
L2
A∞
F'1= F2

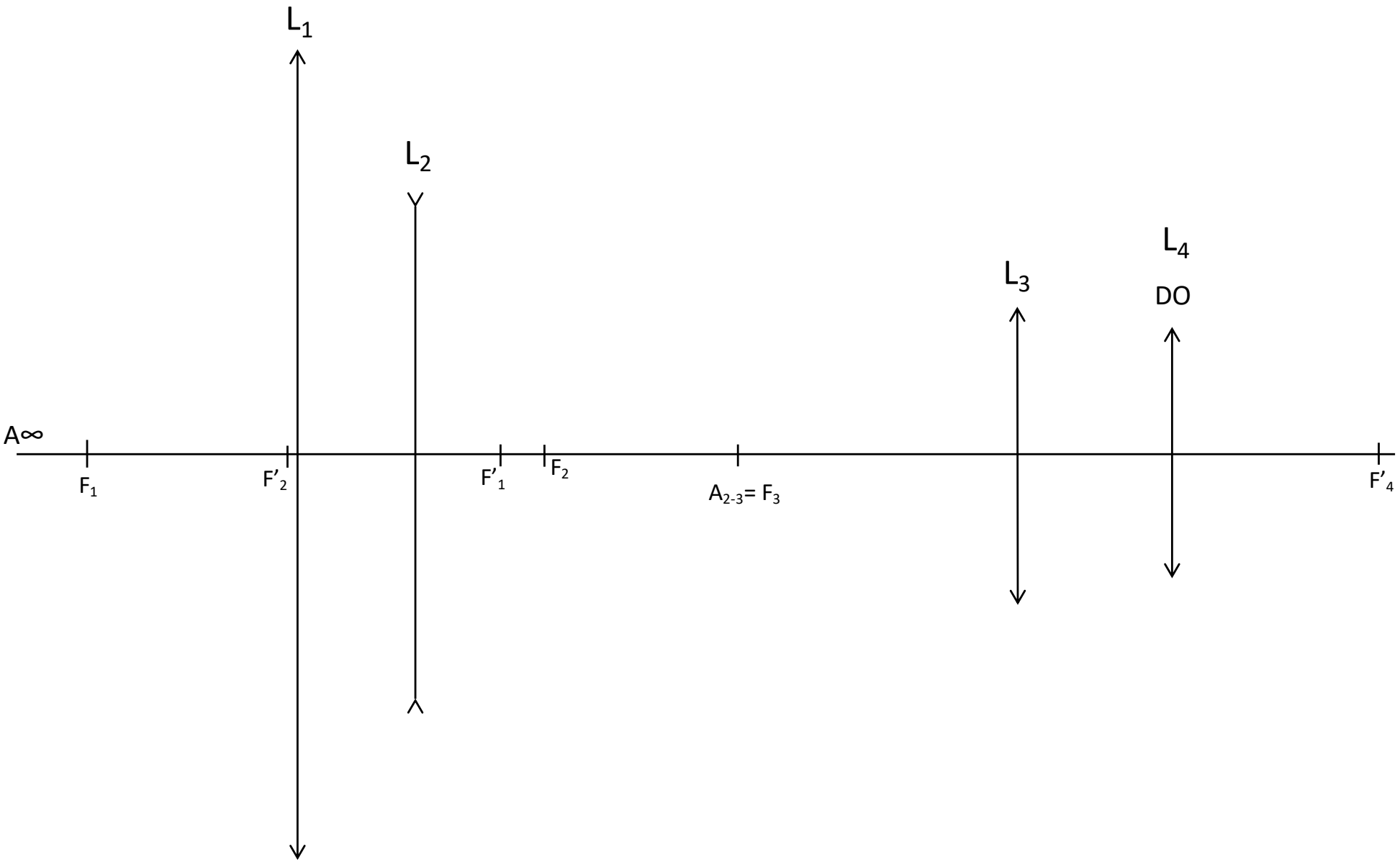

L2
L1
A=F1
F'2


L1
L2
A
F1
F'1=F2

ne pas positionner la pupille d'entrée

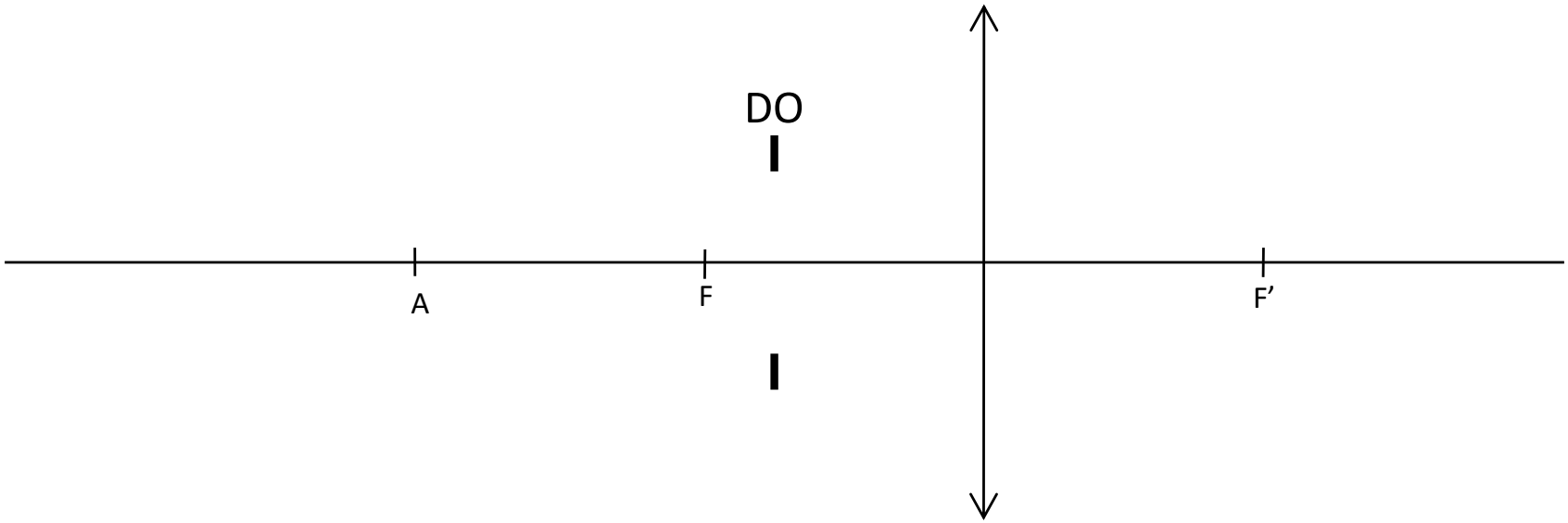


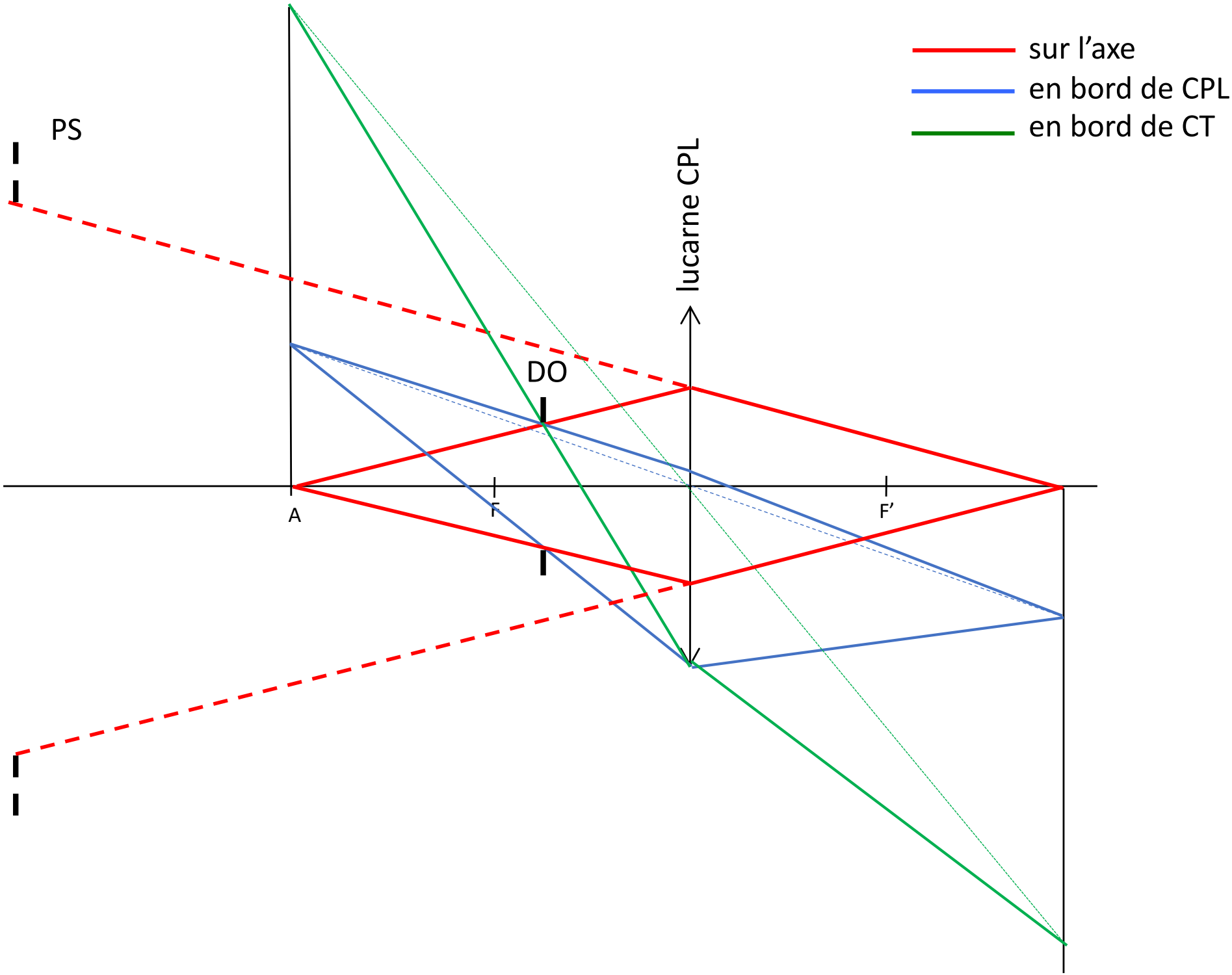
ne pas positionner la pupille d'entrée / travailler dans l'espace entre L_2 et L_3

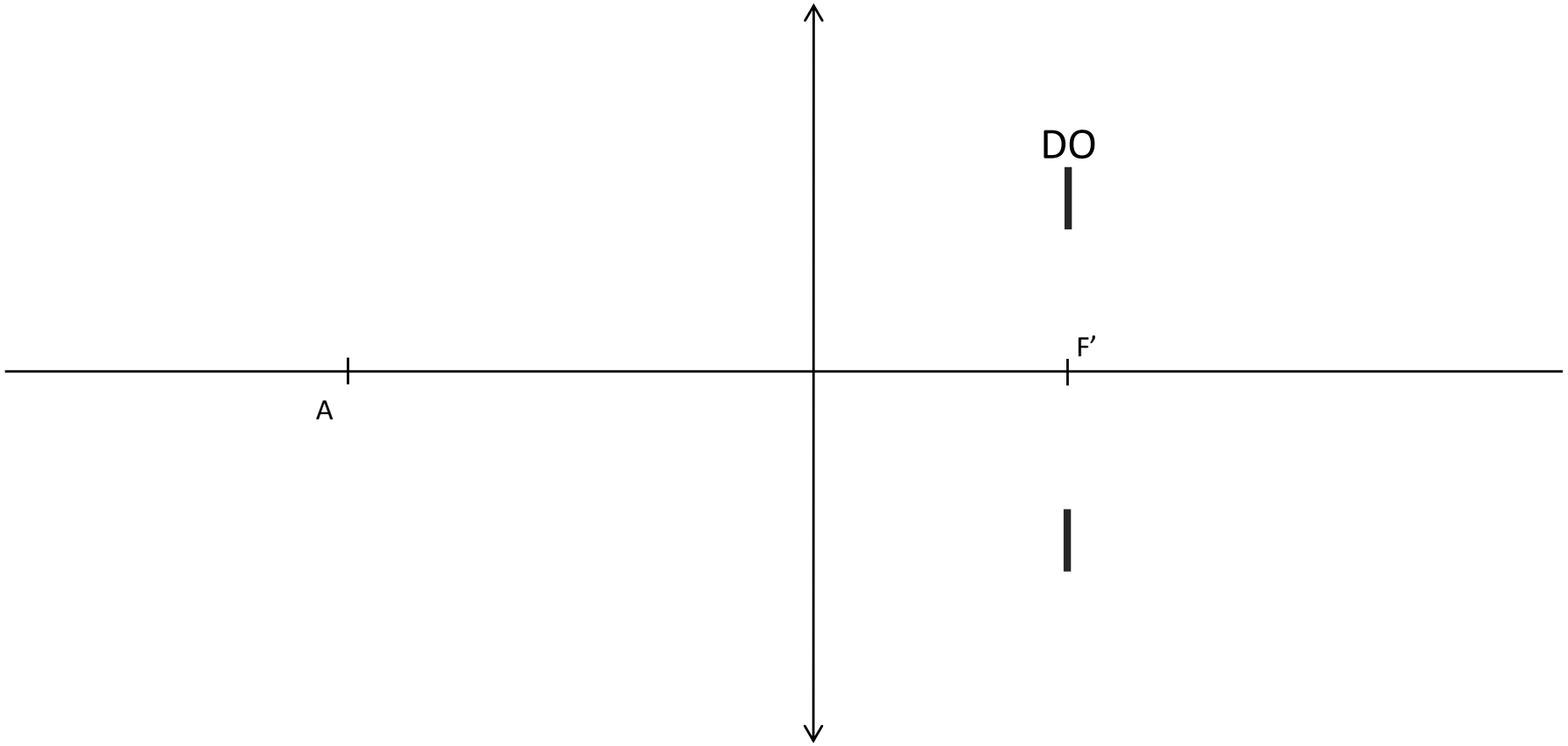


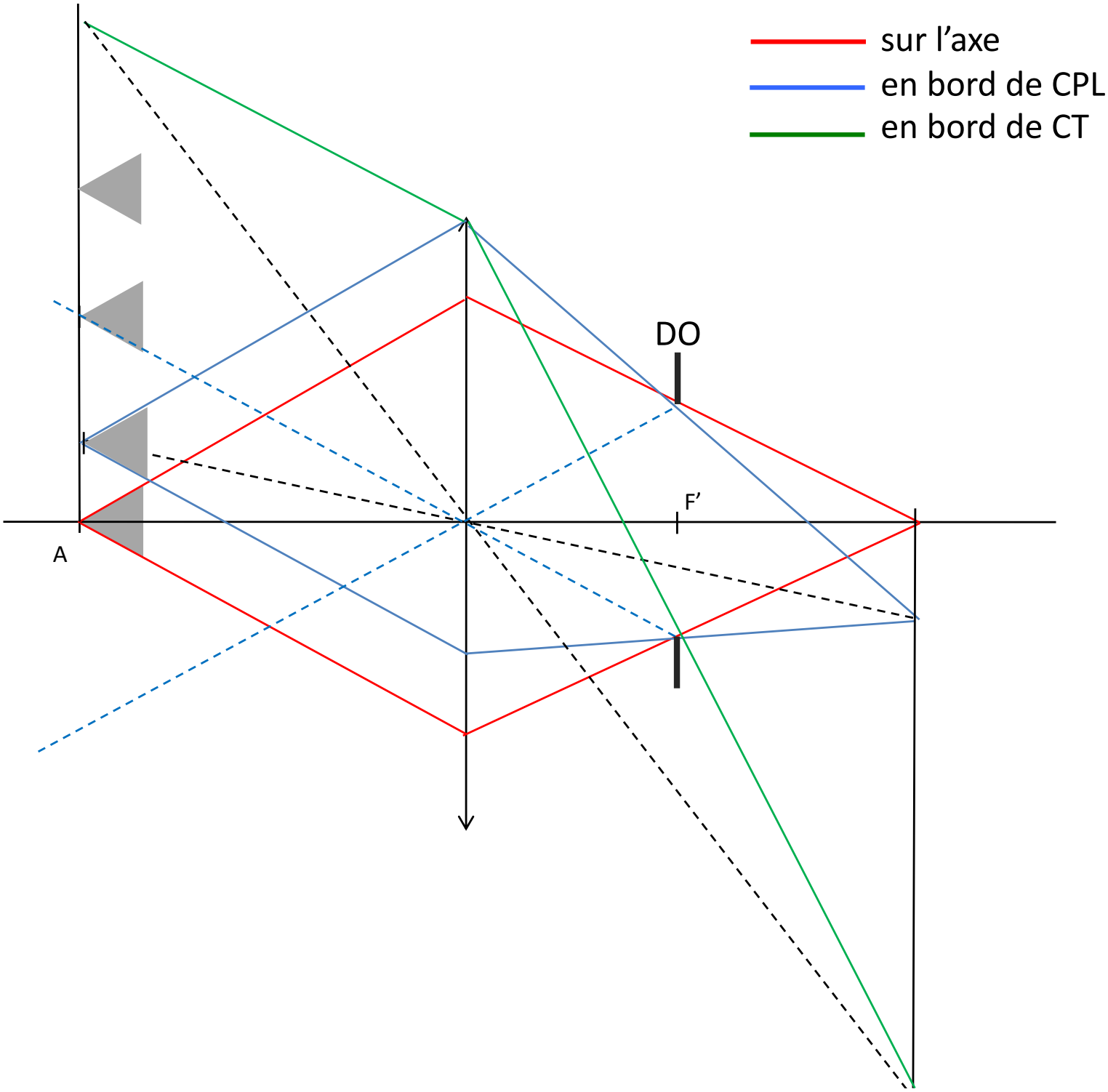
$A_{2\text{-}3}$ = image de A à travers L1 et L2, i.e. dans l'espace intermédiaire entre L2 et L3

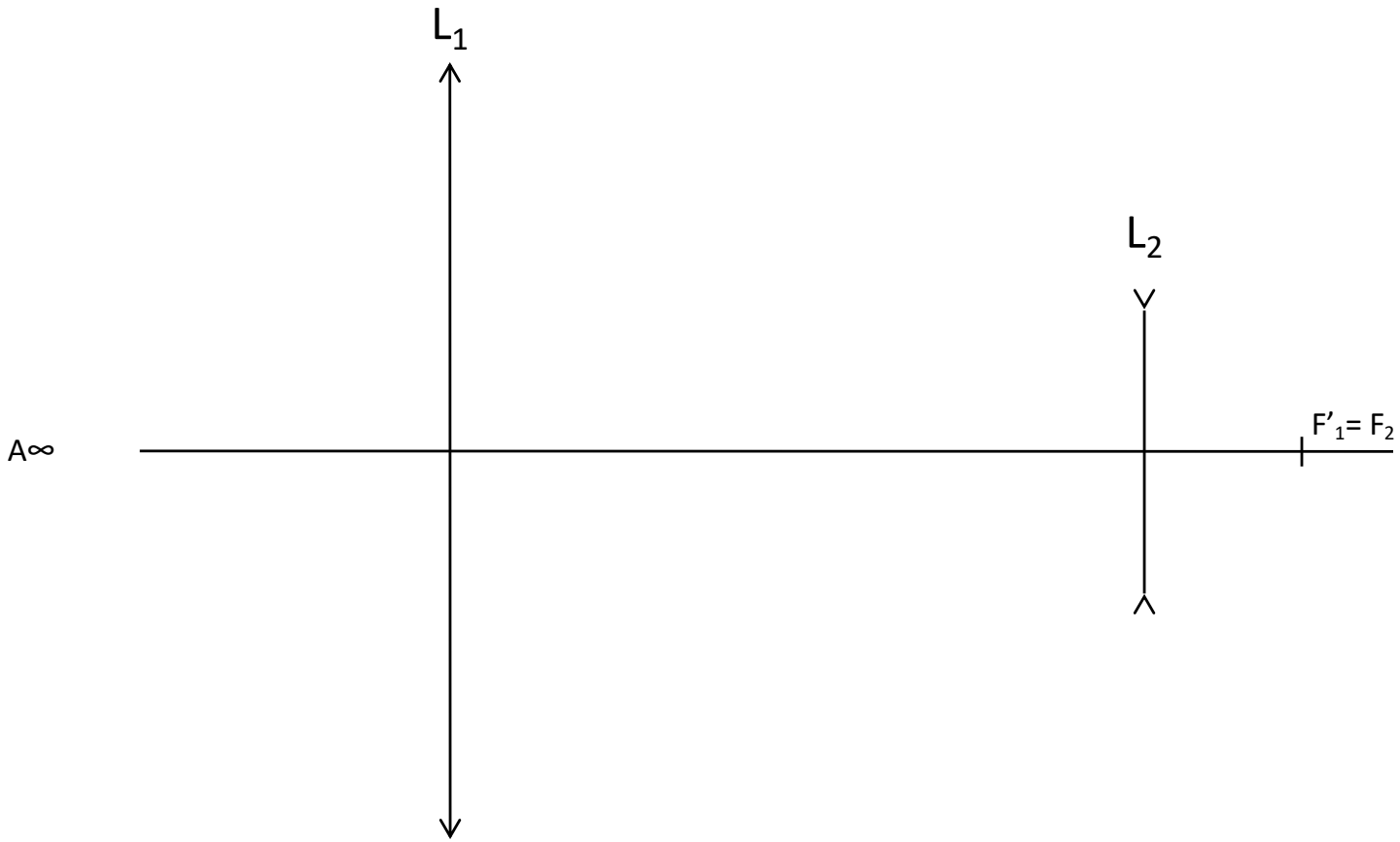
CORRECTION

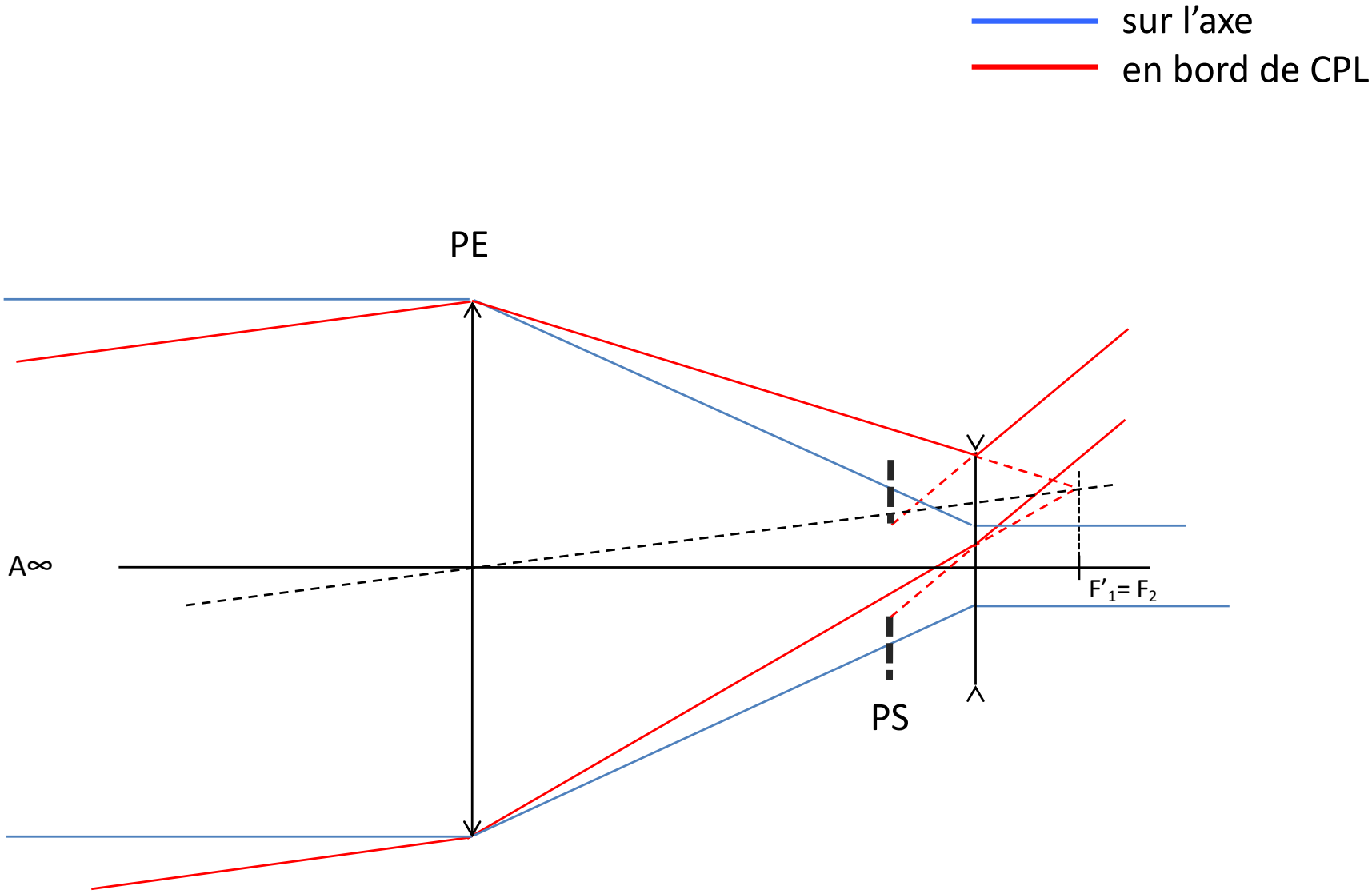

DO
A
F
F’

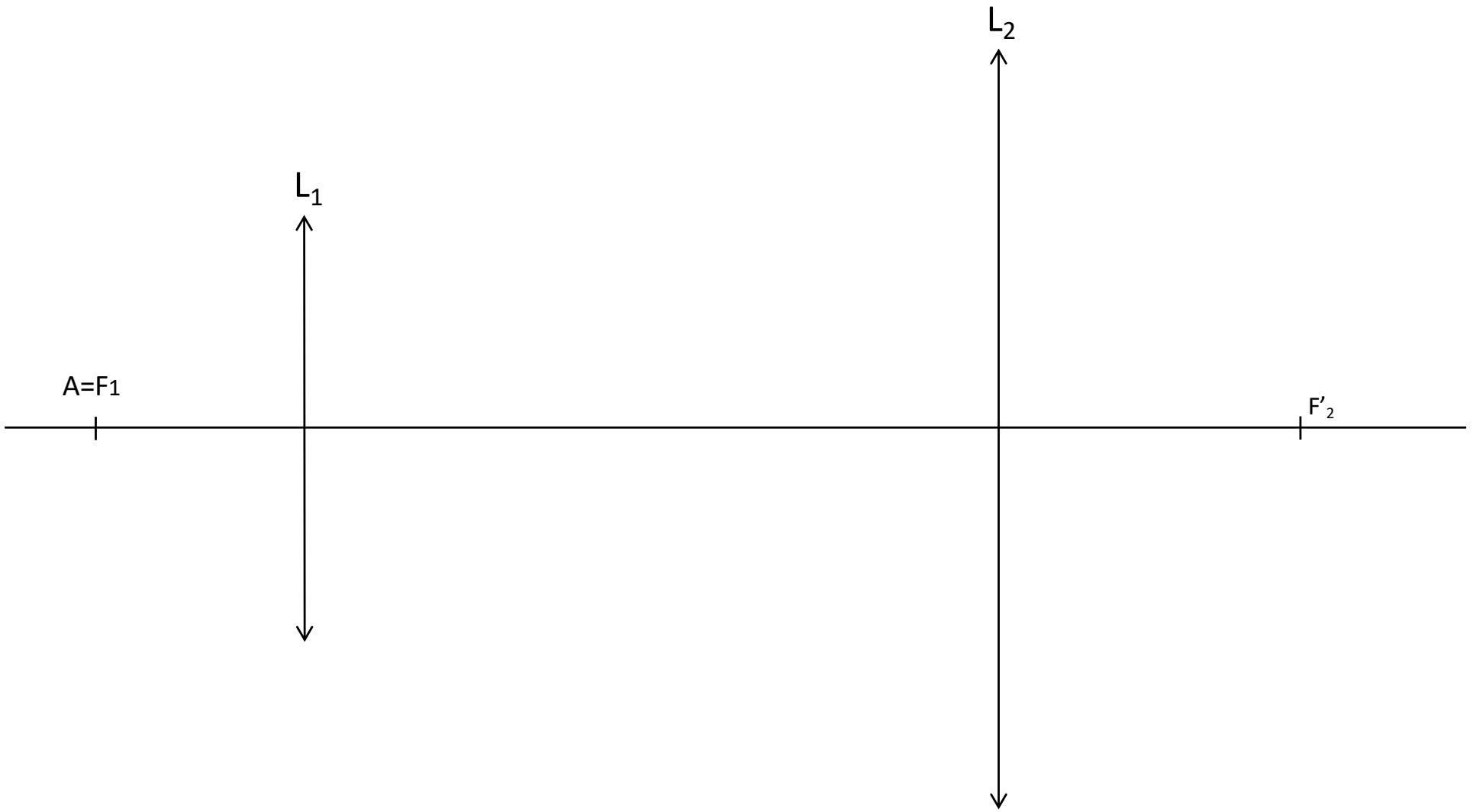

sur l'axe
en bord de CPL
en bord de CT
PS
lucarne CPL
DO
A
F
F'

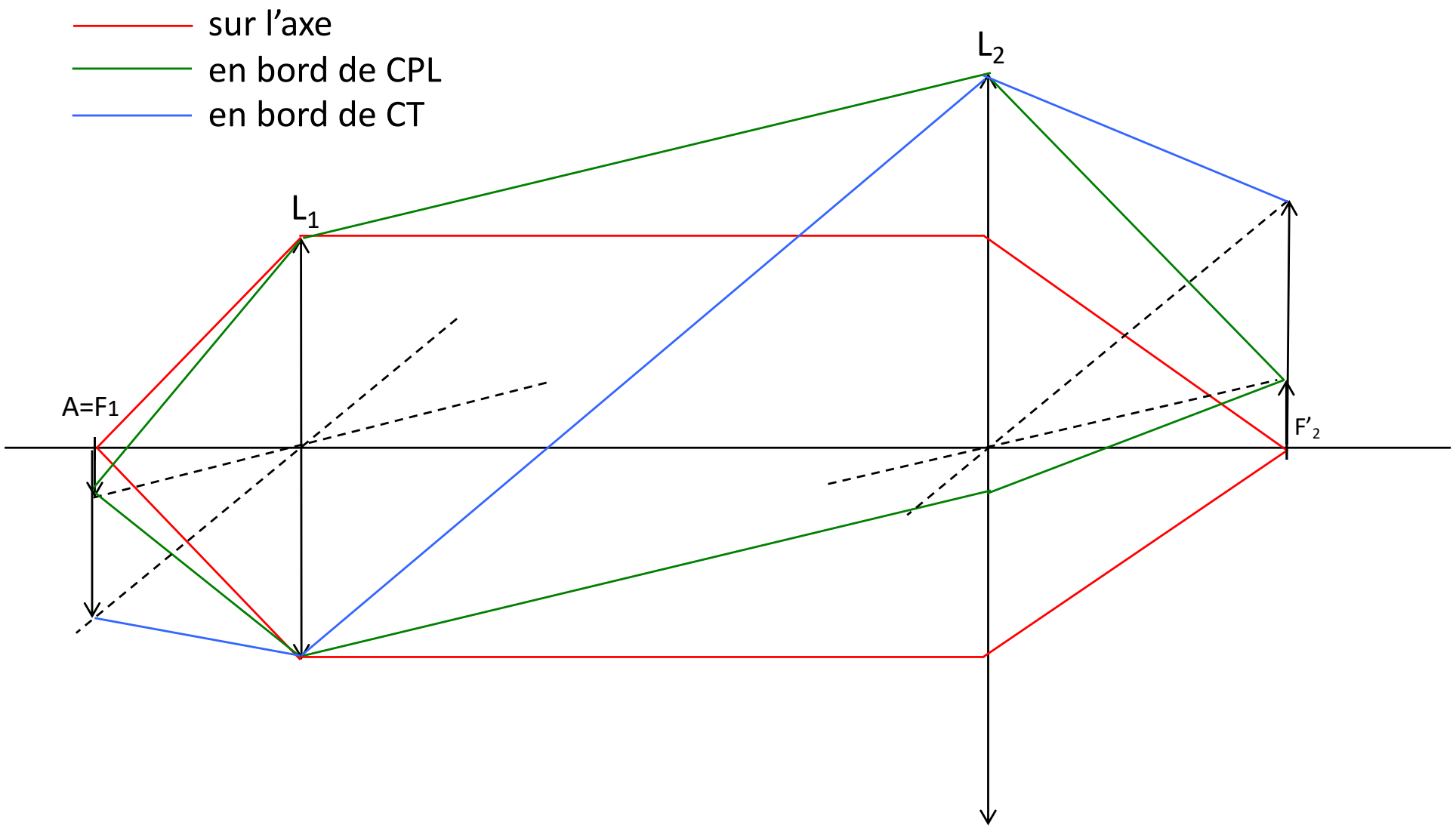

DO
F’
A

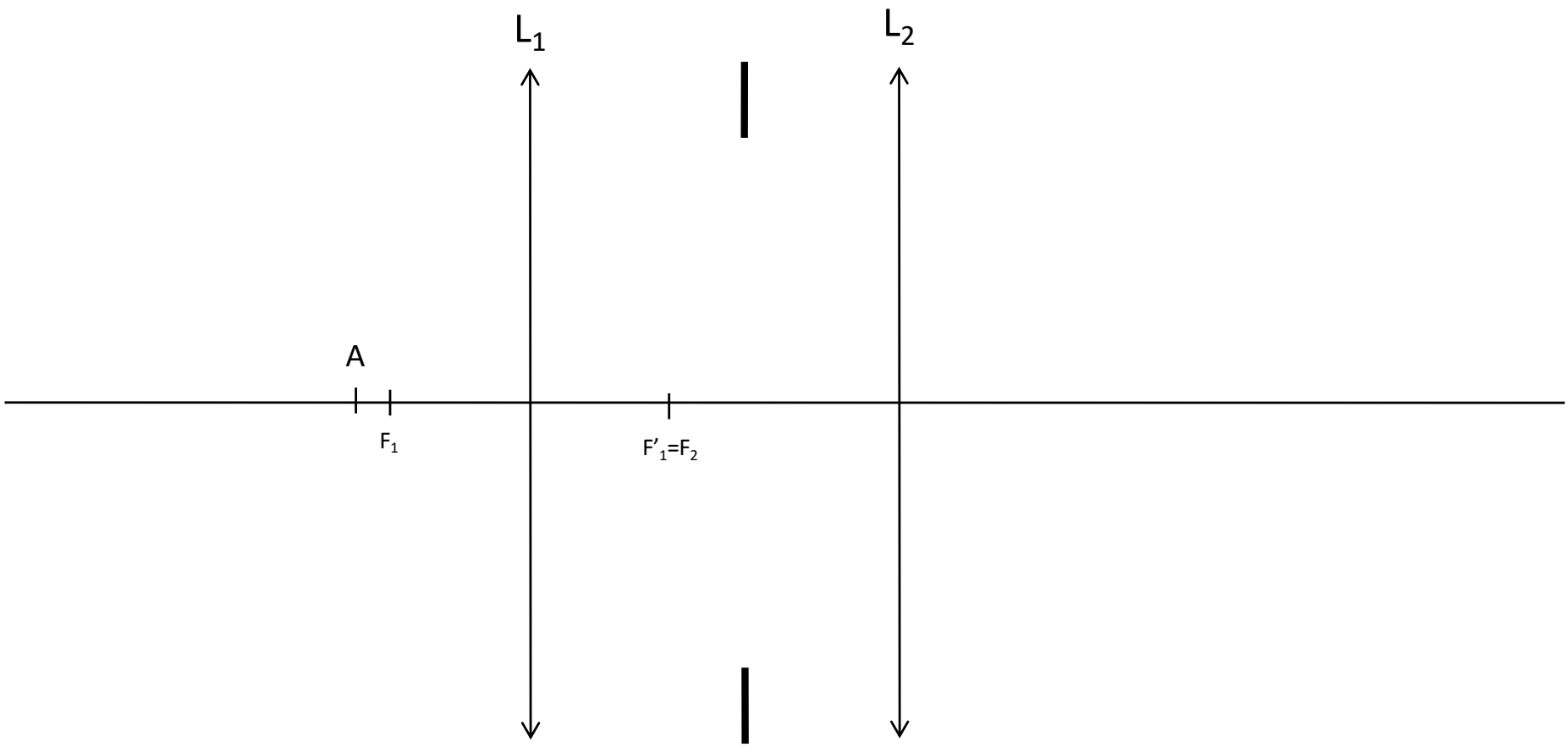

sur l’axe
en bord de CPL
en bord de CT
DO
F’
A


L1
L2
A∞
F'1= F2

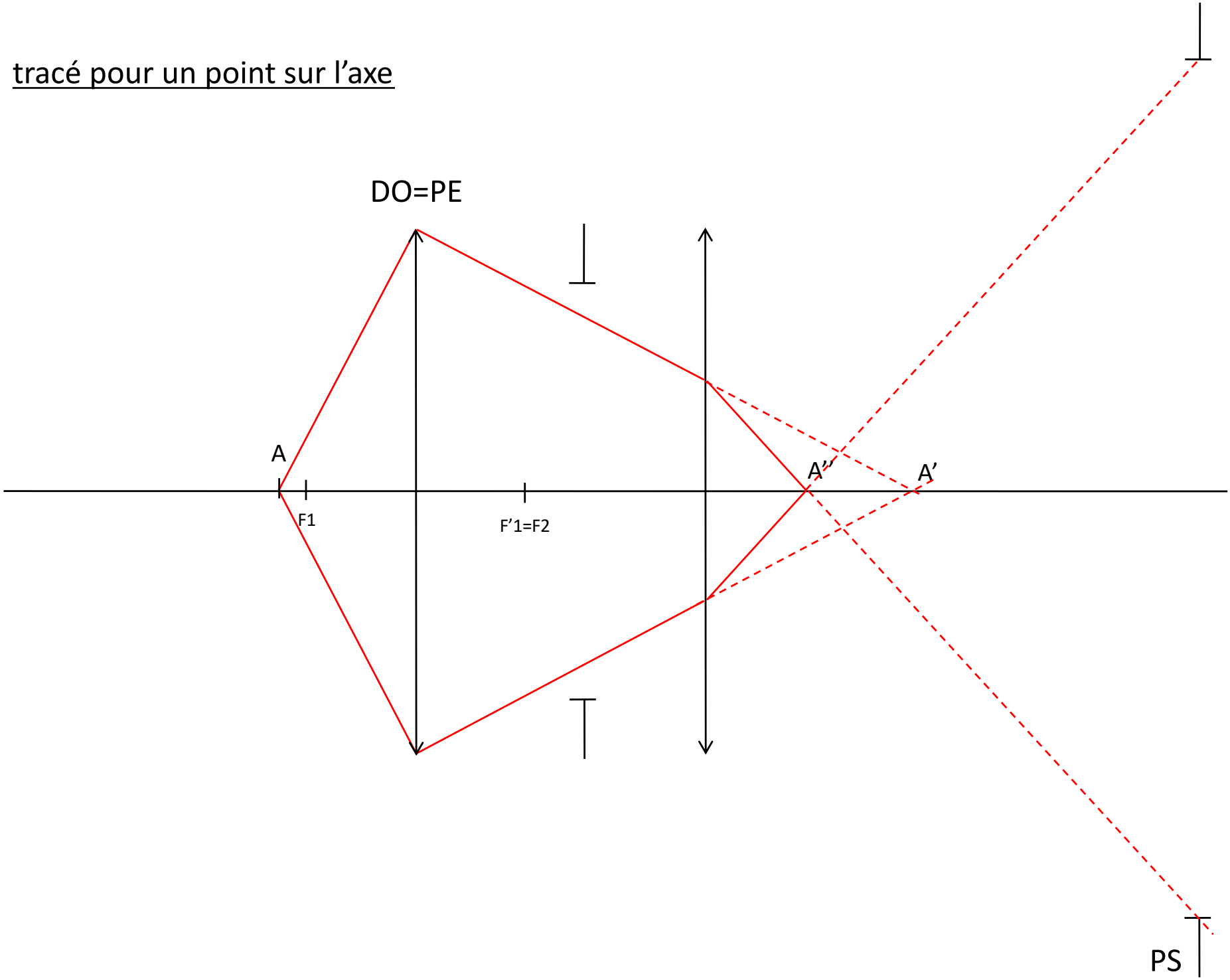

sur l'axe
en bord de CPL
PE
A∞
F'1= F2
PS


L2
L1
A=F1
F'2

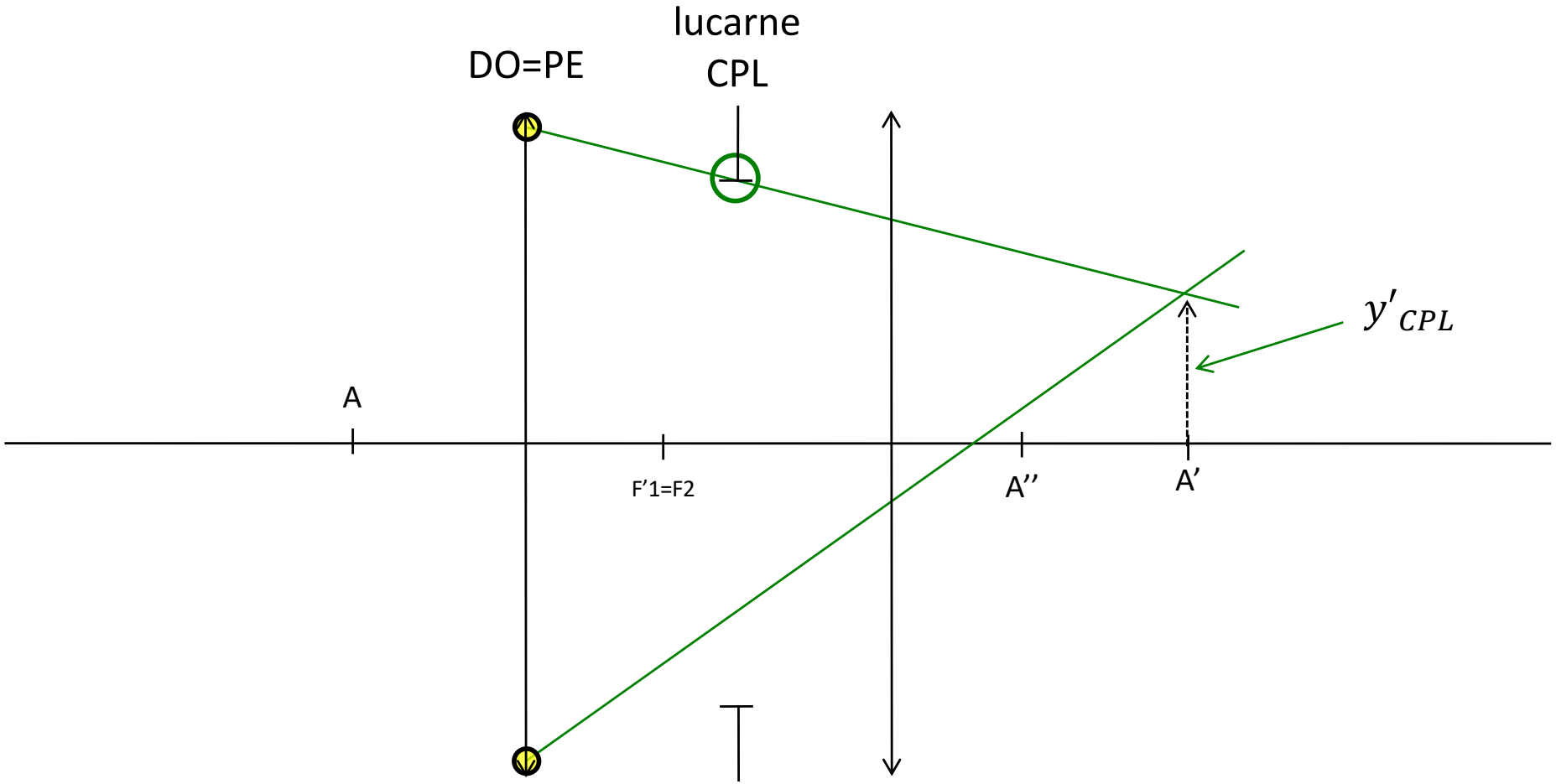

sur l'axe
en bord de CPL
en bord de CT
L2
L1
A=F1
F'2


L1
L2
A
F1
F'1=F2

tracé pour un point sur l'axe

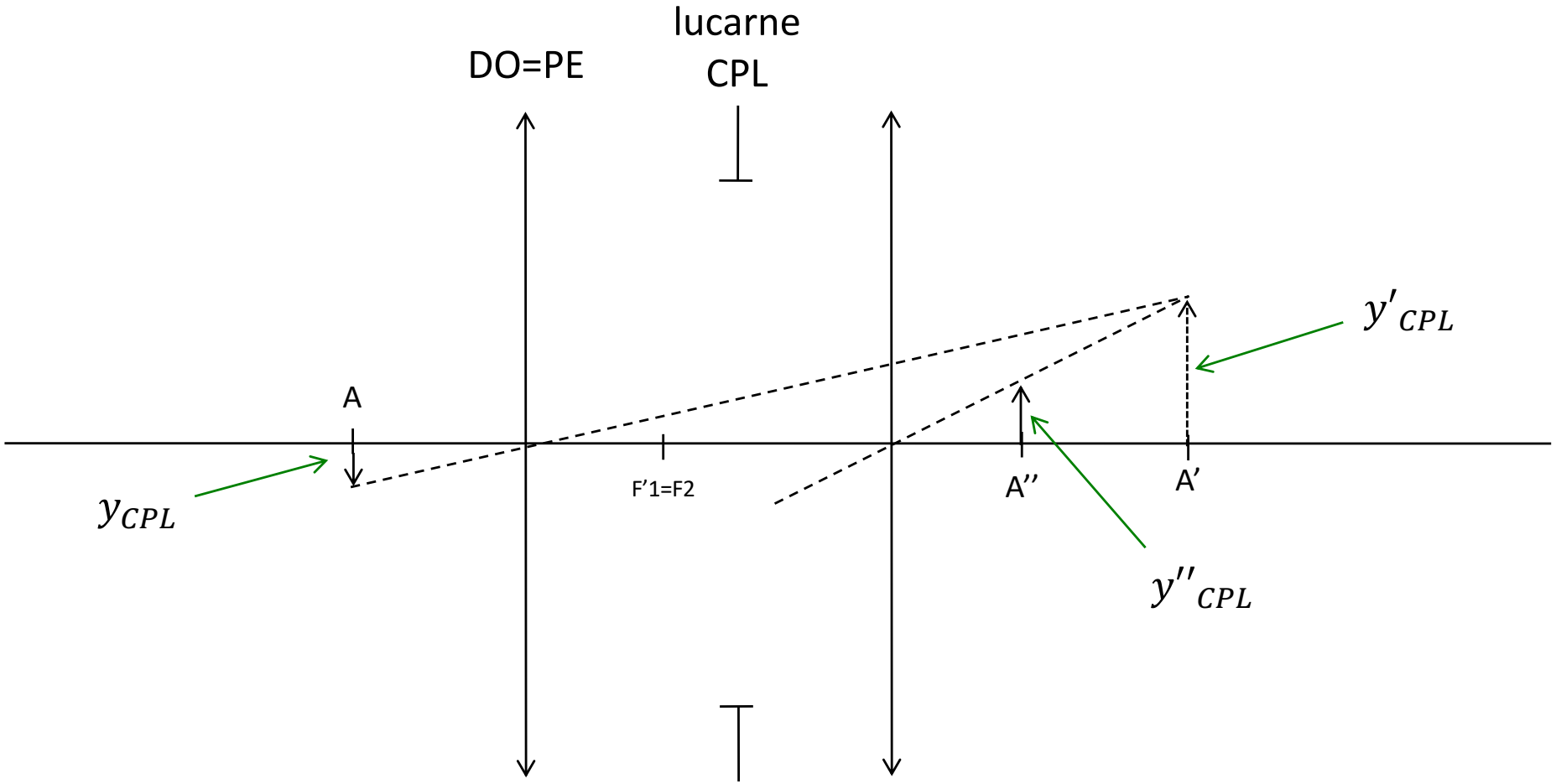


détermination du bord du CPL dans l'espace intermédiaire



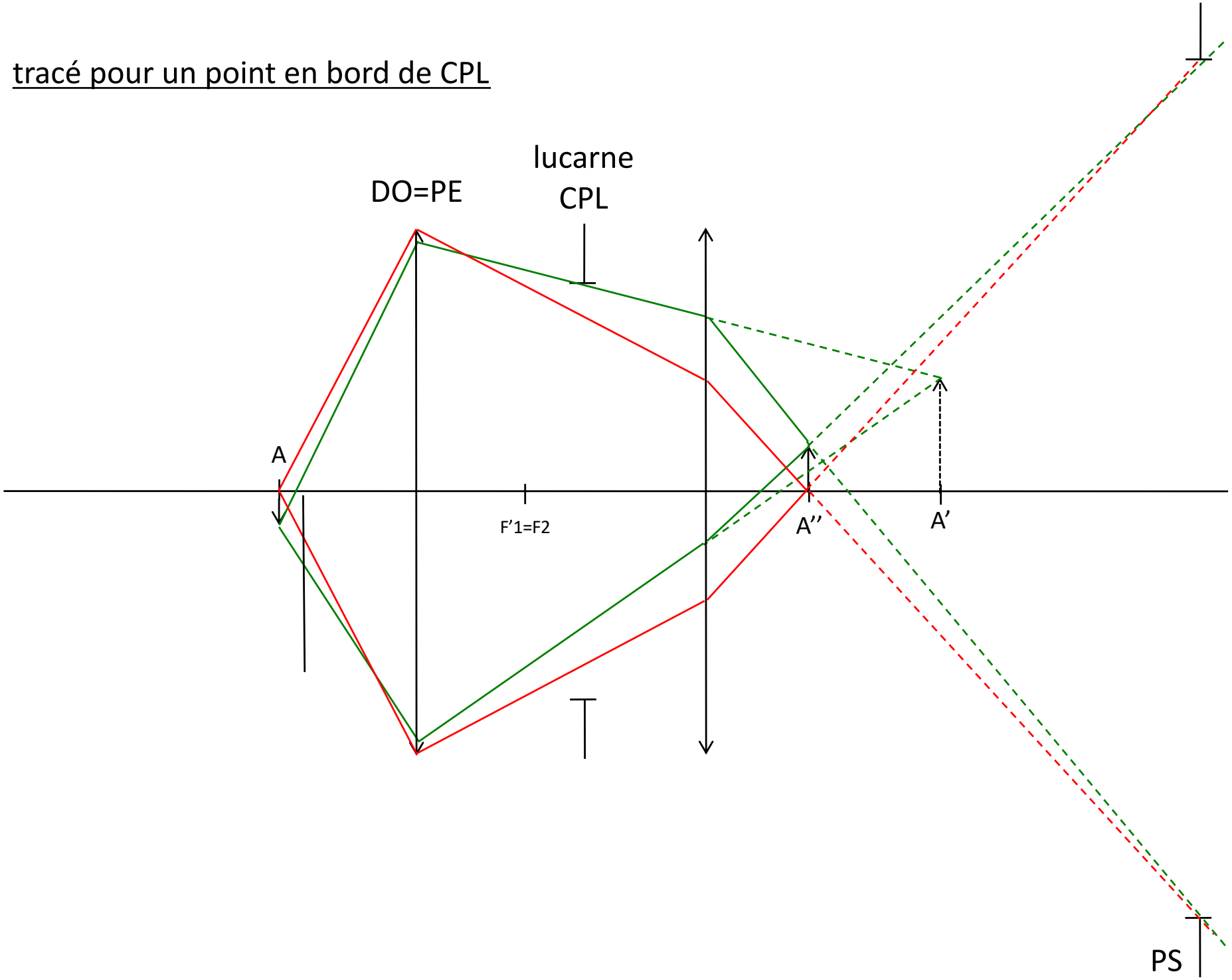
PS

détermination du bord du CPL dans l'espace entrée et sortie

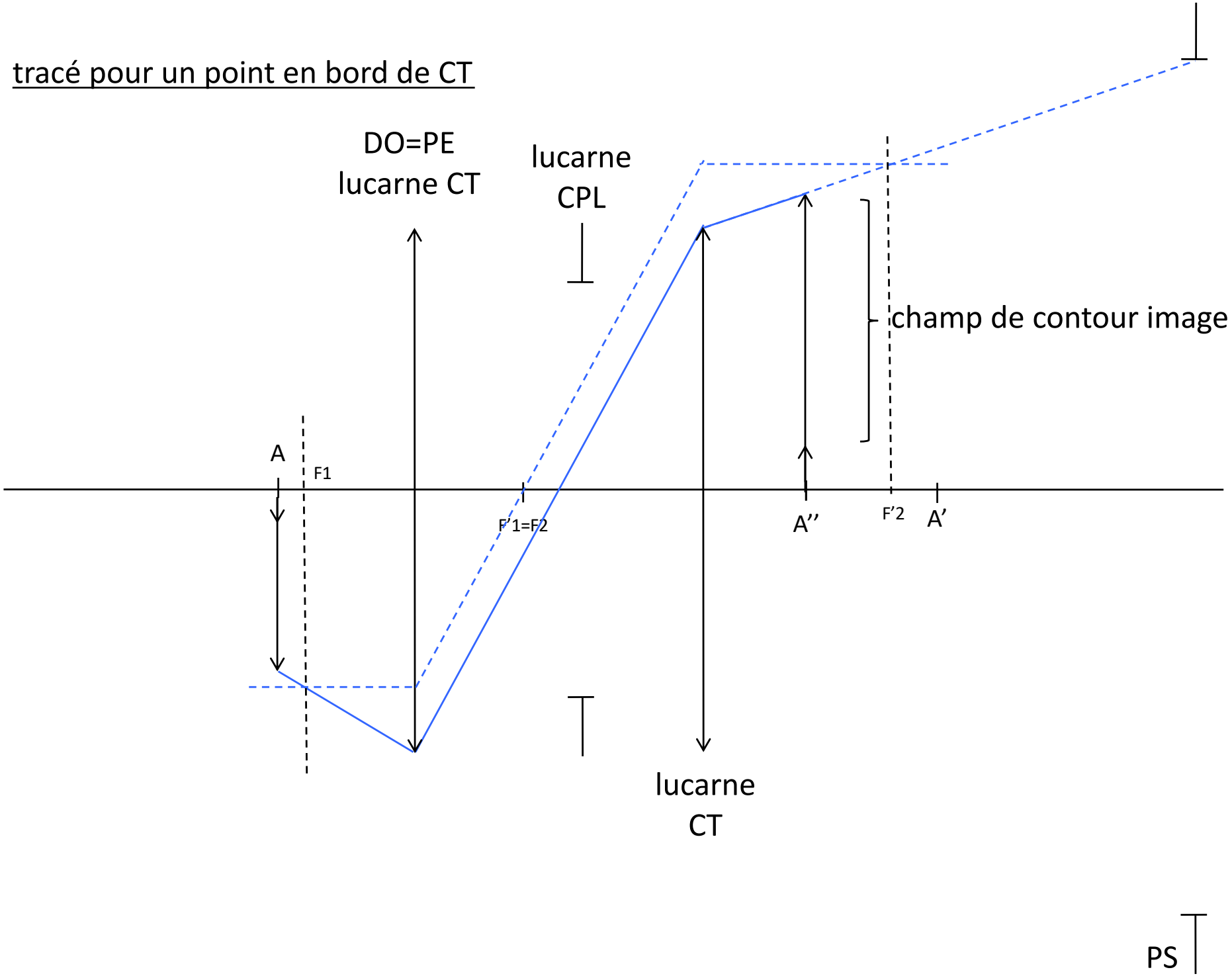


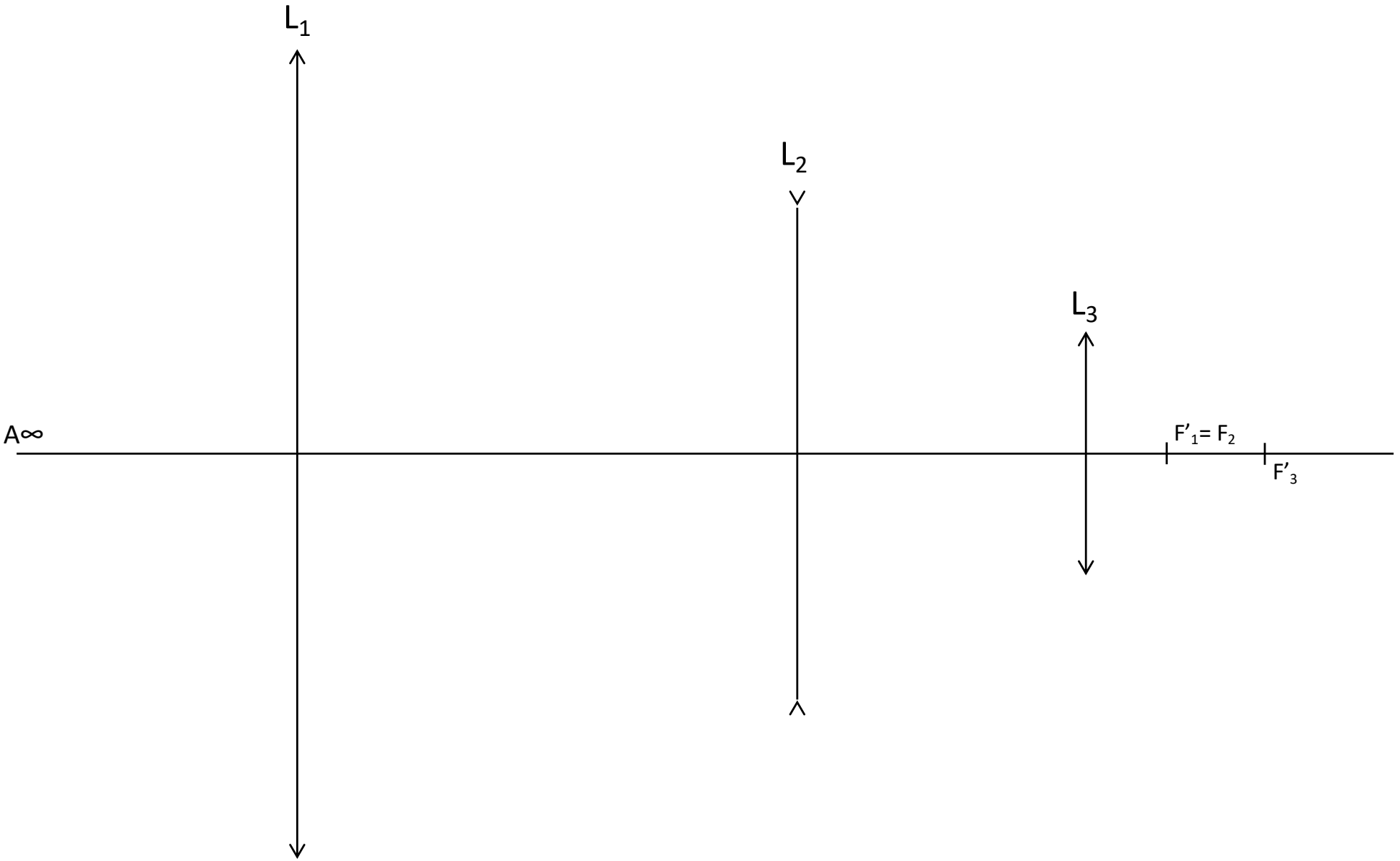
PS

tracé pour un point en bord de CPL



tracé pour un point en bord de CT

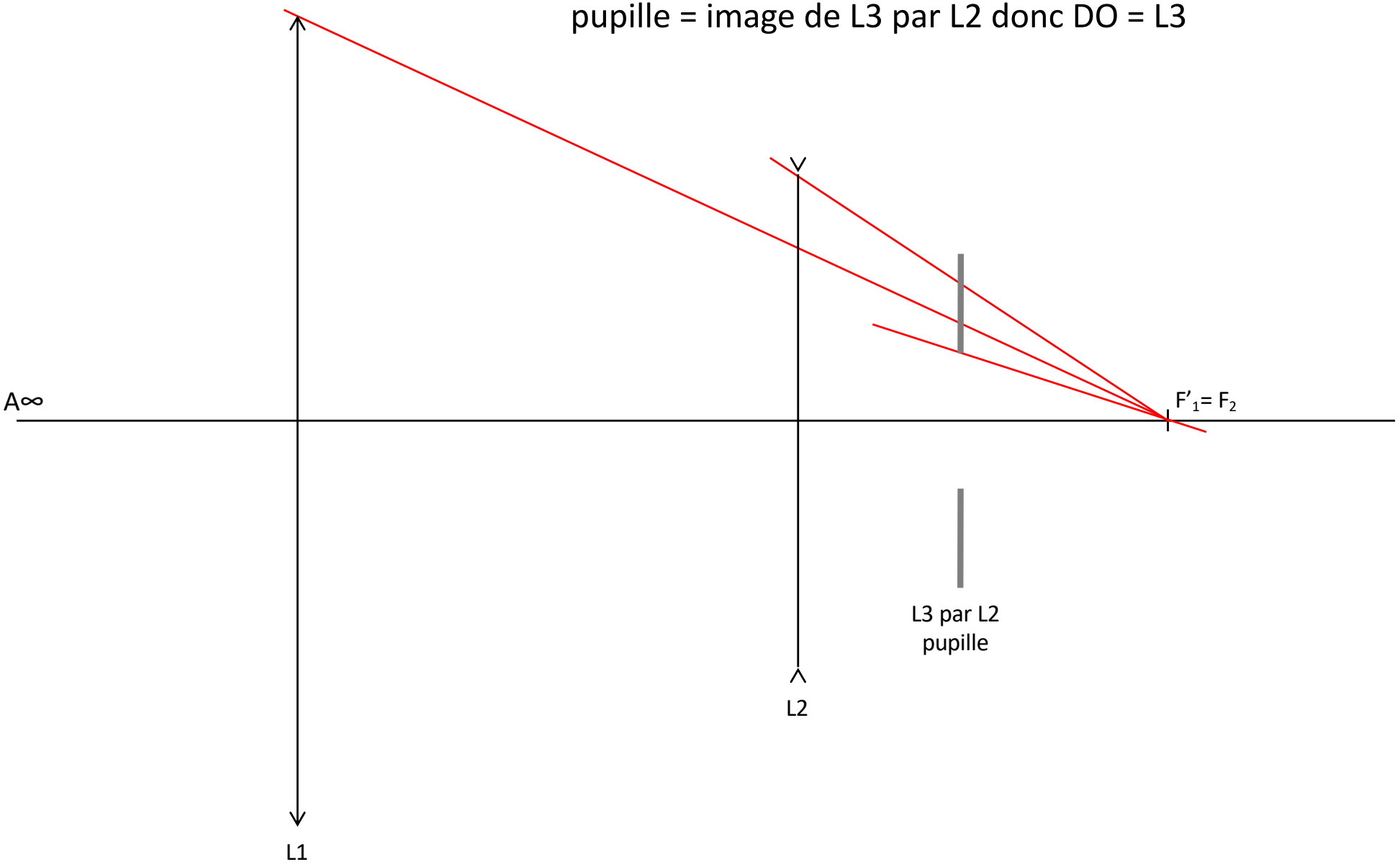



L1
L2
L3
A∞
F'1= F2
F'3

<u>espace intermédiaire L1-L2</u>

on regarde de F'_1 l'angle de vue de chaque élément

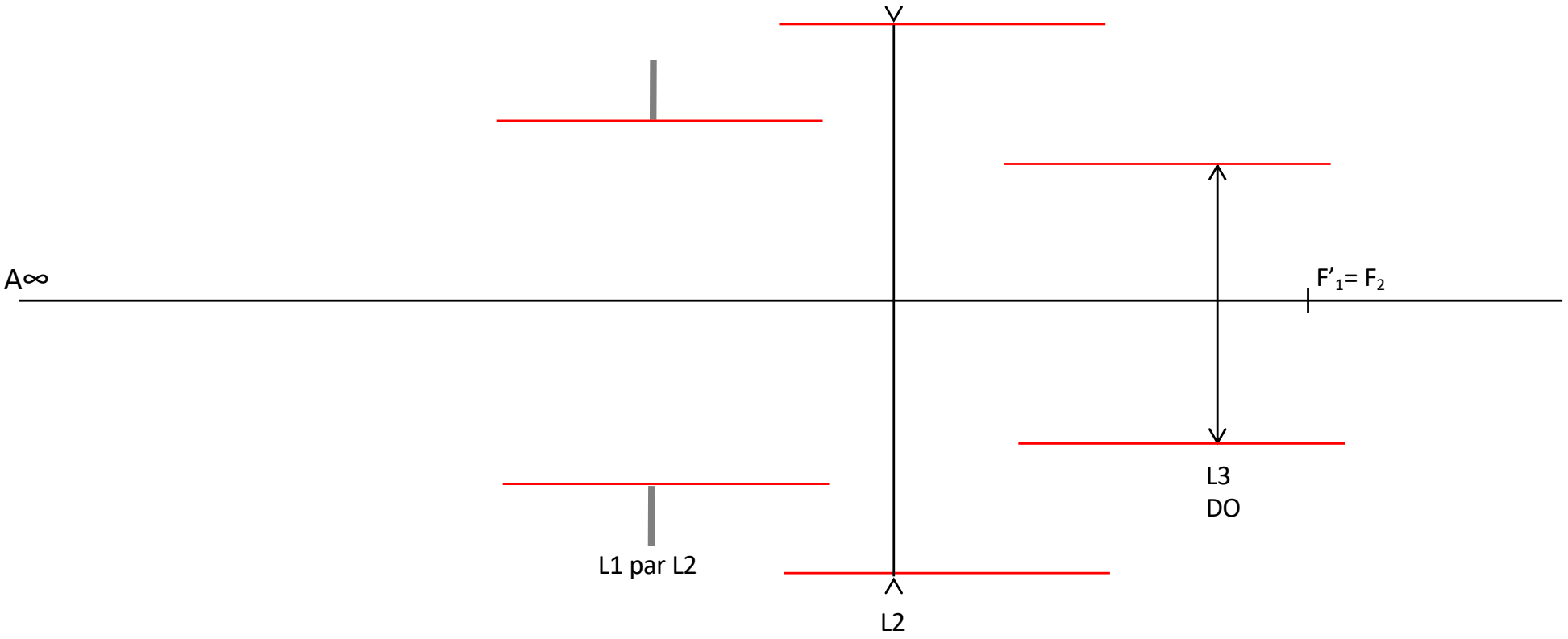
pupille = image de L3 par L2 donc DO = L3



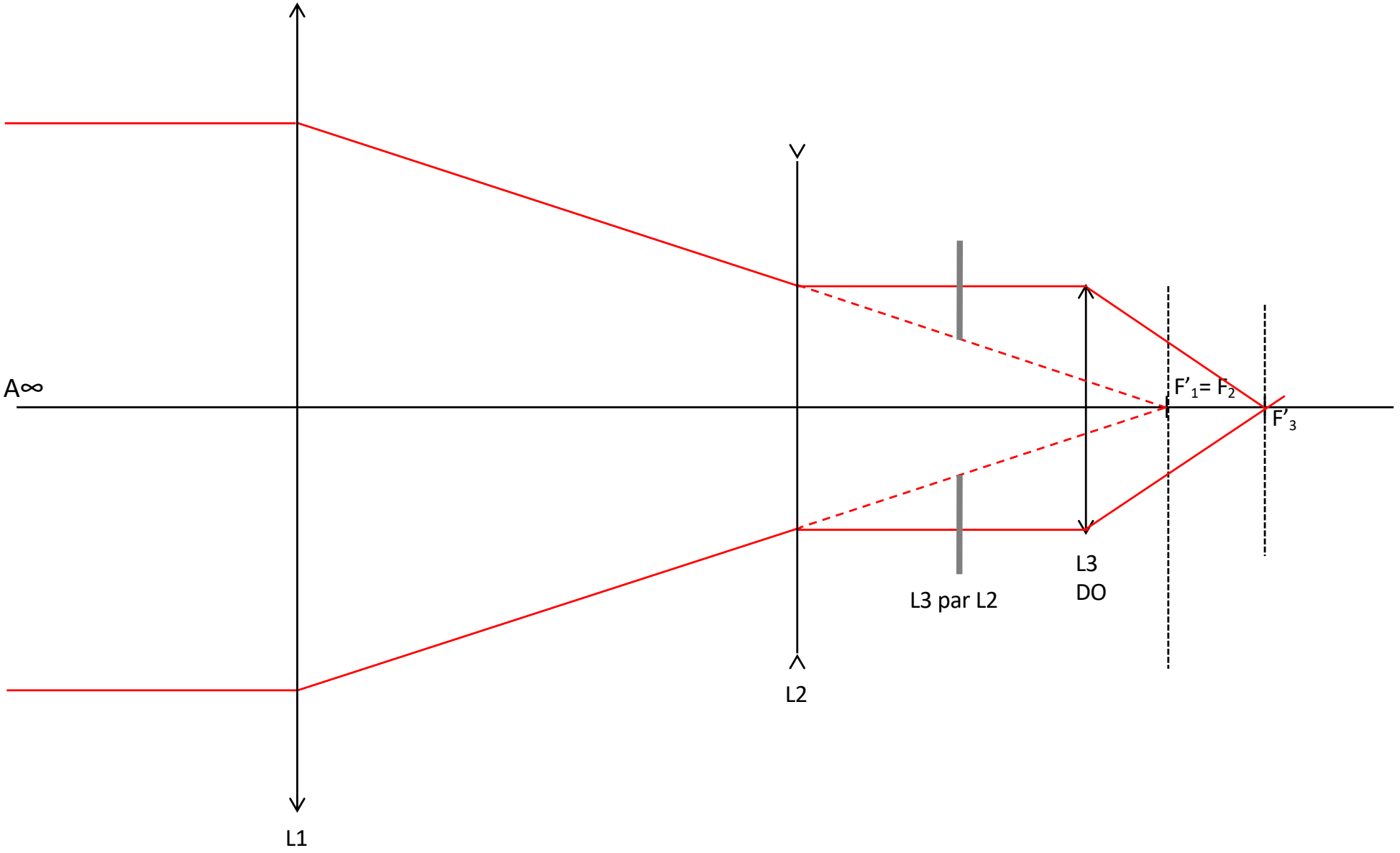
<u>espace intermédiaire L2-L3</u>

image à l'infini donc on compare les diamètres des éléments

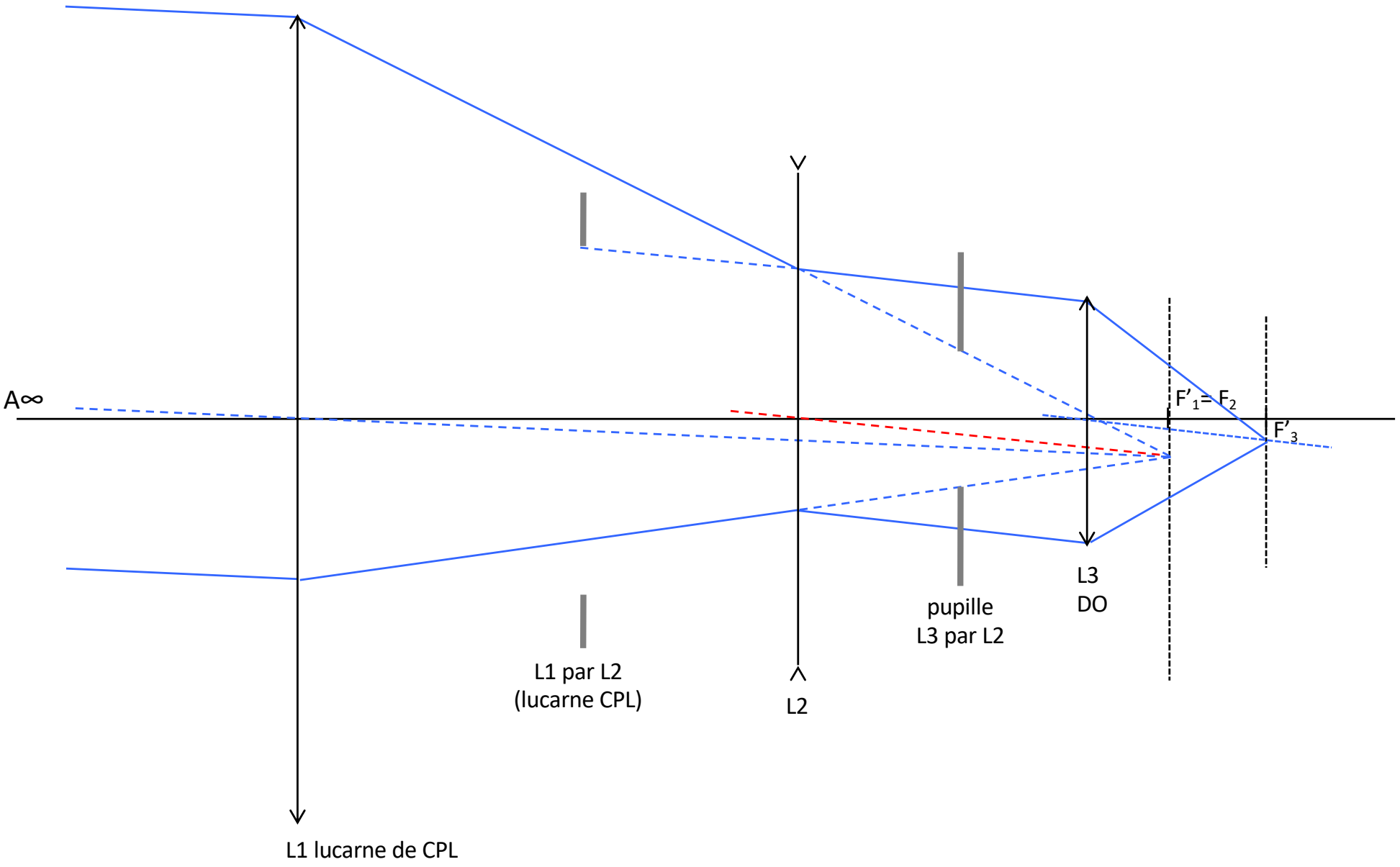
pupille = L3 donc DO = L3



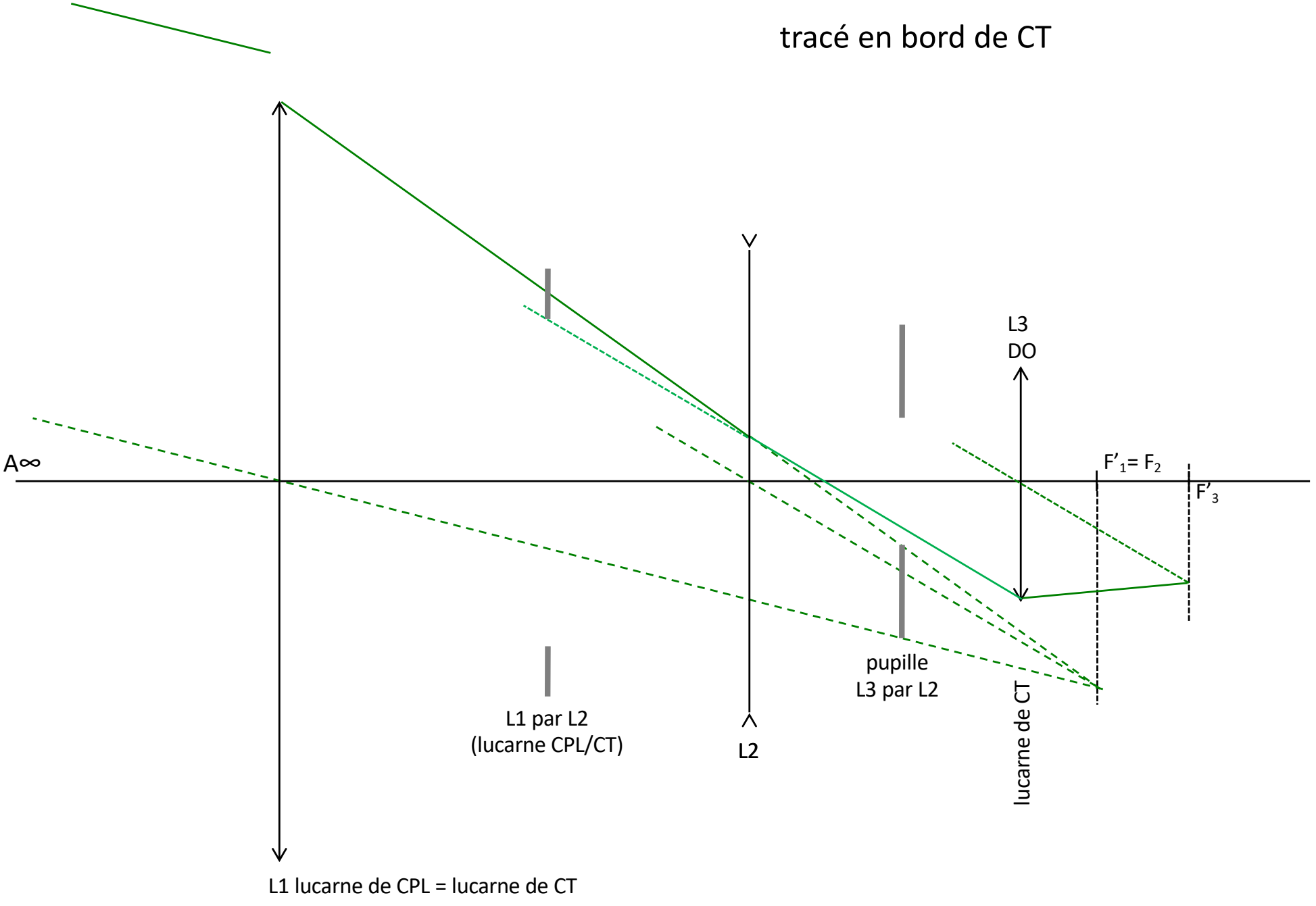
tracé sur l'axe

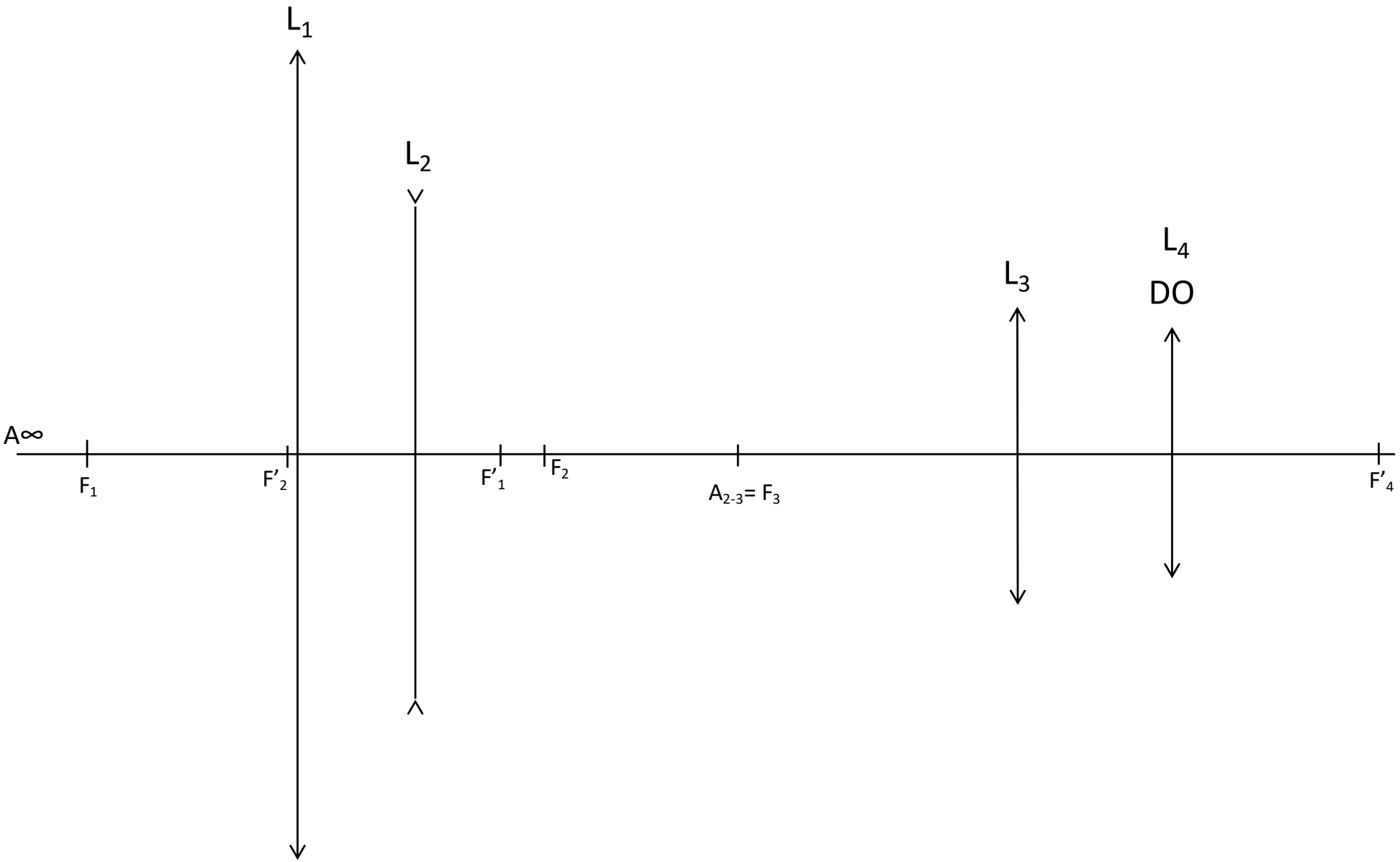


tracé en bord de CPL



tracé en bord de CT




L1
L2
L3
L4
DO
A∞
F1
F'2
F'1
F2
A2-3= F3
F'4

dans l'espace de $A_{2\text{-}3}$

On garde à l'esprit que :
La pupille est le pivot
Les 2 rayons se croisent dans le plan image

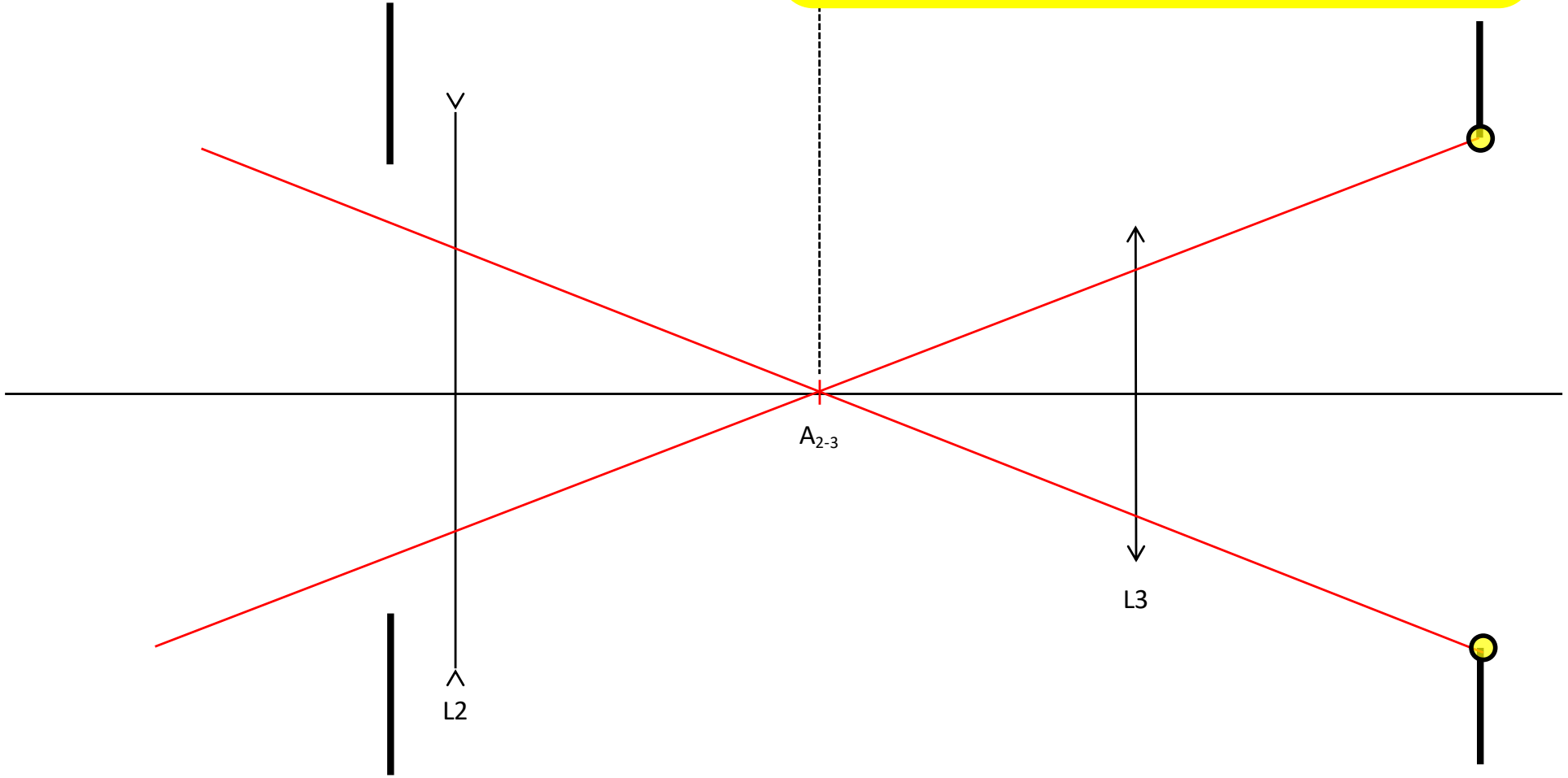
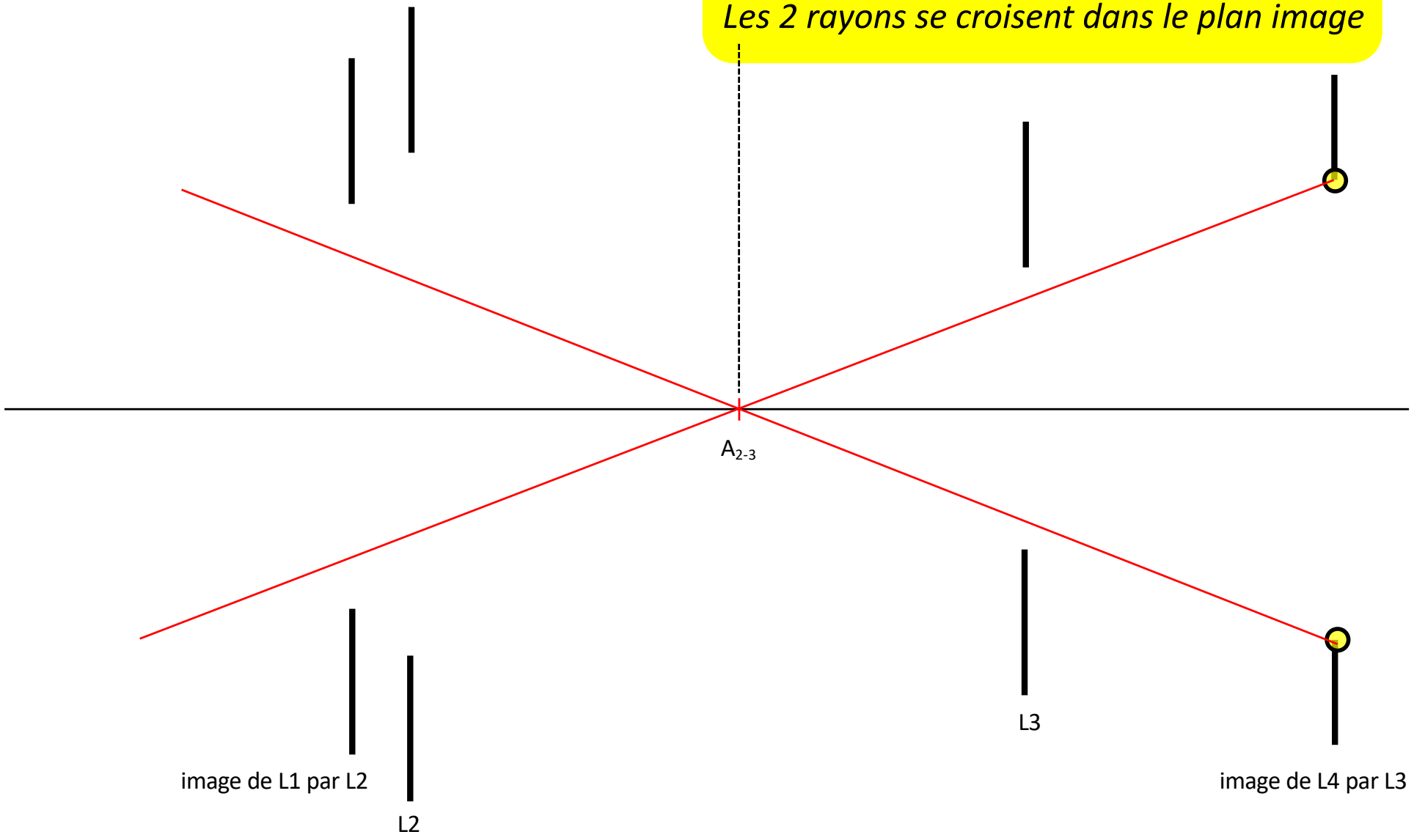


image de L1 par L2

image de L4 par L3

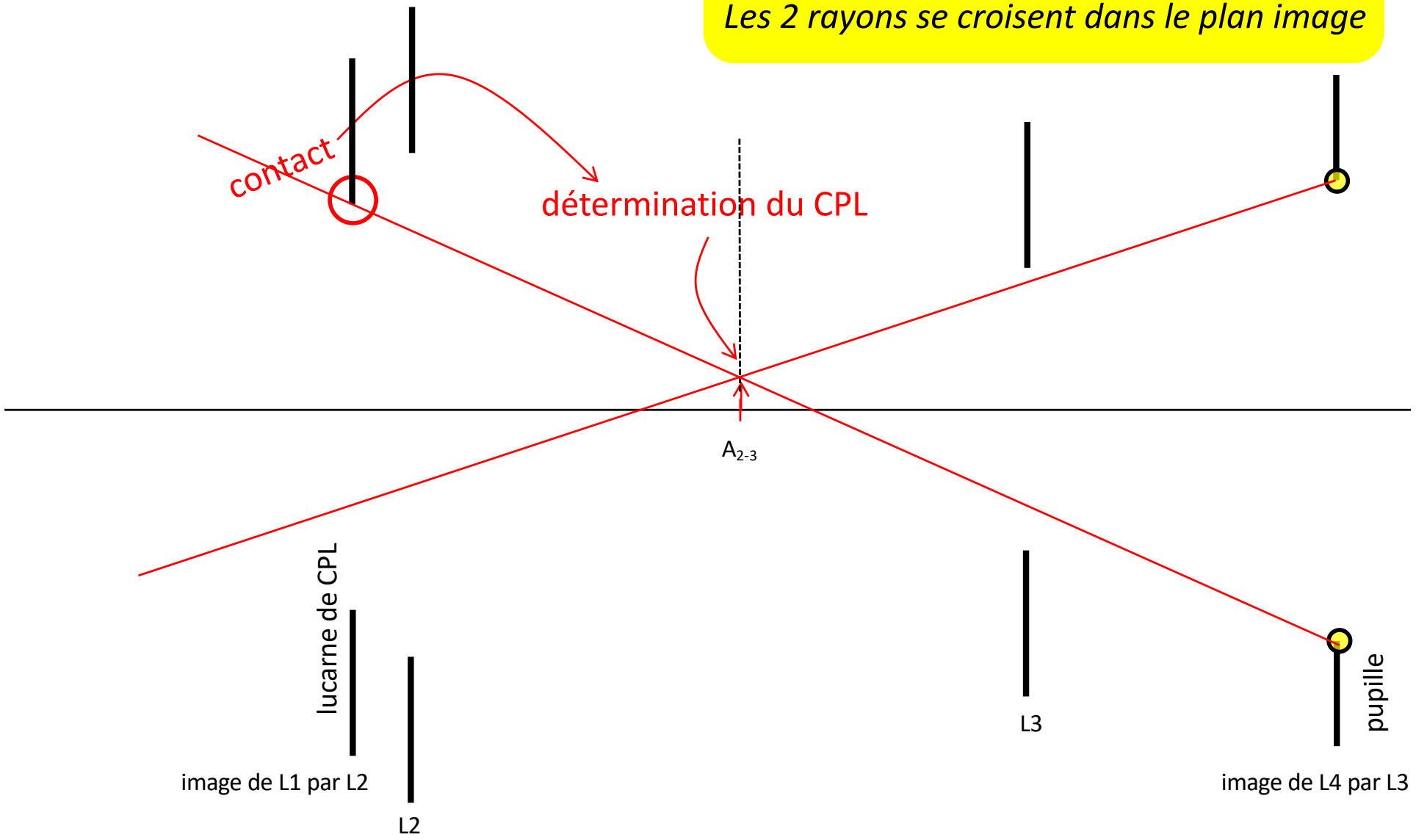
dans l'espace de $A_{2\text{-}3}$

On garde à l'esprit que :
La pupille est le pivot
Les 2 rayons se croisent dans le plan image

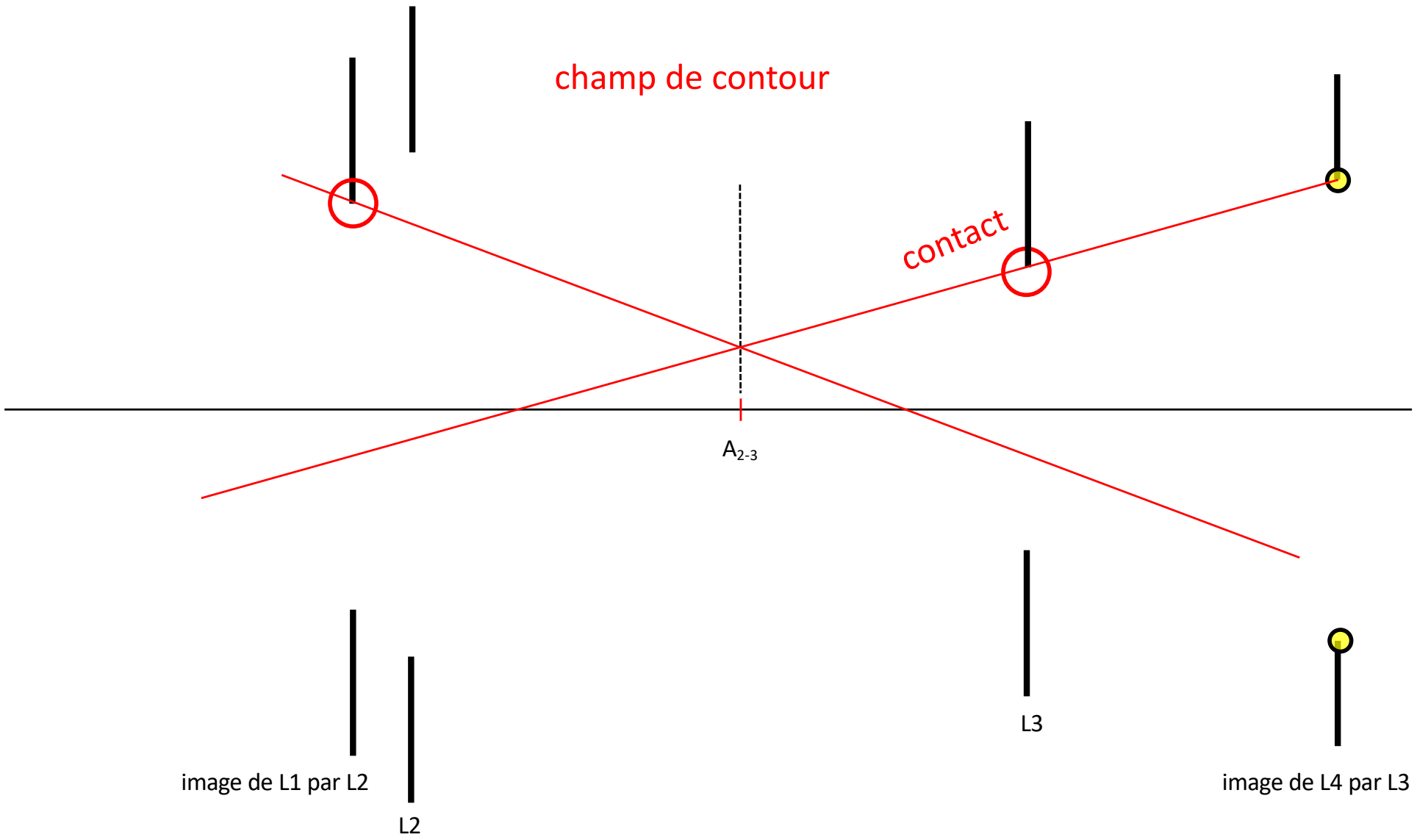


dans l'espace de A_{2-3}

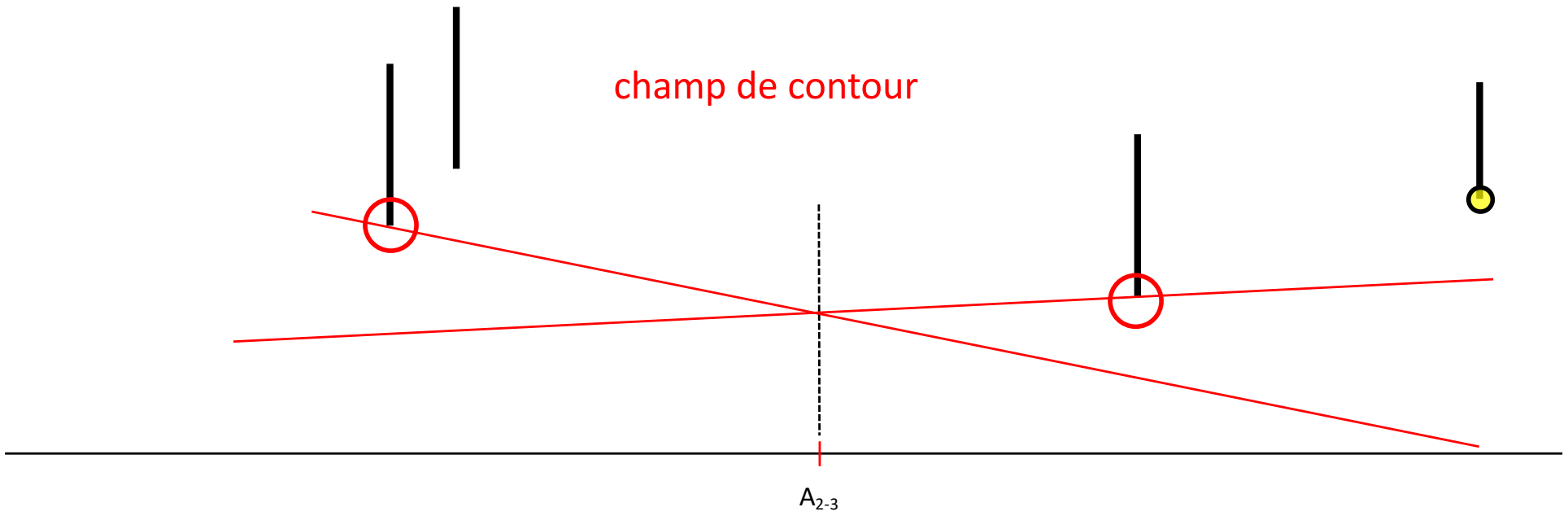
On garde à l'esprit que :
La pupille est le pivot
Les 2 rayons se croisent dans le plan image



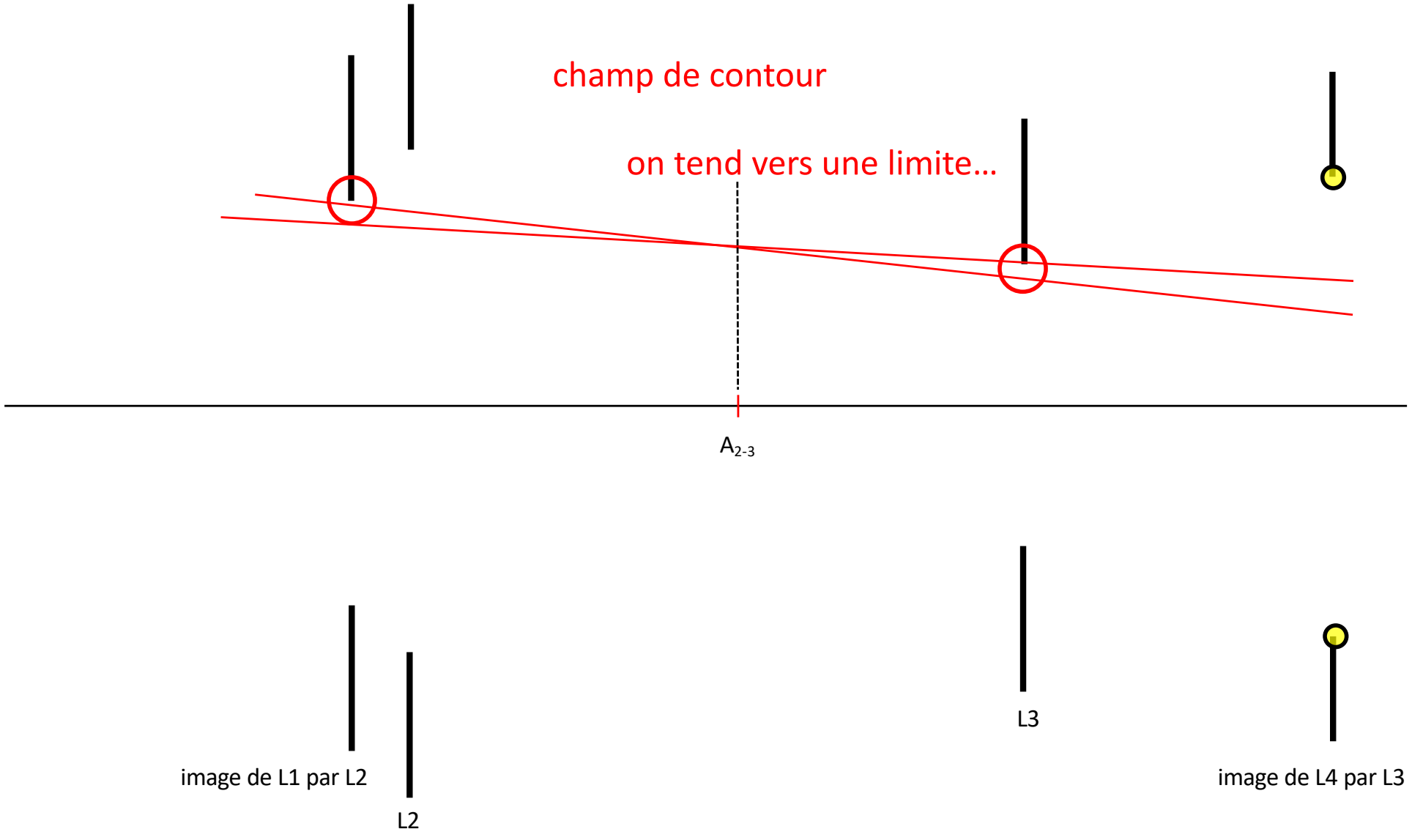
dans l'espace de $A_{2\text{-}3}$



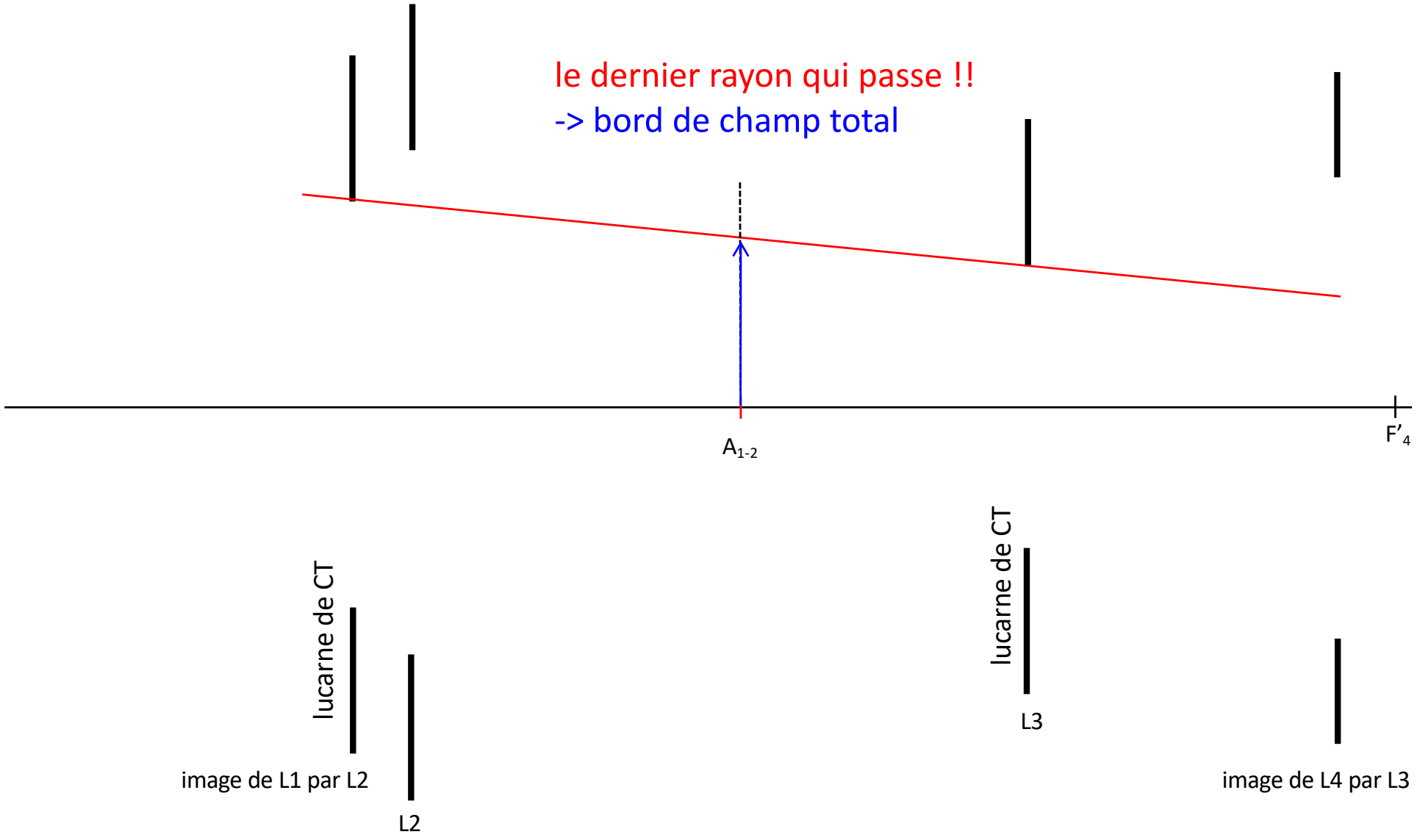
dans l'espace de $A_{2\text{-}3}$



dans l'espace de $A_{2\text{-}3}$



dans l'espace de $A_{2\text{-}3}$

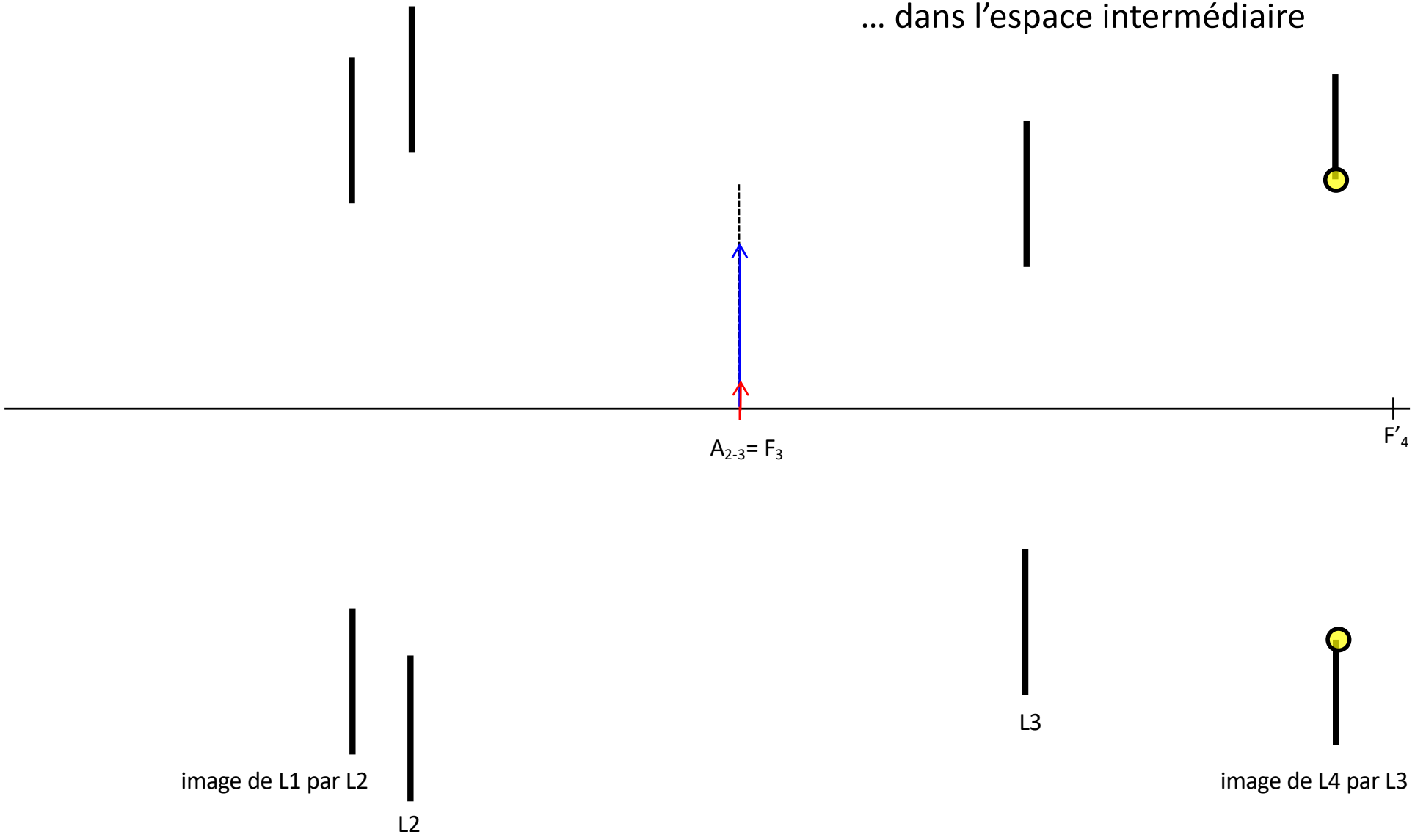


dans l'espace de $A_{2\text{-}3}$

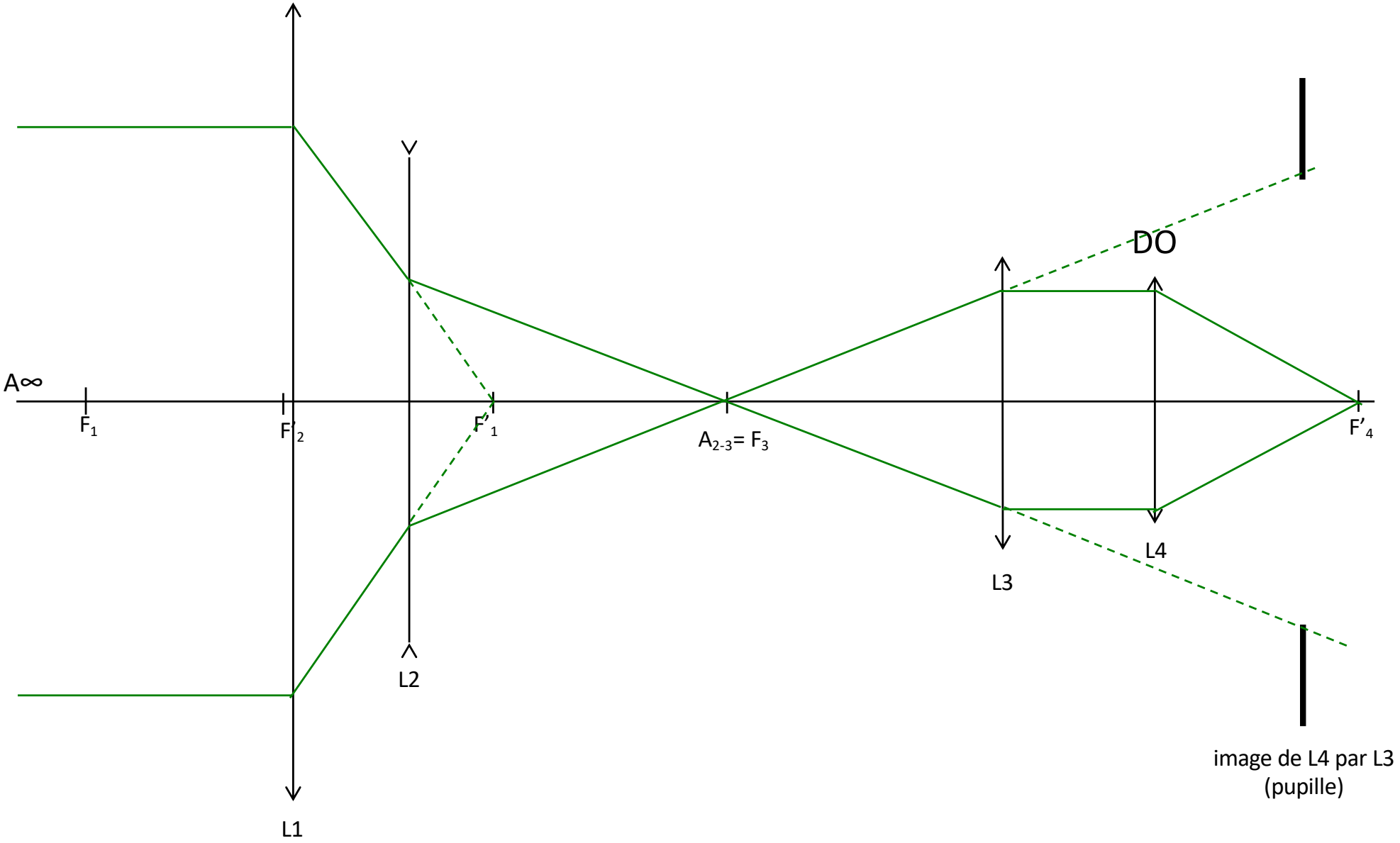
CHAMP TOTAL

CHAMP DE PLEINE LUMIERE

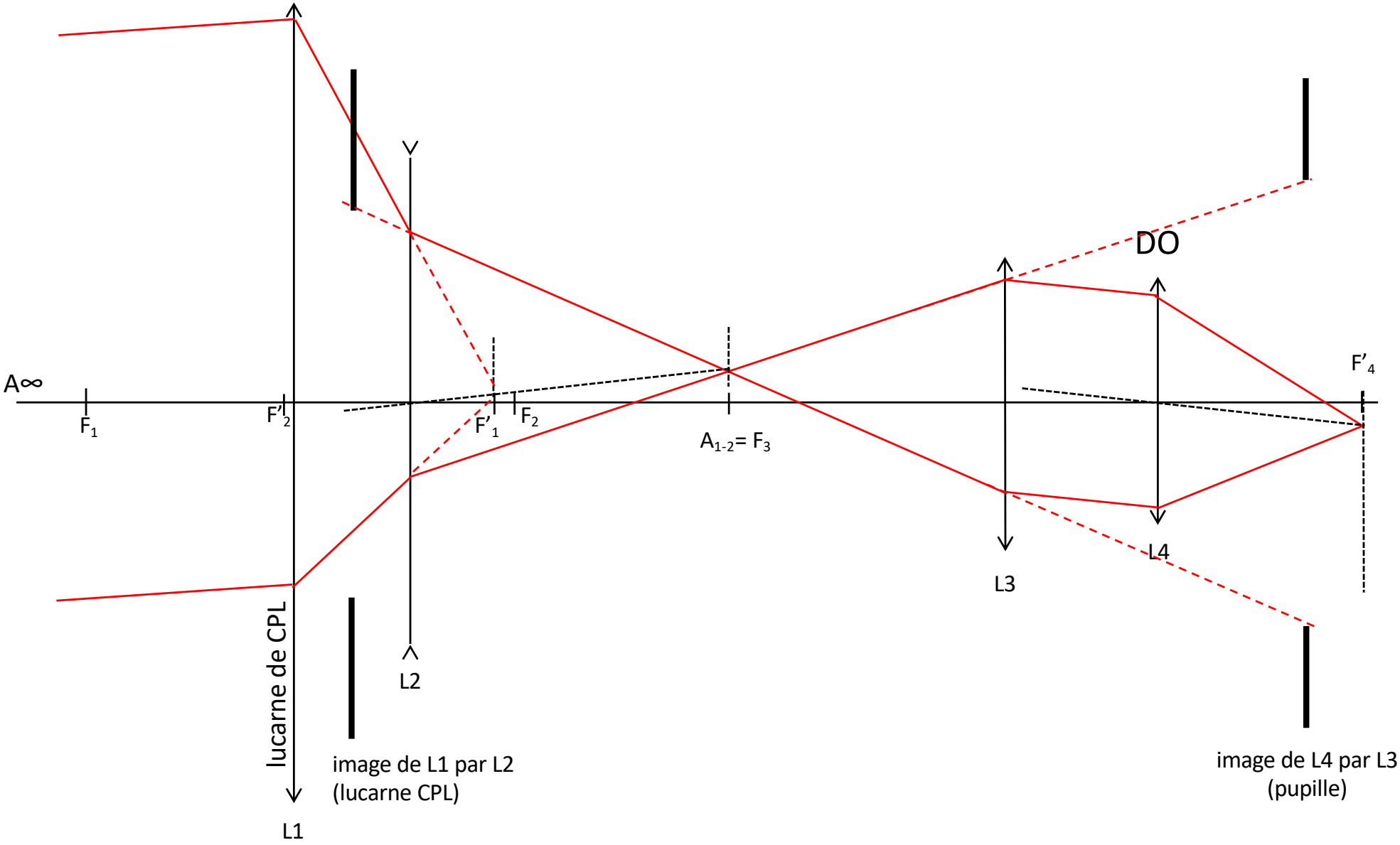
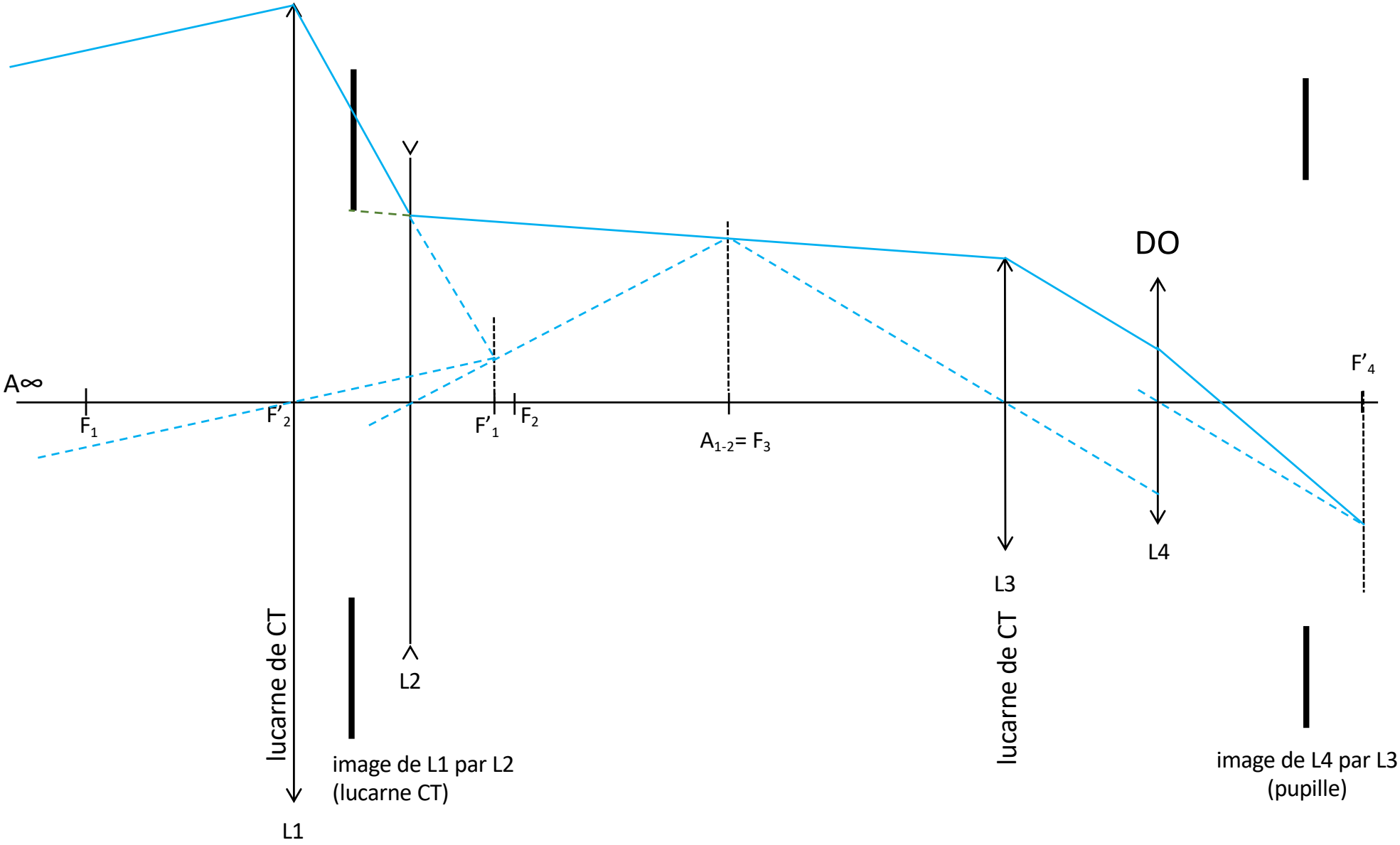
… dans l'espace intermédiaire



tracé pour un point sur l'axe



tracé pour un point en bord de CPL



tracé pour un point en bord de CT