Institut für Informationssysteme
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# Exercises for Spatial Databases and GIS

## **Sheet 9** (until 18.01.2013)

### Exercise 1 (Electromagnetic Spectrum)

1. What phenomenon is a hint for the fact, that the atmosphere influences blue light more than the other wavelengths of the visible spectrum? From which observations may you conclude that green light is less influenced by the atmosphere than blue but more than red?
2. Why are usually wavelengths between 8-14 µm used from the far infrared spectrum, although it covers a much bigger range of wavelengths (3-1000 µm) ?
3. Which wavelengths are suitable for passive satellite systems? Why?

### Exercise 2 (Orbits)

1. What influence on the observable area does the inclination have?
2. Why do earth observation satellites normally have a sun synchronous orbit?

### Exercise 3 (Radar)

What is the meaning of the intersection point between the ground range and the azimuth resolution?