

Q1

Calibrated camera parameters:

camL =

scalar structure containing the fields:

f = 5.5039e+06

R =

0.674225 -0.466420 -0.572603  
-0.737278 -0.470153 -0.485158  
-0.042923 0.749273 -0.660869

t =

-1.2436e+05  
-1.0537e+05  
-1.4354e+05

c =

800  
600

camR =

scalar structure containing the fields:

f = 6.1257e+06

R =

0.904801 -0.253481 -0.342173  
-0.422932 -0.628570 -0.652708  
-0.049630 0.735287 -0.675936

t =

-8.2146e+04  
-1.5671e+05  
-1.6228e+05

c =

800  
600

The length of the baseline is: 6.9058e+04 cm

Q2

The average error is:

$E = [ 0.68890;$   
     $0.70819;$   
     $0.70203 ]$

I believe this error comes from the bad initial conditions. The local search algorithm might stuck in a local minimum.

Q3

$w = 5.75 \text{ mm}$

$iw = 1600 \text{ px}$

$r = 5.75\text{mm}/1600\text{px}$

$\text{camL.f} = 5.5039\text{e}+06 \text{ px}$

$f = \text{camL.f} * r = 1978 \text{ mm}$

No, this calibration result is off.