

ERDAS LAB2: RADIOMETRIC AND ATMOSPHERIC CORRECTION OF LANDSAT DATA

What you need to submit:

1-An ERDAS image of bands 1,2,and 3 that have been converted to at-satellite reflectance

Band	Lmin	Lmax
TM1	-6.2	293.7
TM2	-6.4	300.9
TM3	-5.0	234.4

Band	Solar Spectral Irradiance (watts/(meter squared*um))
1	1997
2	1812
3	1533

eqn2band1.img

$$((293.7 - -6.2) / (255 - 0)) * (\$n1_I71009011_01120070708_b101 - 0) + - 6.2$$

eqn2band2.img

$$((300.9 - -6.4) / (255 - 0)) * (\$n1_I71009011_01120070708_b201 - 0) + - 6.4$$

eqn2band3.img

$$((234.4 - -5.0) / (255 - 0)) * (\$n1_I71009011_01120070708_b301 - 0) + - 5.0$$

eqn3band1.img

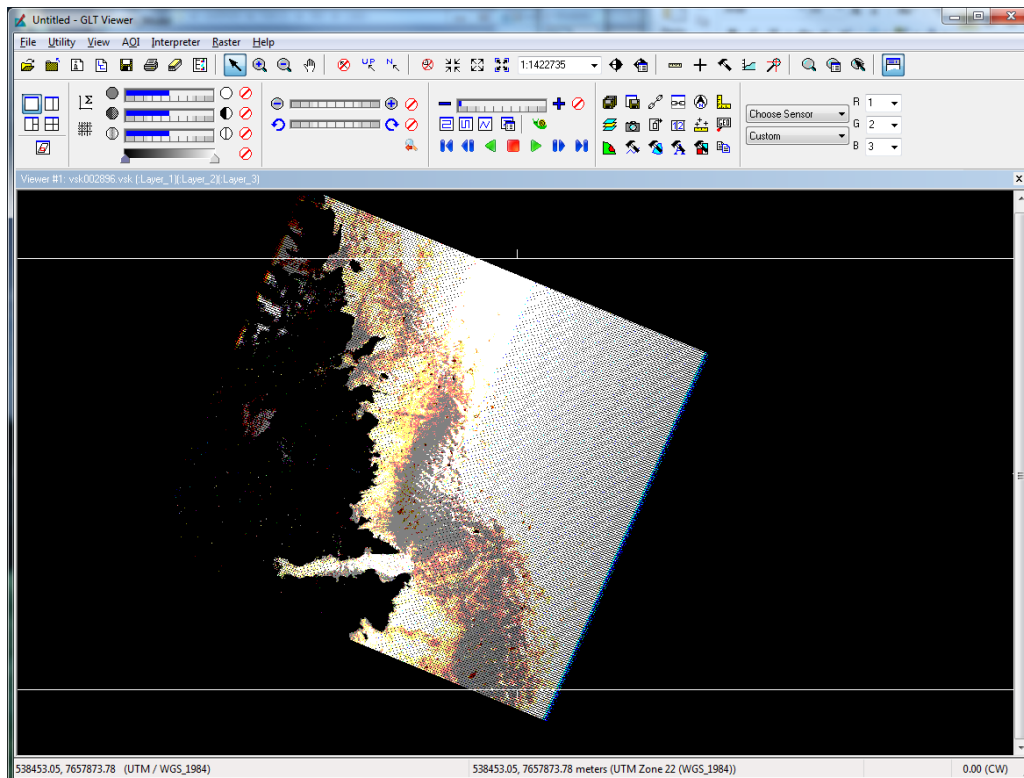
$$((3.14) * (\$n1_eqn2band1) * ((1.01667) * (1.01667))) / ((1997) * (\text{COS} (42.6042328)))$$

eqn3band2.img

$$((3.14) * (\$n1_eqn2band2) * ((1.01667) * (1.01667))) / ((1812) * (\text{COS} (42.6042328)))$$

eqn3band3.img

$$((3.14) * (\$n1_eqn2band3) * ((1.01667) * (1.01667))) / ((1533) * (\text{COS} (42.6042328)))$$



2-An atmospherically and Radiometrically corrected BAND 1 image.

HbandN = 34.1333

Band 1 ->

$(\$n1_I71009011_01120070708_b101 - 34.133)$

→ eqn4step1.img

eqn4step1 ->

$((293.7 - -6.2) / (255 - 0)) * (\$n1_eqn4step1 - 0) + -6.2$

→ eqn4step2

eqn4step2 ->

$((3.14) * (\$n1_eqn4step2) * ((1.01667) * (1.01667))) / ((1997) * (\text{COS} (42.6042328)))$

→ eqn4final

