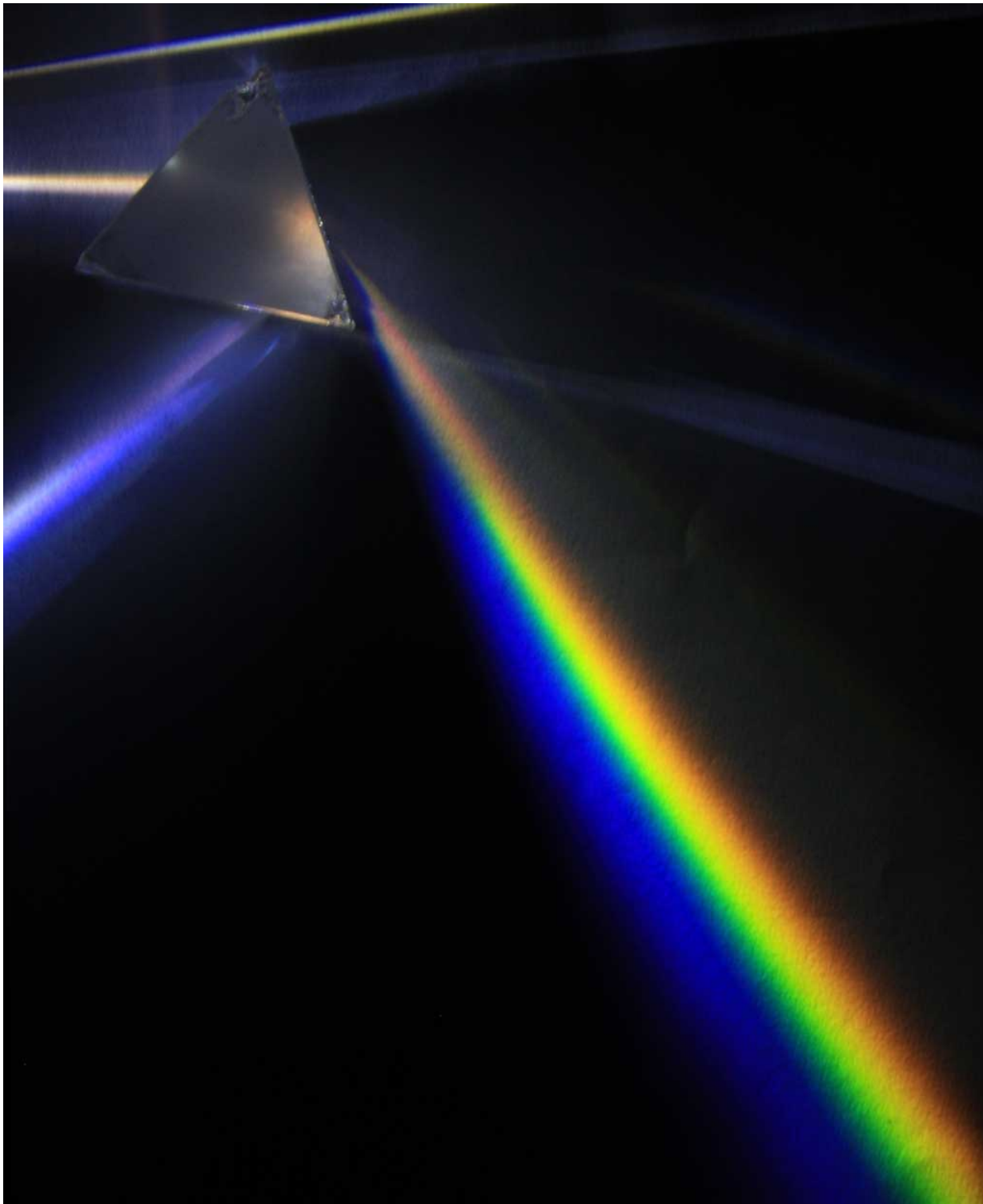


## 10.1: Introduction

### Astronomy Laboratory 10 – Star Colors and Spectroscopy

#### Module Introduction



When light strikes or enters a prism, it is dispersed into component colors. This is an example of spectroscopy. Light dispersion by D-Kuru is licensed under [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)

Spectroscopy is a major scientific tool. In astronomy it allows one to determine precisely the composition of stars, as well as if the star is moving toward or away from Earth.

In this lab, you will explore how spectroscopy works and learn in introduction to astronomy about star color versus star temperature. The lab exercise will take the concept outdoors, where you will visually observe and catalog different stars with varying colors. <sup>(1)</sup>

### Objectives

At the end of this module, students will be able to:

- Identify constellations and the colors of some of the stars within
- Make observations and record data using diffraction grating
- Describe astronomical spectroscopy based on research <sup>(1)</sup>

### Outcomes

The material in this module includes content designed to meet the following course outcomes:

- Explain and apply major concepts in astronomy including planets, satellites, stars, meteors, galaxies, and theories of the universe.
- Demonstrate knowledge of scientific method.
- Communicate scientific ideas through oral or written assignments.
- Interpret scientific models such as formulas, graphs, tables and schematics, draw inferences from them and recognize their limitations.
- Demonstrate the ability to think critically.
- Demonstrate the ability to use scientific and quantitative reasoning. <sup>(1)</sup>

### Assigned Readings

Learning Unit 10

### Assignments

- Star Colors
- Simple Spectroscopy Exercise
- Astronomical Spectroscopy
- Lab 10 Quiz <sup>(1)</sup>

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