Using the Galileoscope in Public Outreach Programs in the United States and Chile

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Instrument designed by professionals*
Same for education program

Over 230,000 sold to date
Current price $25 (bulk)/$50
at www.galileoscope.org

*S. M. Pompea, R. N. Pfisterer, K. S. Ellis, D. N. Arion, R. T. Fienberg, “Optical and System Engineering in the Development of a High-Quality Student Telescope Kit”, SPIE, the International Society for Optical Engineering, San Diego, June 27, 2010.

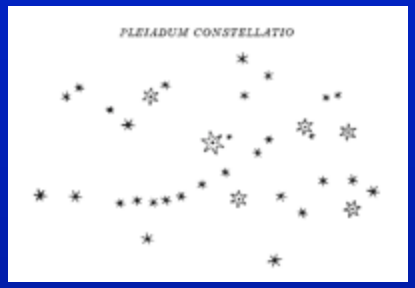
Galileoscope Kit
International Year of Light

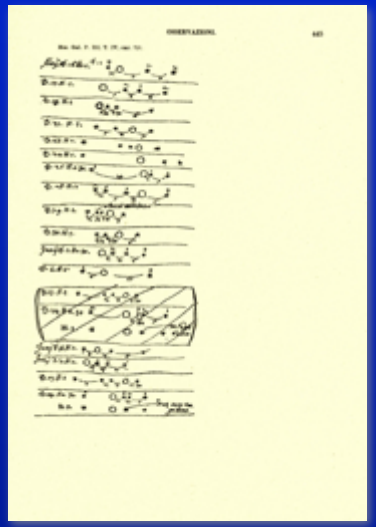
The Teaching with Telescopes Program Classroom Kit

Contents: Asymmetrical color light source, 10 glass short focal length lenses, 10 glass longer focal length lenses, large glass demonstration lens, 10 mounted vellum screens, DVD of curricula, 2 tripods, 2 Galileoscopes

Observational Astronomy Program
"In the Footsteps of Galileo"

- Emphasis on science process
- Observe what Galileo observed
- "Doing your own science"





Integration with Education Projects

Centro de Apoyo de la Didáctica de la Astronomía

Diverse Audiences

e.g., teachers, museum educators, 5th graders, urban audiences

One Example: Math Moves You Program

- Partnership with Raytheon, Tucson Amateur Astronomy Association, and the Arizona MESA program
- 70 Raytheon Engineers, TAAA members, and NOAO staff help students build Galileoscopes
- Since 2010, hundreds of students per year in program

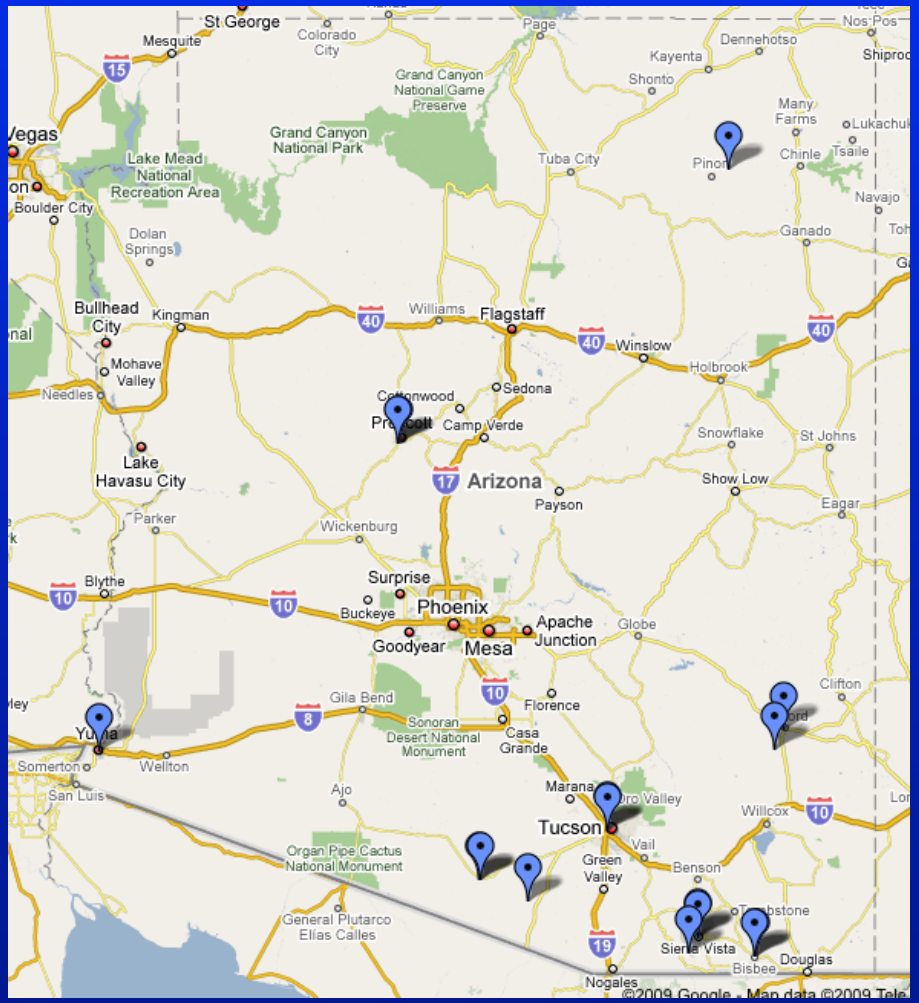
Arizona Star Party Program

Astronomy is a Social Activity

Arizona Star Party Model

- Selection of cities
- Train every 5th grade teacher
- Each teacher gets NOAO developed teaching kit
- Every 5th grade student builds a Galileoscope
- Culminating star party
- Evaluation
- Follow on activities

Hands On Optics Programs
Galileoscope Star Parties in Arizona



Summary
NOAO can be of assistance!

- We have developed several program models for different audiences.
- We have focused on the challenge of getting science taught in elementary schools.
- We have teacher professional development models to share.

We want to partner with you in
whatever ways support your educational programs.

References

S. M. Pompea, R. T. Fienberg, D. N. Arion, T. C. Smith, D. Isbell, “Progress on Creating the Galileoscope for the International Year of Astronomy 2009”, *Preparing For The International Year Of Astronomy: A Hands-On Symposium*, ASP Conference Series Volume 400, M. G. Gibbs, J. Barnes, J. Manning, and B. Partridge, eds., 2008.

S. M. Pompea, R. T. Sparks and C. E. Walker, “Teaching with Galileoscopes and other Small Telescopes”, *ASP Conference Series Earth and Space Science: Making Connections in Education and Public Outreach*, 443: 54, eds. J. Jensen, J. Manning, M. Gibbs, 2011.

S. M. Pompea, R. Sparks, and C. Walker, “Optics education through the Arizona Galileoscope Program”, *Proceedings SPIE: Optics Education and Outreach II,* Vol. 8481, 2012.