

13 march, 2015

numerical results for photo2 2015 HW2
 these were produced by invoking the program main2.m which calls all of the
 designated functions.

image #1

l = 20385.5

s = 18499.5

h =

1657.161

ground coordinate value (radian units)

phi0 =

0.697982039832482

lam0 =

-1.83715138764897

1. output of FI2G

XYZ =

-1288338.11094335

-4721989.09120075

4078322.04036001

2. output of FI2G_PL

philam =

0.697982216978392

-1.83715144469428

3. output of FI2G_PL_0 where phi and lambda input are as just computed

ans =

0

0

output of FI2G_PL_0 where phi and lambda input are the control values

ans =

-1.77145910384979e-07

5.70453007053828e-08

4. output of FG2I

ls =

20385.5000000003

18499.4999999755

notice that we get back what we started with with small discrepancy

5. output of FI2G_PL_PARTIALS (2 x 10) using radian units

part =

Columns 1 through 3

-8.77294903389725e-08

-7.94331267428561e-09

3.78685971469395e-08

9.32587340685131e-12

1.21193499680317e-07

-8.43525249649701e-08

Columns 4 through 6

-0.00474512362735879

0.0625764863260159

-0.0974058933511657

-0.0845233669721779

-0.014281077209688

0.192569474144477

Columns 7 through 9

-0.132647740236358

3.42226247340705e-08

1.25429666653076e-07

-0.116516726933469

1.80087056378397e-07

-1.16138210159988e-07

Column 10

9.60542756445193e-08

5.42277334147911e-08

6. output of FG2I_PARTIALS (2 x 10)

output of fg2i_partials

part =

Columns 1 through 3

-11398752.9661244

-747106.955896015

0.368066612281837

870.952499099076

8251336.34352824

0.69552752393065

Columns 4 through 6

-117235.368179536

702624.985358852

-966436.814382178

		photo2_15_hw2_sol	
697434.440153302	117783.324672928		-1588867.80334433
Columns 7 through 9			
-1599070.04974957	0.524427086929791		1.3427708108793
961533.307468926	-1.48555925989058		0.958642121986486
Column 10			
1.13519647129579			
-0.447311358584557			

7. output of FG2I_ls_0

FlFs =
 -2.5465851649642e-10
 2.45163391809911e-08

8. output of FG2I_ls_0_PARTIALS (2 x 10)

part =			
Columns 1 through 3			
11398752.9661244	747106.955896015		-0.368066612281837
-870.952499099076	-8251336.34352824		-0.69552752393065
Columns 4 through 6			
117235.368179536	-702624.985358852		966436.814382178
-697434.440153302	-117783.324672928		1588867.80334433
Columns 7 through 9			
1599070.04974957	-0.524427086929791		-1.3427708108793
-961533.307468926	1.48555925989058		-0.958642121986486
Column 10			
-1.13519647129579			
0.447311358584557			