

Exercise 1

Consider a multispectral sensor using pushbroom scanning geometry placed into a plane. The CCD array is composed of 800 detectors, the time of integration is 50ms and the field of view is 48 degrees.

a) Calculate the altitude and the speed of the plane function of pixel size ($= 5 \times 5 \text{ m}$)?

b) The recorder is limited to a rate of 300 KB/s and the images are coded on 16 bit. Calculate the maximum number of spectral bands and the size in memory of a square scene?

What is the effect of movement of satellite when it's rolling with a rate of 1 mrd and a period of 0.5Hz?

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