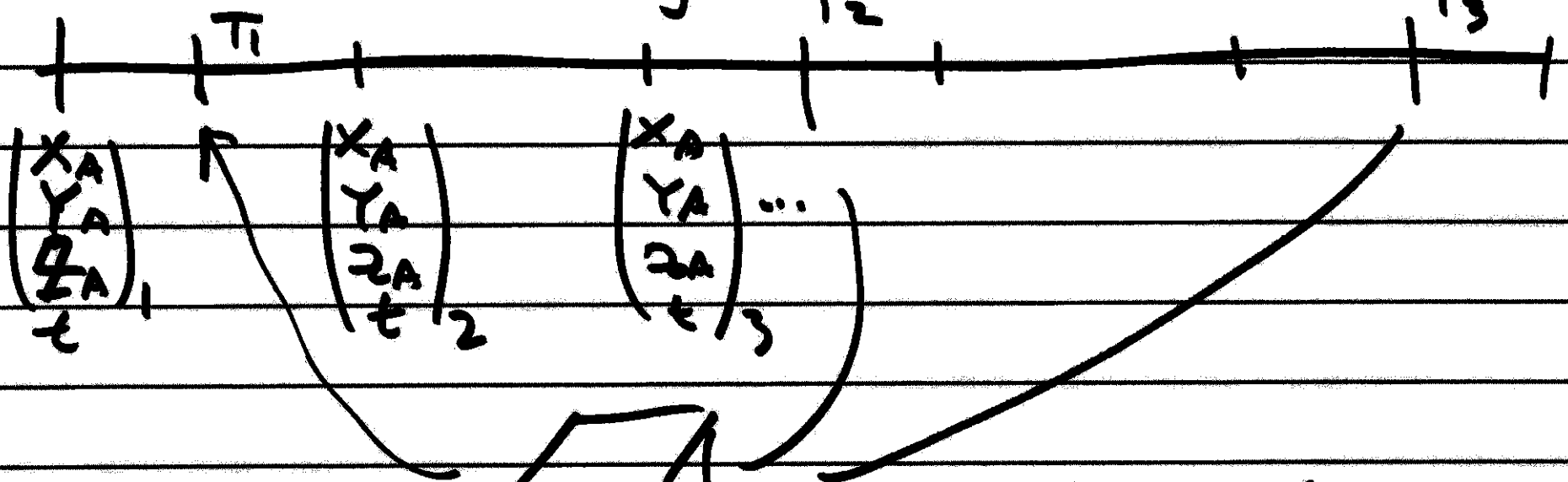
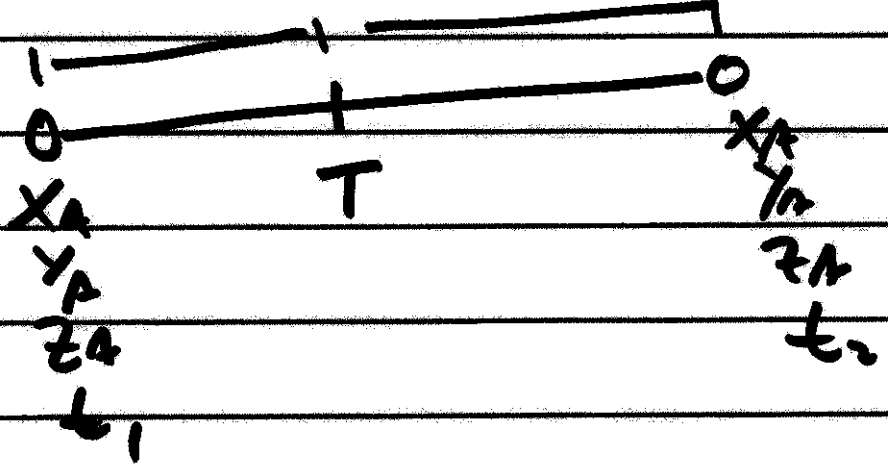


Event History



$$\frac{(t_2 - T)}{\Delta t} X_{A_1} + \frac{(T - t_1)}{\Delta t} X_{A_2}$$

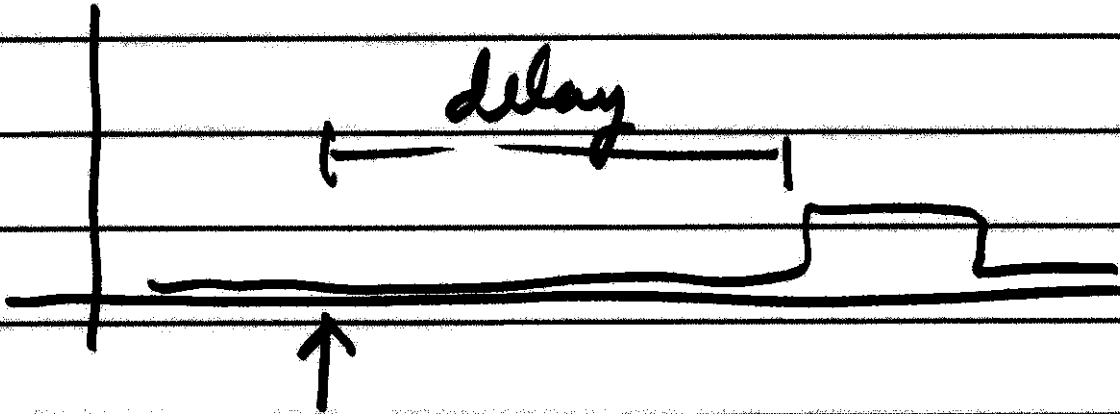
$$\frac{(t_2 - T)}{\Delta t} Y_{A_1} + \frac{(T - t_1)}{\Delta t} Y_{A_2}$$



illum \longleftrightarrow $\frac{1}{500}$ sec



shutter event preferred location
x



$\frac{1}{T_D}$ ←

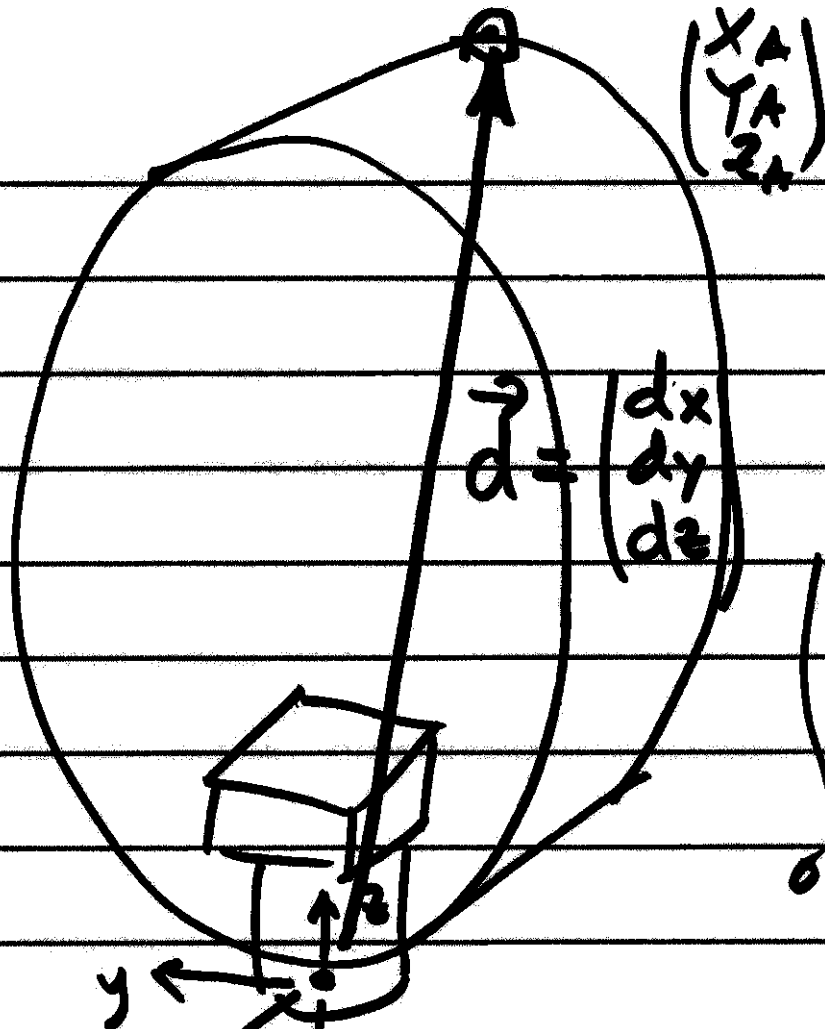
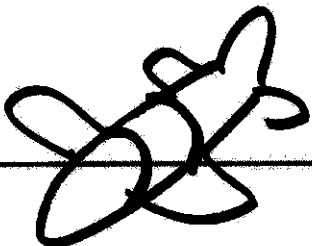
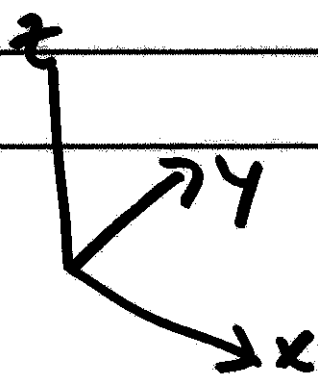


image vector

$$\begin{pmatrix} D_x \\ D_y \\ D_z \end{pmatrix} = M^T \begin{pmatrix} dx \\ dy \\ dz \end{pmatrix}$$

object space
image space



$$\begin{pmatrix} X_A \\ Y_A \\ Z_A \end{pmatrix} = \begin{pmatrix} X_C \\ Y_C \\ Z_C \end{pmatrix} + M^T \begin{pmatrix} dx \\ dy \\ dz \end{pmatrix}$$

↑ observations ↑ unknown ↑ unknown constant

Stabilized platform: try to keep optical axis vertical

This interferes with model

angle readout on stab. platform

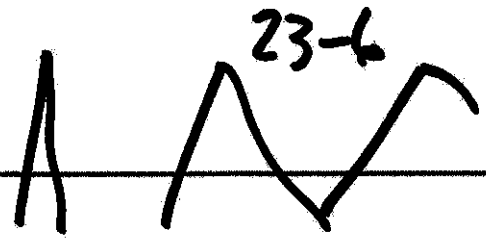
$$\begin{pmatrix} X_A \\ Y_A \\ Z_A \end{pmatrix} = \begin{pmatrix} X_L \\ Y_L \\ Z_L \end{pmatrix} + M_p M^T \begin{pmatrix} dx \\ dy \\ dz \end{pmatrix} + \begin{pmatrix} dx \\ dy \\ dz \end{pmatrix}_i$$

if cycle slips / loss of lock

new unknown segment
of the

*A

Project Planning



1. choose scale, GSD, flying height
2. choose lens

wide angle	} focal length
super wide angle	
narrow angle	

if narrow angle: weaker B/H, height precision,
better correspondence

if wide angle: stronger B/H
better height precision
difficult correspondence

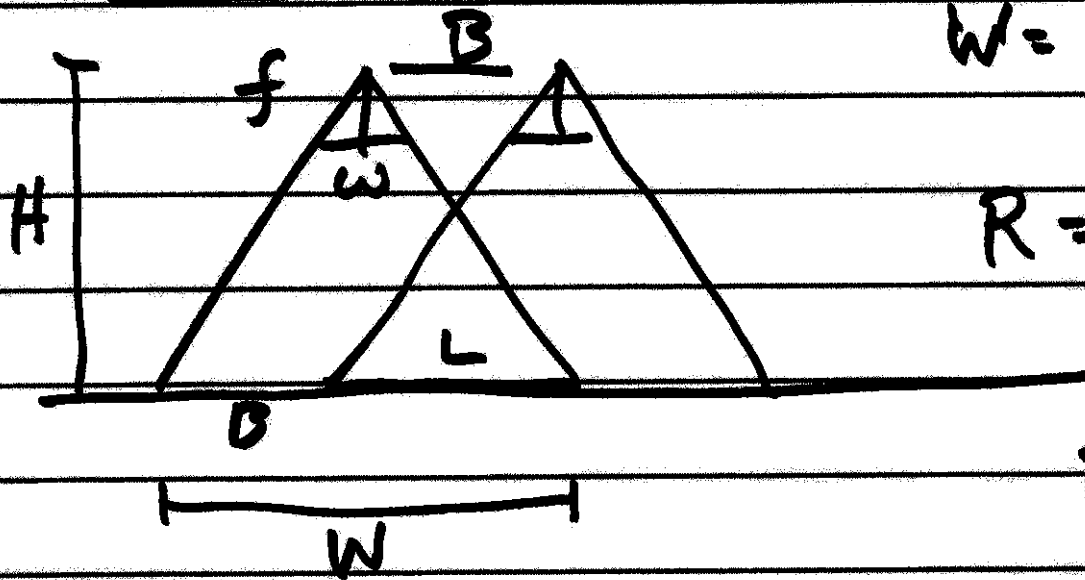
3. film, emulsion, detector
 panchromatic, color, color + IR,
 MS, HS

4. camera architecture
 frame, mosaicked frame,
 multi-linear array

Frame RC-30 Leica

Mosaic frame DMC, UC 2/I, Vexcel

MLA ADS-30 Leica

frame camera

$$w = w / (f/H)$$

$$R = \frac{L}{W} = \frac{W - B}{W}$$

$$B = w(1 - R_F)$$

$$\Delta F = w(1 - R_S)$$