

ON THE CALENDAR

Today

■ **College night:** 6:30-9 p.m. Lone Star Convention Center, 9055 Airport Road (FM 1484). Conroe, Montgomery and Willis school districts host the event for students and parents. More than 150 representatives from colleges, universities, technical and trade schools, and military and service academies will attend. Two

general financial aid sessions will be from 6:30-7:15 p.m. and 7:30-8:15 p.m. For directions, visit www.thelonestar.org.

Saturday

■ **Museum gala:** InterContinental Hotel. The Children's Museum of Houston will present "A Beautiful Evening in Venice" gala. For information, call 713-522-1138, ext. 216.

WINNING NUMBERS

Texas

LOTTO (Oct. 2)	8-23-33-37-40
Bonus ball	15
Estimated jackpot	\$11 million
Winning tickets	None
Next jackpot (Oct. 6)	\$13 million
PICK 3 DAY (Oct. 4)	7-0-8
PICK 3 NIGHT (Oct. 4)	8-3-7
CASH 5 (Oct. 4)	2-16-20-21-24
TWO STEP (Oct. 4)	4-13-18-24
Bonus ball	22

Louisiana

LOTTO (Oct. 2)	2-11-37-38-39-40
PICK 3 (Oct. 4)	9-6-5
CASH QUEST (Oct. 2)	1-2-15-37
POWERBALL (Oct. 2)	2-13-29-32-35
Powerball	4



Mega Millions

MEGA (Oct. 1)	8-10-17-24-39
Mega Ball	52
Megaplier	4
Estimated jackpot	\$101 million
Winning jackpot tickets	1
Next jackpot (Oct. 5)	\$10 million



More info:
713-220-2000
Ext. 1234

THE LINEUP

- **SUNDAY:** Communities & Neighborhoods
- **MONDAY:** Traffic & Transit
- **TODAY:** Environment, Science & Space
- **COMING WEDNESDAY:** Education: Students get hands-on civic lesson.
- **THURSDAY:** Health & Medicine: Local health
- **FRIDAY:** Your Government

ENVIRONMENT, SCIENCE & SPACE

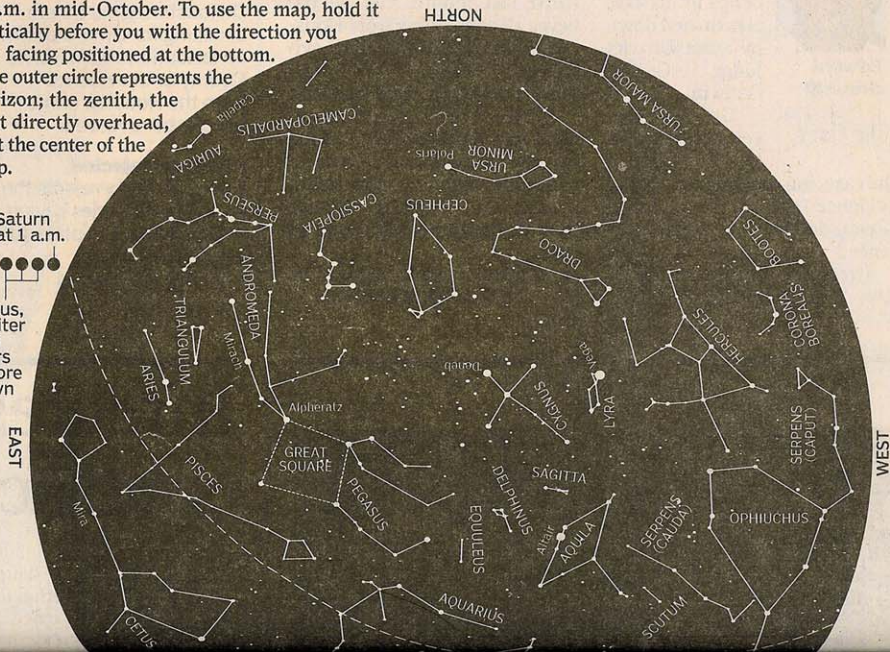
OCTOBER STAR CHART

This is how the sky over Houston will look at 9 p.m. in mid-October. To use the map, hold it vertically before you with the direction you are facing positioned at the bottom.

The outer circle represents the horizon; the zenith, the spot directly overhead, is at the center of the map.

Saturn at 1 a.m.

Venus, Jupiter and Mars before dawn



STUMP THE SCHOLAR

Q: If you could place it on a scale, does the Earth get heavier or lighter as time passes?

— Stan Hildebrand, Katy

A: Your question was a good one, so I shared it with my children, who helped with the answer.

On a clear dark night, we may see a bright streak of light in the sky.

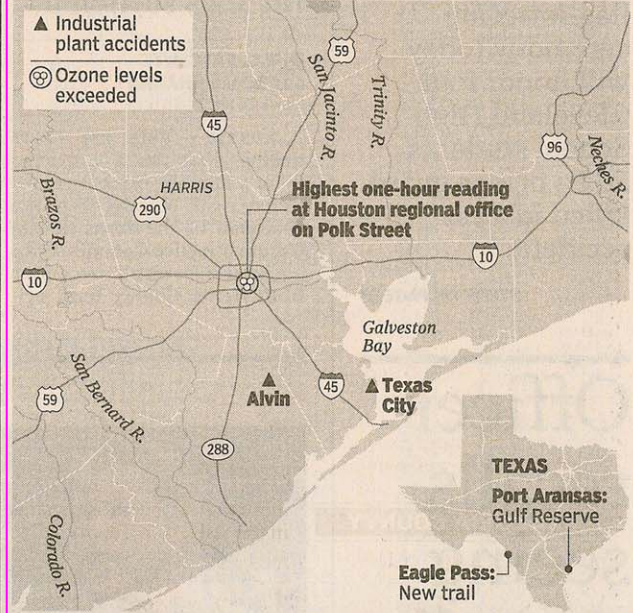
We say this light streak is a shooting star or falling star. This light streak is caused by friction heat of pieces of space material coming into Earth's atmosphere.

Such pieces of space material, if seen on the ground, are called meteorites.

This happens every day whether we see it or not.

Assuming the Earth does not lose material, then it should be heavier each day because of added meteorites.

ECO-WATCH



- ▲ Industrial plant accidents
- ⊙ Ozone levels exceeded

Highest one-hour reading at Houston regional office on Polk Street

TEXAS Port Aransas: Gulf Reserve

Eagle Pass: New trail



B.C. OREN: CHRONICLE

Meteoroids in our sky

1920s by the great astronomer Edwin Hubble, for whom the space telescope is named. Hubble used some blue stars that vary in intensity over time to estimate the brightness of stars in Andromeda and, in turn, their distance.

To find the galaxy, start with the Great Square, four stars high in the southeast. The star in the northeast corner of the square is Alpheratz and the constellation Andromeda is a line of stars extending out to the northeast.

The great Andromeda galaxy is a faint smudge just north of Mirach, the second bright star in the line of the constellation.

For questions or comments on the Environment, Science & Space page, contact raequel.roberts@chron.com.

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— Stan Hildebrand, Katy

A: Your question was a good one, so I shared it with my children, who helped with the answer.

On a clear dark night, we may see a bright streak of light in the sky.

We say this light streak is a shooting star or falling star. This light streak is caused by friction heat of pieces of space material coming into Earth's atmosphere.

Such pieces of space material, if seen on the ground, are called meteorites.

This happens every day whether we see it or not.

Assuming the Earth does not lose material, then it should be heavier each day because of added meteorites.

However, the Earth is about six sextillion tons, and if we assume about 10 tons (likely much less than this) of meteorites are added each day, there would be about 15 trillion tons of meteorites added to the Earth over its 4.55-billion-year history.

In other words, the total meteorites added to the Earth would be less than 0.0000003 percent of the Earth's mass. This number is unthinkably small.

So, in theory, the Earth should be heavier with time if no Earth material was lost, but the best scales available today cannot precisely measure such a small increase in weight.

Additionally, there is no evidence that Earth material may have been lost or is being lost in any conceivable way (other than possible/probable gas loss in the very early Earth).

However, being scientists, we must be objective and logical.

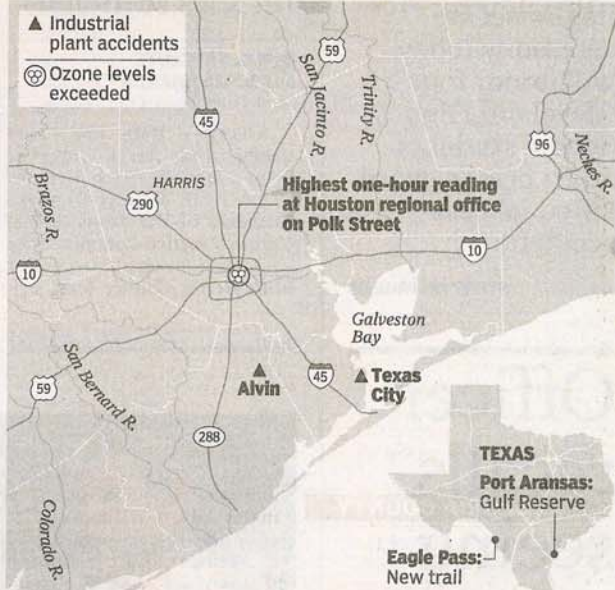
That is, absence of evidence is not evidence of absence.

So, the answer is, to my knowledge or to our present knowledge, that we do not have data.

— Yaoling Niu, associate professor of geosciences, University of Houston, with children Andy and Lily

Local experts answer your common (or uncommon) questions about science. Please send them to: eric.berger@chron.com or Eric Berger, City Desk, Box 4260, Houston, TX 77210.

ECO-WATCH



WORST AIR. Houston has taken the lead in the annual race for the city with the worst smog, beating Los Angeles by eight days with 1½ months left in the smog season. Several events last week supported Houston recapturing the title. On Wednesday, Houston was the only city in the nation where the U.S. Environmental Protection Agency forecasted an unhealthy air quality day. A day later, 95 percent of the region's air quality monitors reported unhealthy ozone levels, in part because ozone levels in the air coming into Houston were high. Bad smog levels haven't been that widespread since 1998.

NEW TRAIL. Overcoming private property concerns, Congress passed legislation last week that would designate El Camino Real de los Tejas, which stretches from the Rio Grande near Eagle Pass to Natchitoches, La., as a National

Historic Trail. El Camino Real was a corridor of trails used by settlers, immigrants, American Indians and the military.

GULF RESERVE. More than 200,000 submerged acres near Port Aransas were approved by the federal government last week for a National Estuarine Research Reserve, the first such reserve along the Western Gulf of Mexico. The University of Texas at Austin Marine Science Institute will develop a management plan for the site, which will open in early 2006.

INCIDENT LOG. There were two accidental releases of pollution last week, according to state records. BP Products North America in Texas City released 59 pounds of nitric oxide, and Equistar Chemicals in Alvin released 606.2 pounds of 1,3-butadiene because of a leak.

Source: Chronicle research; Associated Press

FIT OR FAT?

The federal government recently published a list of states, and the percentage of adults who get recommended amounts of exercise, an important step in controlling obesity and its health and economic implications.

The exercise recommendations are 20 minutes a day, three days a week of vigorous activity, or 30 minutes, five days a week of moderate activity, such as brisk walking or gardening.

Top 5 states:	Bottom 5 states:
1. Wyoming 55.8%	1. Kentucky 28.9%
2. Washington 55.5%	2. Nebraska 34.2%
3. Vermont 55.0%	3. Louisiana 35.1%
4. Alaska 54.6%	4. Tennessee 36.9%
5. Idaho 54.3%	5. Mississippi 37.6%

Source: U.S. Centers for Disease Control and Prevention

Texas
42.9%