

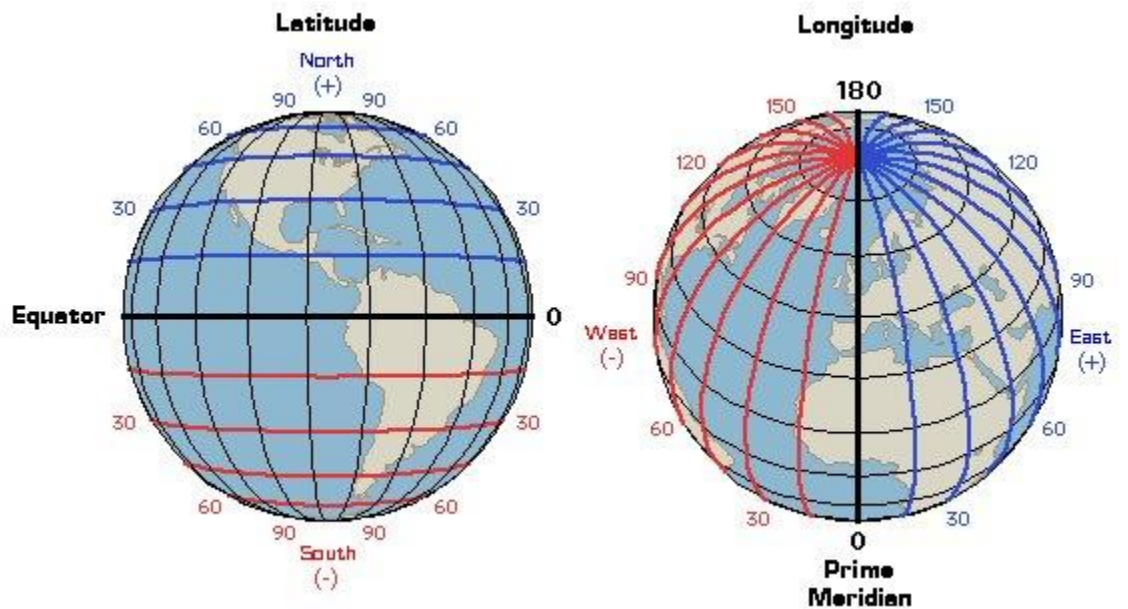
Close Encounters of the Third Kind



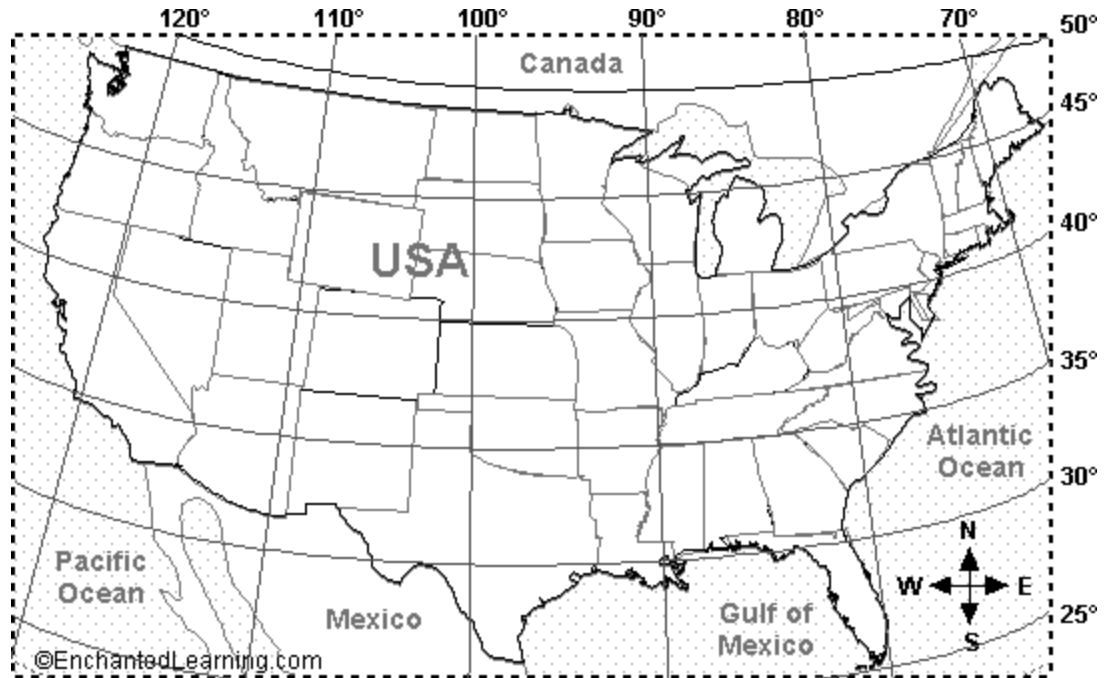
1. In what appears to be the Sonoran Desert, a cartographer named David Laughlin is introduced to a French-Speaking man named Claude Lacombe. Though David has been hired as Mr. Lacombe's interpreter, what is his real profession?
 - a. The two men along with a crew soon find a strange sight: a circular ring of airplanes in brand-new condition, with fuel still in the tank. When did these planes come up missing and where?
 - b. The men soon find a local man who reported the planes. David and Claude find the man has a red sunburned mark on the side of his face. What type of ray causes a sun burn on the skin? Hint: It is found on the Electromagnetic Spectrum above visible light.
2. In an air traffic control tower in the U.S., some of the control tower receive reports of unidentified aircraft flying through the air and coming dangerously close to hitting an airplane. When the tower requests the planes in the vicinity of the incident if they wish to report a 'UFO', what was their responses?
3. In Muncie, Indiana, a strange power outage blackens the area. This incident affects two different families of people.
 - a. The first is Jillian Guiler. When she wakes in the middle of the night and finds her son Barry missing, she wanders off into the countryside to find him. In the house before the abduction, what are the indications of a strong electromagnetic field present?
 - i) The items in the refrigerator were strewn all over the floor. Would an electromagnetic field cause this? Why?
 - ii) Would a strong electromagnetic field turn on the TV and not the light?
 - b. The second person is Roy Neary. Roy gets a call from the power company he works for, and goes out to answer a service call. However, stopping at the train's track, a number of metal objects in the vicinity (including Roy's truck) begin to act strangely. A strange craft appears overhead, and flashes bright lights at Roy before flying off.
 - i) Would a strong electromagnetic field effect the Mail boxes the way they did? Explain.

- ii) Would a strong electromagnetic field effect the items in the truck the way they did? Explain. (Note: Which way did the items seem to be attracted towards)
 - iii) Would a strong electromagnetic field effect the truck gages the way they did? Explain.
 - iv) Would a strong electromagnetic field effect Roy the way they did? Explain. (Note: Does an Electromagnetic Field affect the Gravity Field on Roy)
- c. Once the craft has disappeared, Roy drives off, before almost hitting Barry on a hillside road.
- i) When Barry first appears in the middle of the road, you can see the constellation Orion in the upper right of the scene. From mid-northern latitudes, Orion is visible in the evening from October to early January and in the morning from July to November. The scene looks like a summer evening and if it was the morning would Orion be that high in the sky?
 - ii) As Jillian appears, several strangely-lit craft fly by. What was the color of the last one?
 - iii) Roy gets back in his truck and gives chase. What were the other vehicles chasing after the lights?
 - iv) The strange objects fly off over the edge of a cliff, and as Roy and the others watch, ascend into some thundering storm clouds overhead. What happened in the city below?
- d. Roy returns to his family eager to tell of what he saw, but his wife Ronnie refuses to acknowledge her husband's flights of fancy. Even though Roy has something wrong with his face. What was wrong with his face? Explain. (Note: What kind of Electromagnetic Wave would cause this?)
- e. Some time afterwards, Roy meet up with Jillian and Barry, and Jillian relates how there seems to be a melody and an image of a mountain she cannot get out of her mind. Roy soon finds himself obsessing over the same mountain image. What does he use to sculpt his obsession?
4. Meanwhile, Bob and Claude have gone around the world and observed other strange phenomenon:
- a. A missing ship names Cotopaxi has appeared in the Gobi Desert. However, the camel that is shown in this seen is a single hump camel. The camels in the Gobi Desert are double hump camels. Obviously, this was not filmed in the Gobi Desert. Where do you think this seen was filmed? (Hint the ship is actually found in a desert near a large body of water)

- b. A group of people in India have been chanting a strange 5-note sequence that they claim came from above.
5. The aliens broadcast a series of pulses which are decoded by the Mr. Lacombe to be longitude and latitude. In degrees:minutes:seconds, the longitude is 104:44:30 and the latitude is 40:36:10.
- a. The aliens could of divided the earth into degrees latitude using 0:00:00 as the equator. Do you think the aliens would of known about the minute and second divisions that the humans came up with?
- b. Since 0:00:00 is a human standard from the Prime Meridian of Greenwich, England, do you think the aliens would of known this to communicate this to the humans?



- c. The scientists grab a globe and declare these coordinates are in Wyoming. Everybody and his brother (and the aliens) then proceed to show up at Devils Tower, Wyoming. However, Devil's Tower is found in the Northeast corner of Wyoming. Check the Map below to see if 104:44:30 longitude and 40:36:10 latitude agrees to this location: (Note: 30 min is equal to 0.5 degrees latitude and 30 sec is equal to 0.5 minutes)

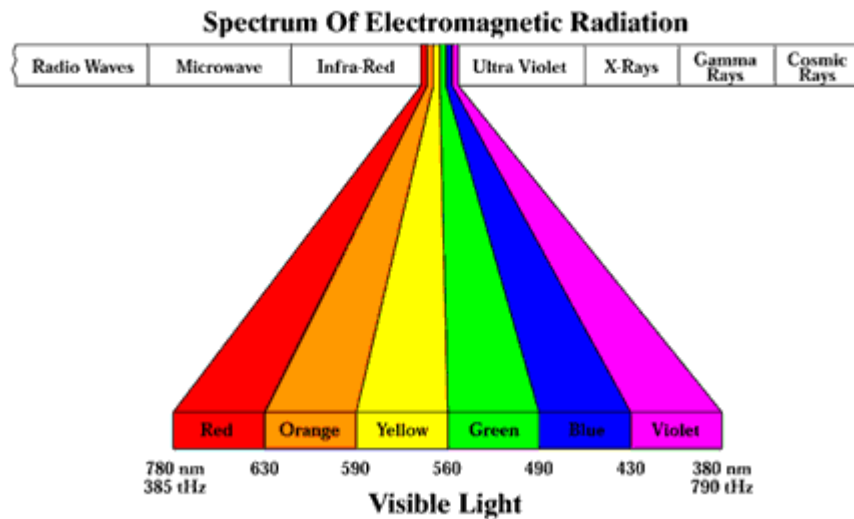


- i) Does the Longitude 104:44:30 agree to the map?
 - ii) Does the Latitude 40:36:10 agree to the map?
 - iii) How many degrees off are their estimates?
 - iv) How many miles do you think that would have made? (Note: 5 degree latitude is about 200 miles difference)
6. Back in Muncie, Jillian is shocked one evening when the same lights as before descend towards her home.
 - a. What happened to all the appliances in the house? Are all these possible with a large amount of electromagnetic forces?
 - b. Do you think the screw thing was reasonable with the aliens advanced technology?
 - c. What happened to Barry?
 - d. Still in a state of shock, what does Jillian do?
 7. Shortly thereafter, a person from the U.S. Government sits down for a town hall chat with several locals in attendance (including Roy and his family). What is the government's stance on this issue?
 8. Roy is slowly losing his mind over the strange images in his head, and finally drives his wife Ronnie to take their kids and leave. After they have left, what does Roy construct in his family's living room?
 9. Roy heads off towards Devil's Tower, only to encounter every one leaving in the wake of a disaster.
 - a. What is that disaster?

- b. Roy also finds Jillian there, and the two attempt to get to Devil' tower, but is delayed. What delays them?
 - c. Roy and Jillian are separated, with Roy brought before Bob and Claude. The two listen to Roy's story. What does Bob and Claude do with Roy's story?
 - d. Jillian and Roy manage to escape, making it to the other side of the mountain before night settles in. What do they find there?
 - e. The two secretly make their way down as several little lit ships appear. What happens after the little ships fly away?
10. In these last climatic scenes, we are treated to a musical game of table tennis where alien and human attempt to communicate by bandying the same five-note tune back and forth. Along with the musical tones, each note is accompanied by a colored light. The humans have set up a large light board and the aliens flash the colors on their taillights. We get the impression that these lights are also significant element in the attempts at communication. Let's analyze the sound sequence.
- a. If I record the five note pattern, and replay them near a piano, I get the following sequence of notes: B5, C#6, A5, A4, and E5, where the second A is exactly one octave below the first. From the table below, transpose these to frequencies in hertz...(Hz)...

Note	Hz	Note	Hz	Note	Hz	Note	Hz	Note	Hz	Note	Hz	Note	Hz
C1	32.7	C2	65.4	C3	130.8	C4	261.6	C5	523.3	C6	1046.5	C7	2093.0
C#1	34.6	C#2	69.3	C#3	138.6	C#4	277.2	C#5	554.4	C#6	1108.7	C#7	2217.5
D1	36.7	D2	73.4	D3	146.8	D4	293.7	D5	587.3	D6	1174.7	D7	2349.3
D#1	38.9	D#2	77.8	D#3	155.6	D#4	311.1	D#5	622.3	D#6	1244.5	D#7	2489.0
E1	41.2	E2	82.4	E3	164.8	E4	329.6	E5	659.3	E6	1318.5	E7	2637.0
F1	43.7	F2	87.3	F3	174.6	F4	349.2	F5	698.5	F6	1396.9	F7	2793.8
F#1	46.2	F#2	92.5	F#3	185.0	F#4	370.0	F#5	740.0	F#6	1480.0	F#7	2960.0
G1	49.0	G2	98.0	G3	196.0	G4	392.0	G5	784.0	G6	1568.0	G7	3136.0
G#1	51.9	G#2	103.8	G#3	207.7	G#4	415.3	G#5	830.6	G#6	1661.2	G#7	3322.4
A1	55.0	A2	110.0	A3	220.0	A4	440.0	A5	880.0	A6	1760.0	A7	3520.0
A#1	58.3	A#2	116.5	A#3	233.1	A#4	466.2	A#5	932.3	A#6	1864.7	A#7	3729.3
B1	61.7	B2	123.5	B3	246.9	B4	493.9	B5	987.8	B6	1975.5	B7	3951.1

- b. Since the speed of sound is 340 m/s, calculate the wavelengths of the sequence: [Use $v = f\lambda$ where λ = wavelength in meters] Also note that 1 Hz = 1/sec.
- c. The humanoids flash the following sequence of colors: red, orange, pink, yellow, and white. If the pattern is to correspond with the sound, then the frequency of the lights should go: up, down, down, up. Look at the wavelengths of light in the visible spectrum. Do they follow the same pattern?



- d. Since the speed of light is 3×10^8 m/s, calculate the missing frequencies below the wavelengths: {Use: $v = f\lambda$ where λ = wavelengths of the sequence} [Note: 780 nm = 780×10^{-9} m and 385 tHz = 385×10^{-12} Hz] Do they follow the same sound pattern?
- e. In addition, because pink is a combination of spectral colors and white is a mixture of all of the colors together, do you see any systematic pattern at all?
- f. To make matters worse, the extraterrestrials go with a pattern of orange, pink, yellow, blue, indeterminate color; followed by pink, yellow, pink, yellow, blue. Use the diagram below to see if this might help: (See if you can match the sound pattern by plucking the notes.)

