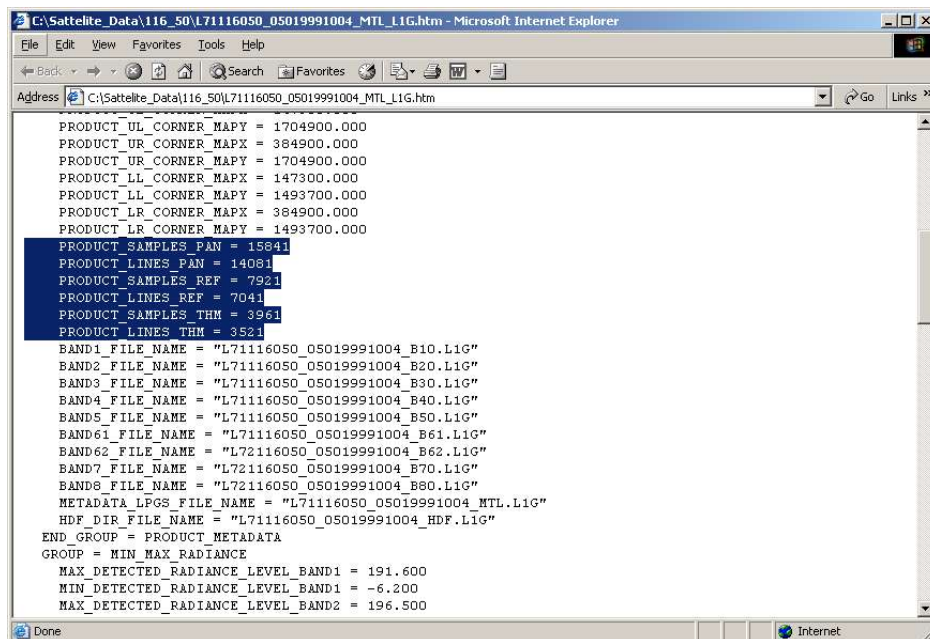


ENVI supports the HDF standard and is compatible with Unwrapped HDF. In order to use generic GeoTIFF imagery in Research Systems' ENVI 3.x, follow the steps below:

1. **Start ENVI:** In MS Windows this will generally be through either a desktop icon or an entry under the "Start -> Program Files" section of the Windows menu.
2. **Load the Header File (and the bands):** Select "File -> Open Image File" and navigate to the directory where the Landsat image is saved. Note that this directory MUST be the same directory as the *_HDF.L1G header file (in this case L71116050_05019991004_HDF.L1G). Double click the *_HDF.L1G file. This will add the metadata for the image bands to available bands list.
 - 2.1 **Alternative 1:** Load the Landsat bands individually as [.bsq <-link] files. For this, the user must use the information provided in the *_MTL_L1G.htm file.
3. **To Display Bands Separately (as gray scale):** Highlight the band in question (note the "Selected Band" display will update) and click "Load Band". The image now displays in the ENVI display environment.
4. **To Display Bands as an RGB Composite:** In the available bands list, highlight "RGB Color". There is now space to select three bands for display in your RGB composite. Select the image bands you wish to display and select "Load RGB".

A Note on Spatial Reference Data in ENVI: In some instances the user may be required to enter spatial coordinates, pixels size, etc. manually. This information is all contained in the *_MTL_L1G file (Figure 1) and can be entered through the "File -> Edit ENVI Header" dialogue. More detailed information such as sun elevation, time of acquisition, etc. is also available.



```
PRODUCT_UL_CORNER_MAPY = 1704900.000
PRODUCT_UR_CORNER_MAPX = 384900.000
PRODUCT_UR_CORNER_MAPY = 1704900.000
PRODUCT_LL_CORNER_MAPX = 147300.000
PRODUCT_LL_CORNER_MAPY = 1493700.000
PRODUCT_LR_CORNER_MAPX = 384900.000
PRODUCT_LR_CORNER_MAPY = 1493700.000
PRODUCT_SAMPLES_PAN = 15841
PRODUCT_LINES_PAN = 14084
PRODUCT_SAMPLES_REF = 7921
PRODUCT_LINES_REF = 7041
PRODUCT_SAMPLES_THN = 3961
PRODUCT_LINES_THN = 3521
BAND1_FILE_NAME = "L71116050_05019991004_B10.L1G"
BAND2_FILE_NAME = "L71116050_05019991004_B20.L1G"
BAND3_FILE_NAME = "L71116050_05019991004_B30.L1G"
BAND4_FILE_NAME = "L71116050_05019991004_B40.L1G"
BAND5_FILE_NAME = "L71116050_05019991004_B50.L1G"
BAND61_FILE_NAME = "L71116050_05019991004_B61.L1G"
BAND62_FILE_NAME = "L72116050_05019991004_B62.L1G"
BAND7_FILE_NAME = "L72116050_05019991004_B70.L1G"
BAND8_FILE_NAME = "L72116050_05019991004_B80.L1G"
METADATA_LPGS_FILE_NAME = "L71116050_05019991004_MTL.L1G"
HDF_DIR_FILE_NAME = "L71116050_05019991004_HDF.L1G"
END_GROUP = PRODUCT_METADATA
GROUP = MIN_MAX_RADIANCE
MAX_DETECTED_RADIANCE_LEVEL_BAND1 = 191.600
MIN_DETECTED_RADIANCE_LEVEL_BAND1 = -6.200
MAX_DETECTED_RADIANCE_LEVEL_BAND2 = 196.500
```

Figure 1: Contents of the MTL.L1G File