What Causes the Northern Lights?

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This unit is intended for high school science teachers to use in an eleventh-grade chemistry course. Throughout this unit, students will learn about the movement of electrons within energy levels of atoms, and how this results in the release of electromagnetic energy. Students will conduct a flame lab investigation, and use the information from additional activities and class discussions to discover how the Northern Lights, also known as the Aurora Borealis, relates to this important chemistry topic. Inquiry-based activities aligning with Next Generation Science Standards (NGSS) will be a large component of the unit, and students will be in charge of directing their own learning. Twenty-first century learning skills will be utilized in addition to literacy components that reinforce reading, writing, listening, and speaking skills.