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Using the Sunspotter in the STEM Curriculum

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Using the Sunspotter in the STEM Curriculum

Richard W. Schmude, Jr.

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Overview

- Introduction
- Goals
- Activities
- Problems
- Conclusions

Introduction: The Sunspotter

Introduction: Group Observation of:

- Earth’s rotation
- Sunspots
- Limb darkening
- Sun’s rotation
- Earth’s elliptical orbit
- Season

Introduction: A Sun Image

Introduction: Time requirement

- Simple to set up (less than one minute)
- Six minutes of class time needed; each student makes a drawing

Georgia Performance Standards Grade 4

- Concept/Skills to maintain
  - Uses tools for collecting data
  - Uses data to answer questions
  - Conducts simple investigations

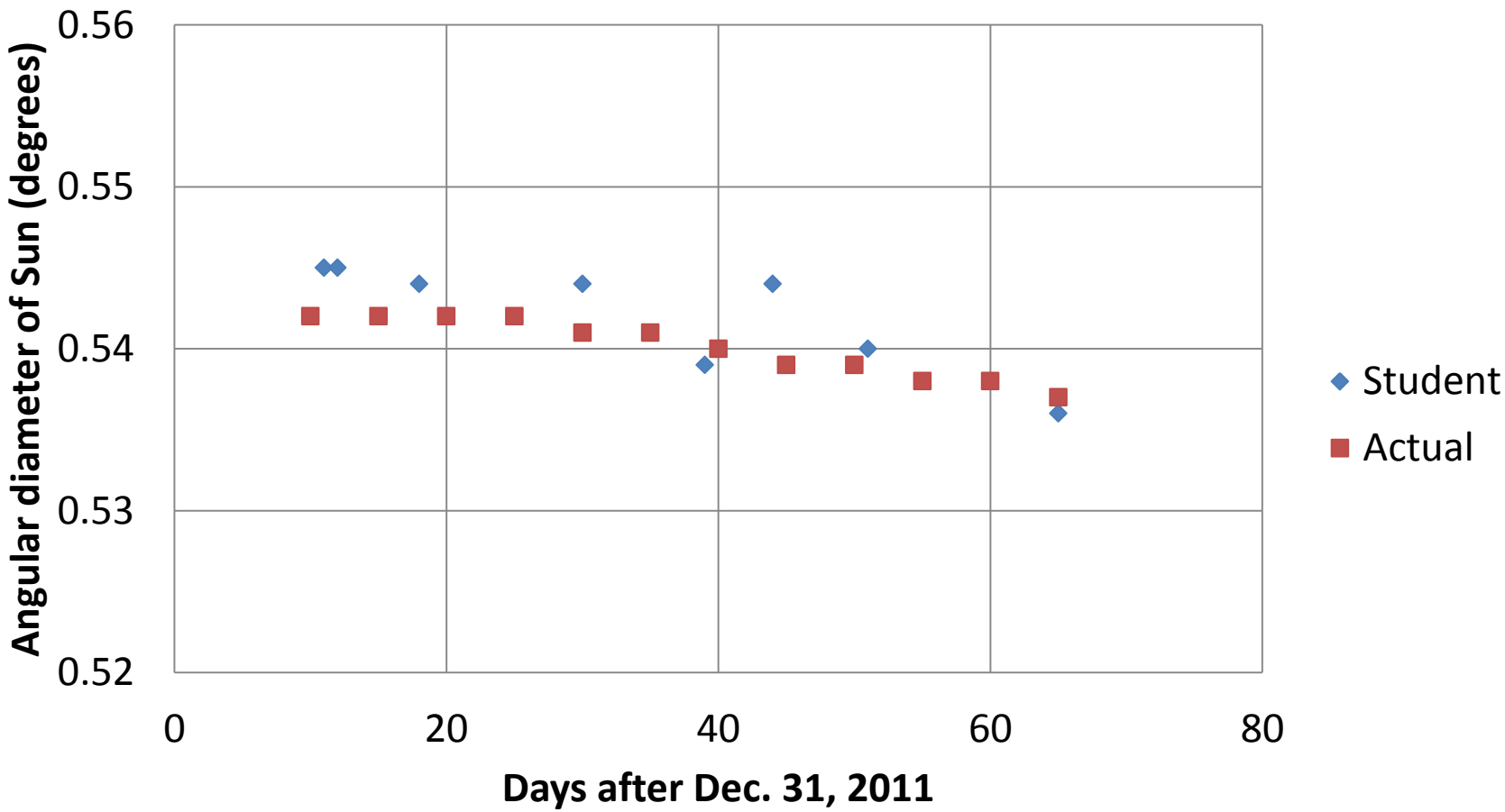
Georgia Performance Standards Grade 8

- Concept/skills to maintain
  - Analyzes scientific data via calculations and inference
  - Uses scientific tools
  - Writes clearly

Goals

- Learn how to set up sunspotter
- Be exposed to activities
- Discuss what may work in your classroom

Actual Measurements
Angular diameter of Sun



Actual Measurements

Date	Number of sunspots seen	Sunspot number
11 Jan	2	30
12 Jan	2	30
18 Jan	4	60
19 Jan	5	75
30 Jan	4	60

In my classroom

- Students are required to keep a journal
  - Log of sun drawings
  - Graph sunspot number
  - Summarize results

- Student feedback is usually positive