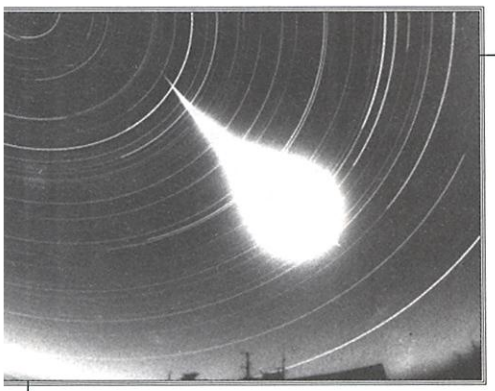


RESOURCES

Shooting Star Gallery

In the 1400s, all atmospheric phenomena were called meteors: winds, rain, hail, rainbows, auroras, and lightning, as well as shooting stars. Although this history echoes today when we tune in to our local "meteorologist" for the weather report, it's been a good 150 years since scientists recognized meteors as clumps of matter that come from space.

The American Meteor Society's Web site offers a wealth of lore on meteors for both professionals and amateur sky watchers. There are great photographs, logs of meteor activity, primers on observing, and forms for reporting sightings—both ordinary meteors and the especially bright ones called fireballs. A link to a sister site covering both meteors and comets by Gary Kronks offers details of major meteor showers and tips on how to observe them. In mid-April, look for the Lyrids: about 10 meteors an hour, with occasional bursts of 100, especially on the best viewing days of 21 to 22 April.

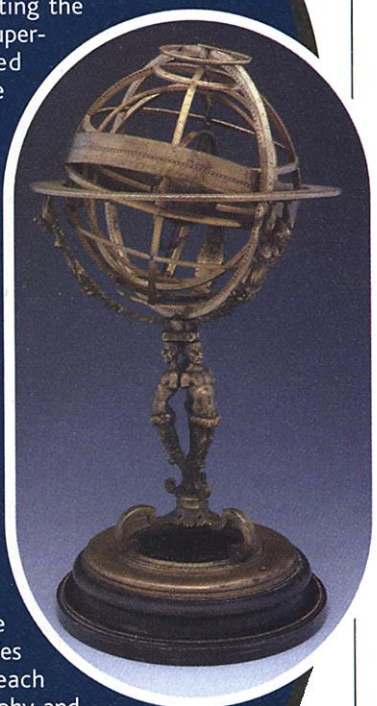
Others sections detail various ways of tracking meteors. The radio scatter method, for instance, looks for the trail of ionized air left in a meteor's wake, while spectroscopy uses light spectra to reveal a meteor's speed.

www.amsmeteors.org

EXHIBITS

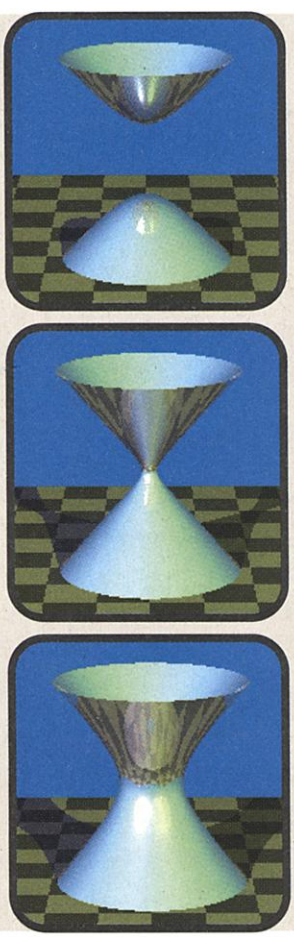
Instruments of Science History

Without mechanical clocks, how would you mark time in the dark? Fifteenth century scientists solved the problem by inventing the nocturnal, a device made of superimposed disks that measured time at night by following the movement of stars and the moon. Find out more at Epact, a new Web catalog of 520 medieval and Renaissance scientific instruments.



Epact was set up by the Museum of the History of Science, Oxford, and three other museums in the United Kingdom, Italy, and the Netherlands to display their collections of instruments from before 1600. The often lavish and beautiful pieces range from sundials and surveying instruments to armillary spheres, which modeled the celestial sphere with respect to the horizon of an observer (at right, one from France circa 1570). Besides photos and descriptions of each piece, Epact holds a bibliography and technical articles about how the instruments were used. The site notes that nocturnals had one drawback: They didn't work too well on cloudy nights.

www.mhs.ox.ac.uk/epact



EDUCATION

Math on the Move

Mathematics may be the queen of the sciences, as Carl Friedrich Gauss famously said, but you'd never know it from the legions of math-phobic undergraduates. The new *Journal of Online Mathematics and Its Applications* (*JOMA*) aims to change that by serving up an enticing array of Web-based teaching tools for all levels of college math.

The inaugural issue is devoted to precalculus and calculus "mathlets": interactive learning tools that let users graph formulas, such as the area under a curve or a predator-prey model of foxes and rabbits. *JOMA* also plans to post dazzling graphics, such as the stills from the animation at left: A series of surfaces called hyperboloids morph together with small changes in one parameter in the defining formulas. "With computer tools, what mathematicians see only in their minds, other people can see for real," notes founding editor David A. Smith of Duke University. He hopes to put out a new issue every few months.

www.joma.org

DATABASES

Genome Express

In a hurry to find up-to-date gene information on model plants and animals? Then check out euGenes, an express ride into seven popular genome databases.

Drawing on methods used by FlyBase, the well-known *Drosophila* genome site, euGenes (short for Genomic Information for Eukaryotic Organisms) provides a single interface for trolling public databases of the fruit fly, human, mouse, mustard weed, worm, yeast, and zebrafish genome sequences. (The rice genome sequence is coming soon.) The search options are simpler than those for some individual organism databases. That makes the site easy to use for students and nonspecialists, says developer Don Gilbert of Indiana University, Bloomington. But if the reports on sequence, map, and functional data aren't enough, links lead to more detailed databases. Gilbert says euGenes should also be a boon to anyone looking for gene relationships across species.

iubio.bio.indiana.edu/eugenes

Send great Web site suggestions to netwatch@aaas.org

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