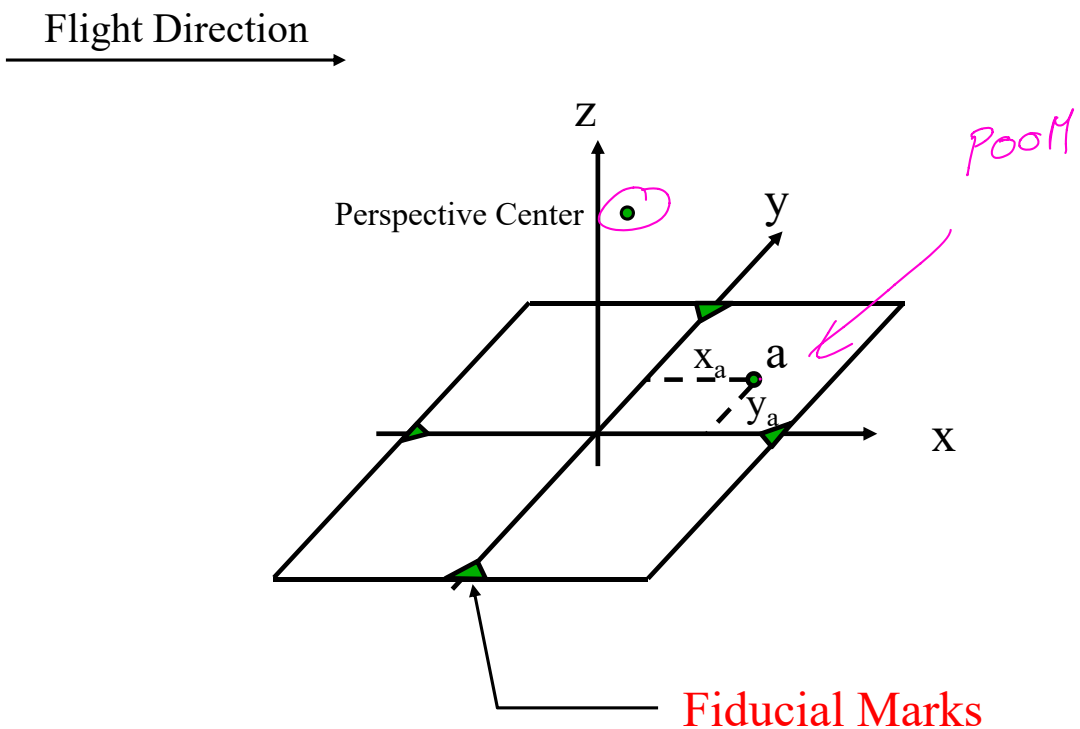
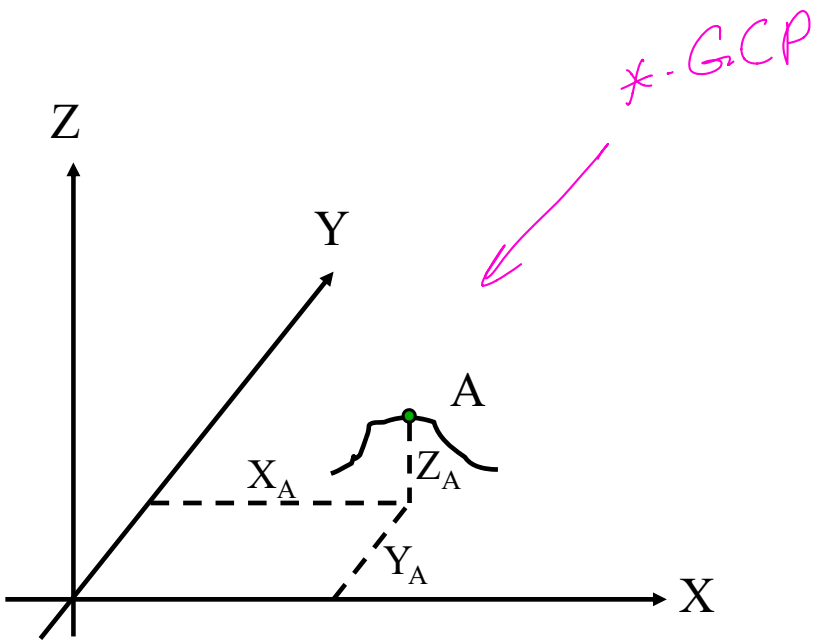
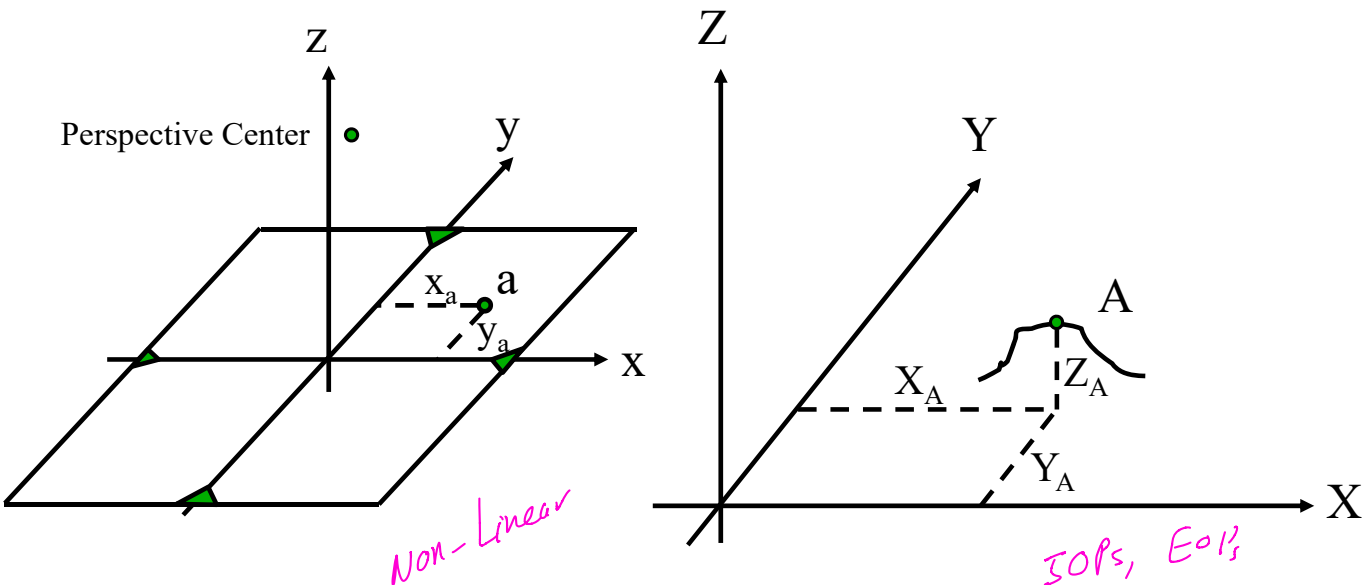
Image Coordinate System: Diapositive



Ground Coordinate System



Mathematical Model



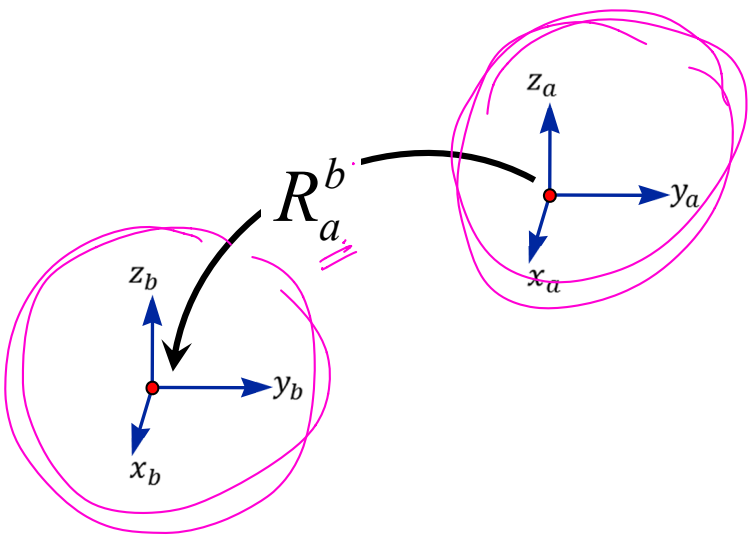
Non-Linear

IOPs, EOPs

ch. 7

$$x_a = f_x(X_A, Y_A, Z_A, \ldots\ldots)$$
$$y_a = f_y(X_A, Y_A, Z_A, \ldots\ldots)$$

Notations

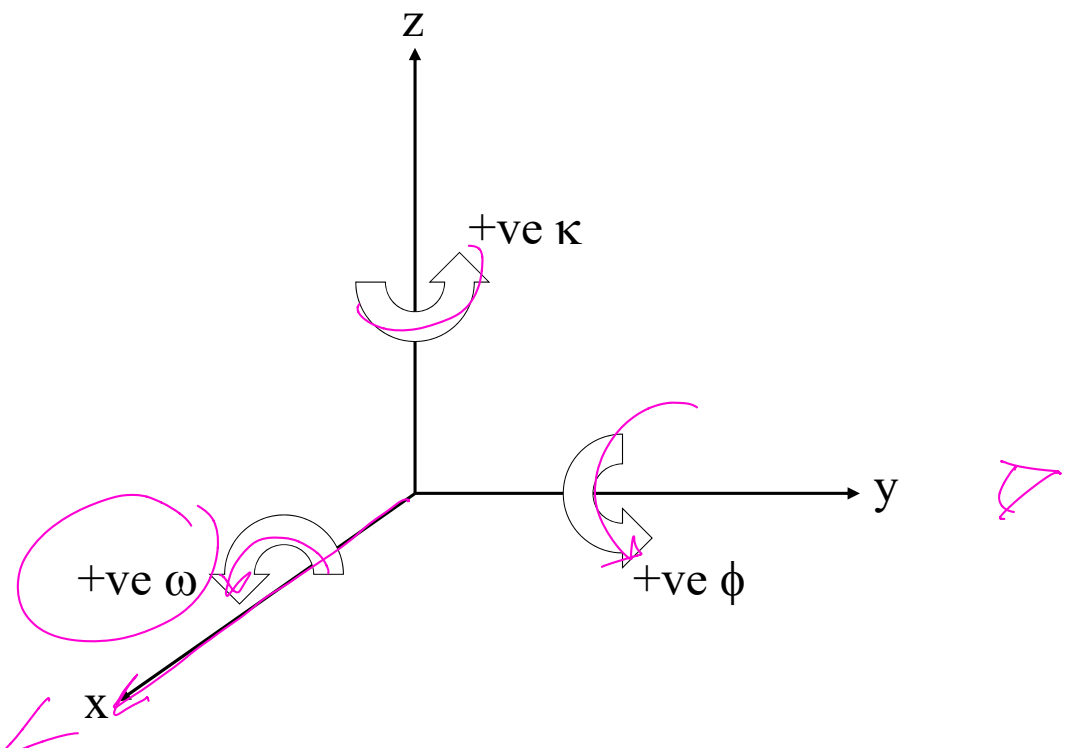


Rotation in Space: Final Remarks

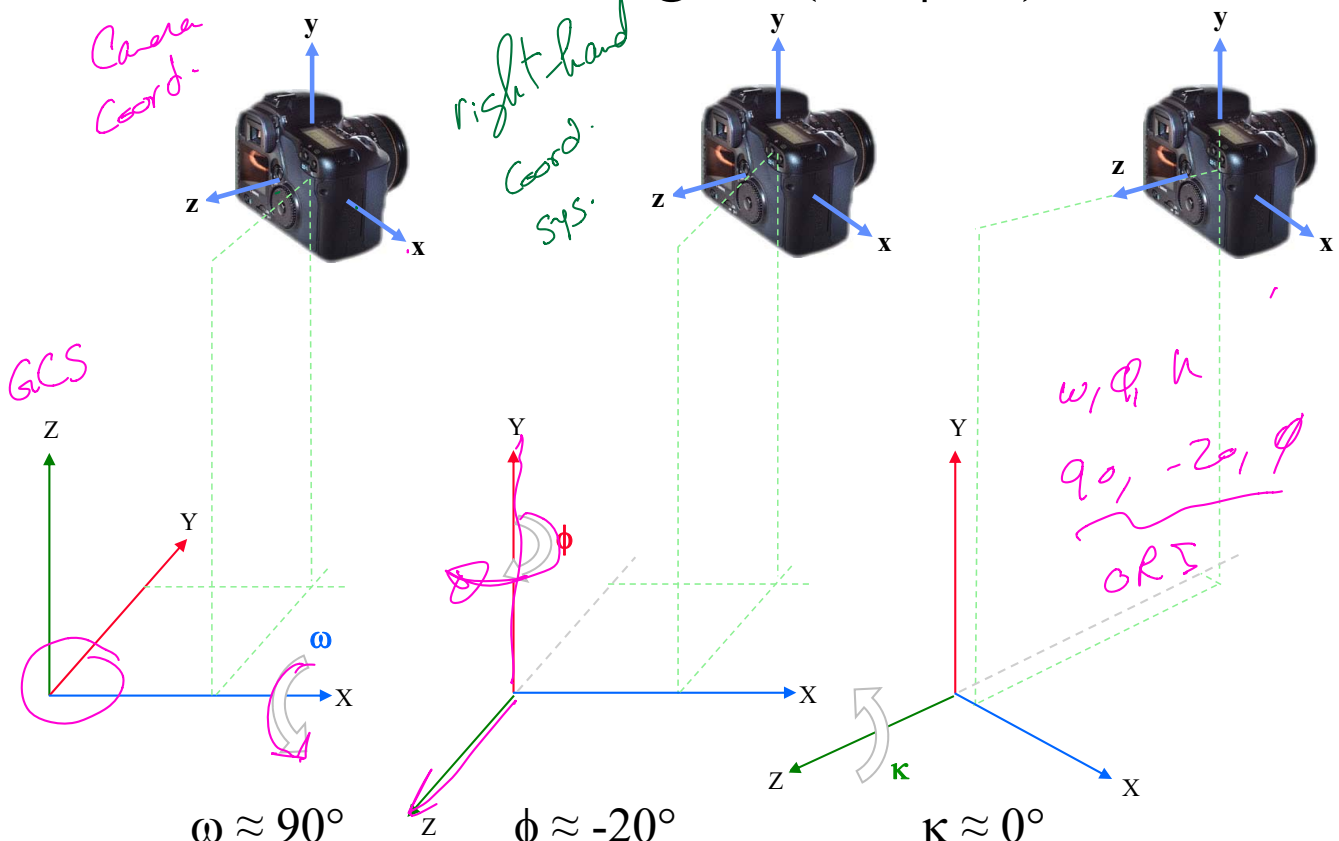
- The angles (ω, ϕ, κ) are the rotation angles that need to be applied to the ground coordinate system until it becomes parallel to the image coordinate system.
  1. Primary rotation (ω) around the x-axis,
  2. Secondary rotation (ϕ) around the y-axis, and
  3. Tertiary rotation (κ) around the z-axis.
- A positive rotation angle is defined as the one that is counter clock wise when looking at the system with the positive direction of the axis of rotation is pointing towards us.

? order is important

Positive Rotation Angles (Right Handed System)



Rotation Angles (ω, ϕ, κ)



Rotation Angles (ω, ϕ, κ)

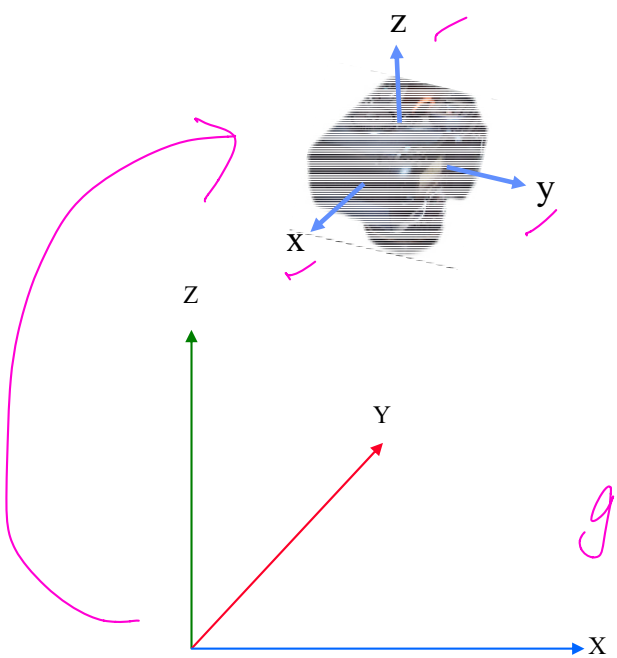


Image Coord.

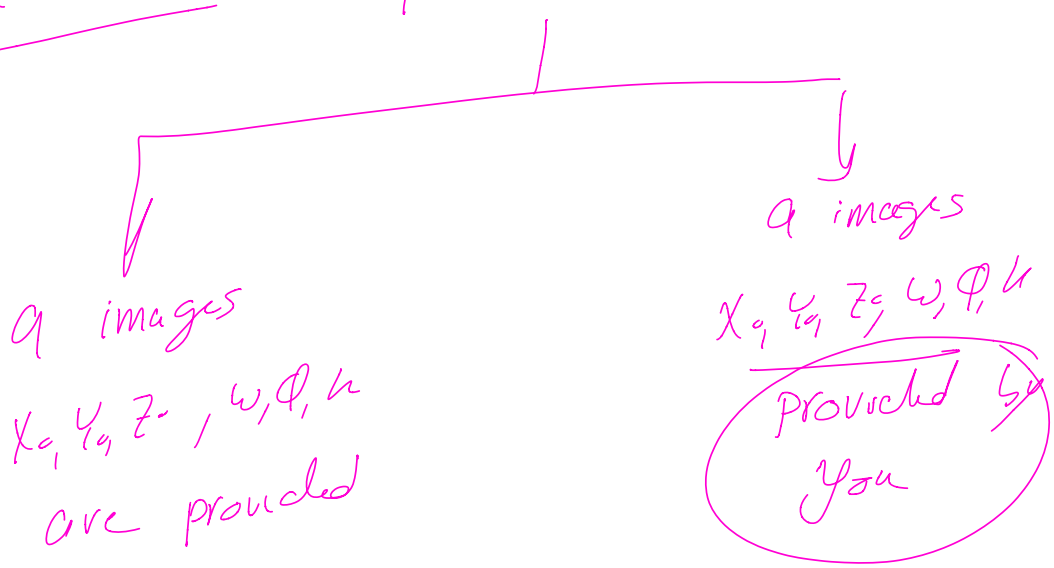
(φ, ϕ, -90°)

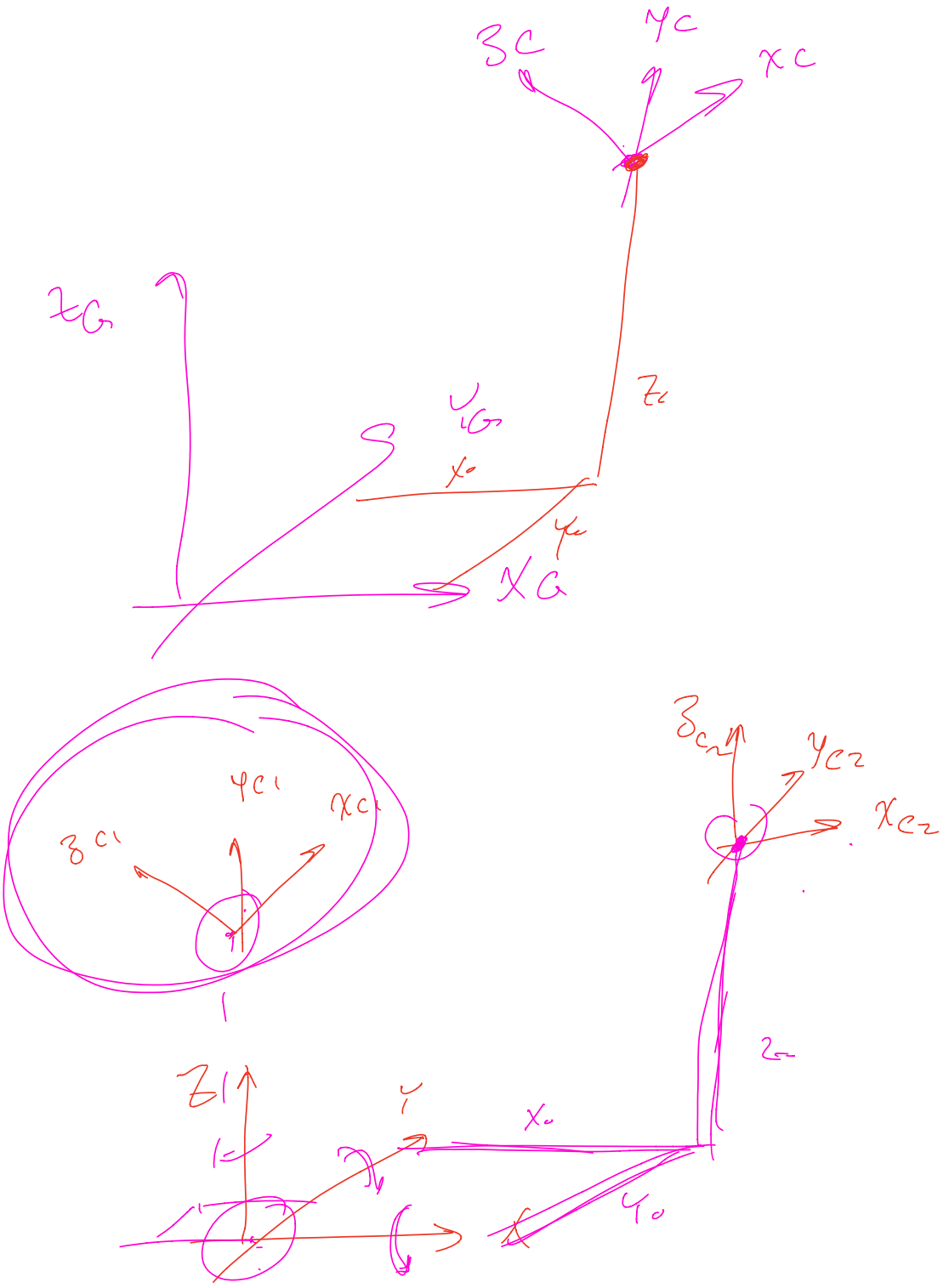
ground Coord.

ω ≈ ?, ϕ ≈ ?, and κ ≈ ?

*.ors

18 images




Zc
Yc
Xc
ZG
YG
XG
Z1
Y1
X0
Y0
Z2
Zc1
Yc1
Xc1
Zc2
Yc2
Xc2
1