



The Scoop

This newsletter is published by The Connecticut Lighter Than Air Society for its members and interested parties. Portions of this newsletter may be reprinted if credit is given to the writer to CLAS. The opinions expressed are not necessarily those of the organization or members of this organization (but if they are they'd be damn good ones!). For more information contact: Mick Murphy — Minister of Propaganda, PO Box 1528, Litchfield, CT 06759-1528. (860) 567-3448. E-mail Blarney007@aol.com

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What is wind?

Wind is the movement of air over the surface of the Earth, from areas of high pressure to low pressure. But what causes the changes in pressure? There are a few concepts that we will have to explore to find exactly how this works, but ultimately all the energy on our planet comes from the Sun.

The Sun gives out all sorts of radiation, including heat and light energy, and is so powerful that it radiates 100,000,000,000,000 kilowatt hours of energy to the Earth per hour. When this energy hits the Earth, the ground and other surfaces absorb it, and heat the surrounding air. It is these differences in temperature, together with the rotation of our planet, that create the wind.

About 1 to 2 per cent of the energy coming from the sun is converted into wind energy, which is enough to create sufficient electricity to meet the needs of the world three times over, and is a source of power that will never run out.

The density of air: Air, like all substances around us, has a certain density.

$$\text{Density (kg/m}^3\text{)} = \text{mass (kilograms)} / \text{volume (meters cubed)}$$

The density of air is small but not zero. If air didn't have any mass, and therefore had a density of zero, then gravity would not be able to attract it and air would simply float off into space with disastrous results for all living creatures.

There is only a thin layer of air surrounding the earth, what we know as our atmosphere. This extends upwards more than 50 kilometres above ground level. At this height the density is less than 1% of the ground level value. If the earth were the size of a

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FAA Safety Fest 2003

Bob Martens of the FAA has extended his appreciation to CLAS for their support at Safety Fest. Our continuous support of this event keeps the ballooning community in a very favorable light with the FAA. This event serves to help educate balloonists as well as help balloonists educate the FAA about ballooning operations in our area. Once again CLAS was able to provide Safety Fest with the Keynote speaker. Through the efforts of Mick Murphy, we were able to get a world class speaker at the event. Santo, through the safety counselor network was able to raise the funds to make this happen as well as coordinate the event with the FAA. Daryl, worked diligently to pull together a training program for our organization. Frank Bart and Daryl were on hand with balloon systems for display and training. Dave Lasher, Charlie Perrault, Kevin Brielman and Daryl put together informative presentations. Kathy Wadsworth supported the event financially in her generous contribution to help bring Rutan to Connecticut. Penny provided the club with a venue for Sunday's part of the program. Mike, Tony, Al, Kevin, Erwin, Ellen, Cindy, and others provided support for our booth; and the list goes on. It is clear that not everyone was mentioned in this thank you, but our thanks go out to you just the same. All of these efforts would be futile if not for the attendees. The club turn out for this was very good. This event was the result of an excellent display of teamwork. Lets turn our thoughts and efforts to our training events for next year. We will be putting together a safety seminar as well as participating in Safety Fest next year. Through your continued efforts and support, it is hoped that next years programs will surpass this years.

CLAS Business Meeting: May 15, 2003

Meeting called to order at 7:45 p.m. Members present: Lisa Huck, Jim O'Brien, Cindy Smith, Daryl Smith, Kevin Brielmann, Tony Roswell, Terry Rollinson, Carlos Kebe, Ellen Dressel, Erwin Dressel, Mike Bollea, Charlie Perreault, Penny Christy

Minutes: Read and accepted unanimously.

Treasurer's Report: Checking account: \$2594.93. CD's: \$5483.20

Report accepted unanimously.

Correspondence: No report.

Sunshine: No report.

Products: Merchandise on hand: \$1,987. Current sales: \$0

It was agreed to ask Frank Bart if we can we sell shirts at Goshen. Current pricing of 12/16/18 (s/m/l) will be reduced to 8/10/12. We will sell shirts also at Tewkesbury on 6/21.

Membership: Current number: 51 currently paid up

Daryl and Penny will call those who did not yet pay their dues for the year. Registration at SafetyFest will be a useful occasion for this.

Flight Manual: Penny wants to have a "work detail" after Sat or Sun portion of the safety seminar for an hour or so to assemble new copies of the manual. Some people have not yet received manuals.

Education: SafetyFest is this Saturday. Daryl handed out sign-up for BFA seminar – a two-day seminar, same as last year. There was some discussion about which balloon to use for the pre-flight class. Booth, CLAS flag, will put basket/burner. Cindy will bring JB newsletters and sign-up sheets. Mike Bollea will bring his tv/vcr combo and Charlie's ABQ tape. We should meet by 7:30am. Various people volunteered to print out copies of the Scoop to distribute at SafetyFest. Some discussions have happened regarding 2004 safety seminar. No decision has yet been made on core vs. single-subject. Date probably be 2/21/04 or 2/28/04.

Chris Mooney, Bill Costen and Daryl visited the NE Air Museum (NEAM). The ballooning exhibit there contains material dating through about 1900 but the museum would like to include more recent history. NEAM would like us to work on the exhibit, and would like us all to be members. They have a lot of WWII equipment in storage; they will allow some members to catalog existing material. They will be having the dedication of their new B-29 on June 1. Also we may try to get BFA to hold May board meeting at NEAM. If we had our 2004 seminar in the area, could have reception the preceding evening at NEAM.

Competition: Marlborough fly-out is scheduled for 5/24 or 5/25. Breakfast will be held on Sat at Daryl & Cindy's regardless (9am if no flying); after flying, otherwise. Next date is 6/21 or 6/22 possibly at Millerton NY where there is lots of farmland, but lots of livestock. Erwin suggested Air & Space Day in Tewkesbury, MA instead. FAA's Sharon Felton would get waivers as necessary since the proposed field is 22 miles from Logan. Some Granite State people coming too. This event would be a good one for kids also.

FAA

BFA: No report. BFA wants us to try to increase BFA membership at our seminars, etc.

Winter Dinner: No report.

Audit Committee: No report

Other Business: No old business.

Meeting adjourned at 9:18pm.

Respectfully submitted, Jim O'Brien, Secretary.

Lookie Here



The Hot Summer Sale!

From June 10 to July 31, the fabulous and popular
FireFly 8B with a 4.5 basket
and all the goodies is on sale for **\$23,900.**

Look
Here

There is a **FAST START** for any order
placed by June 24; with a \$4.9 or 4.9 at no charge.
Replacement **8B envelopes** are priced at **\$15,000.**

Especially Here



**Call Your FireFly Dealer for More
Information on This Great Sale!**

Here
Too



www.fireflyballoons.net

email: info@fireflyballoons.net

704.878.9501 FAX 704.878.9505
810 SALISBURY RD. STATESVILLE, NC 28677

Disclaimer: We didn't spend a lot of money on this ad so we could pass the savings on to you.

Balloon across the moon picture:

Explanation: Anticipating the celestial shadow play of a solar eclipse, sky gazers across Germany watched the Sun rise on May 31. In Bonn, astro-photographer Thilo Kranz had set up his small refractor telescope and camera on the Kennedy Bridge across the Rhein river to get a good view to the northeast. The timing of this eclipse must have seemed ideal for a local balloon flight too, as hot air balloonists also favor early morning hours with usually calm surface winds. Kranz and colleagues had noticed a balloon drifting in the hazy sky near the horizon



and speculated about viewing the eclipse from on board. But when the eclipsed Sun finally emerged into view they were delighted to see the lighter-than-air craft make the occasion a very special show from their own vantage point.

In fact, in the central panel of this montage of Kranz's telescopic eclipse images, the silhouetted balloon reminds the APOD editors of a remarkably well-fed exclamation mark!

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football, the atmosphere would be equivalent to a 1mm thick layer on the surface of the football.

Air pressure: Because air has density, the air in the atmosphere is constantly pushing down on us. The size of this pushing force over each unit of area is called the air pressure, or atmospheric pressure. **Pressure (Pascals) = force (Newtons) / area (m²)**
(The unit of pressure is called the Pascal or Pa for short, 1 Pascal = 1 Newton per m²)

Atmospheric pressure

The pressure on the earth's surface due to the air above us is about 100000 Pa - 101,325 Pa to be precise. That's 1Kg pushing on every square cm! 101,325 Pa is also commonly referred to as 'one atmosphere'. The weight of a column of water 10 meters high would be needed to increase the air pressure at the base of the column by 1 atmosphere.

A barometer measures air pressure. If you took a barometer up in a hot air balloon you would see the pressure reading fall the higher the balloon goes. This happens because there is less air above the balloon the higher up into the atmosphere it goes. If you went too high the air pressure would become so low that you would not be able to breathe properly. This is why modern passenger jets have 'pressurised cabins' to keep the conditions similar to that at the earth's surface so the passengers are more comfortable.

There is another unit of pressure called the "milli-bar" or Mb for short. There are exactly 100 Pascals per milli-bar, so 1000 Mb is about one atmosphere. If you watch the weather forecast on TV you may see a map showing atmospheric pressure. This is referred to as an isobar chart. Isobars are similar to contour lines. Instead of the lines showing areas where the ground is the same height above sea level, the lines show areas where the atmospheric pressure is the same. The closer the lines are together the more rapidly the pressure changes from one place to another. This is similar to contour lines on a map, the closer they are together the more steep the slope.

Why does the pressure vary from place to place and from day to day? There are two causes:

1) the rotation of the earth

As the earth spins on its axis it drags the atmosphere round with it. However, the air higher up in the atmosphere is less affected by this dragging/stirring effect. The difference in the air speed at different levels in the atmosphere causes the air to mix, forming turbulence, which causes wind at the earth's surface.

The rotation of the earth causes another related phenomenon, the **Coriolis force**. This is best demonstrated by example. Take a piece of paper and pin it onto something which will not get damaged, e.g. a carpet. Rotate the paper anti clockwise (to represent

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Two safe after balloon's tangle with power lines

Last Update: 06/16/2003 7:35:27 AM By: Associated Press

(Albuquerque-AP) -- A hot-air balloon caught fire after it became tangled in power lines while landing. Authorities say Albuquerque balloon pilot Sam Cabeza de Baca and a 15-year-old boy flying with him emerged from Sunday's botched landing without injury.

The pilot intended to land in an open field at 2nd and Rio Bravo SW but ended up getting snagged on some power lines as he drifted over a street. Bernalillo County Sheriff's spokeswoman Michele Arviso Devlin says part of the balloon caught fire, but Cabeza de Baca put it out with a fire extinguisher. Arviso Devlin says the two were stranded in the gondola for about 15 minutes until utility workers arrived to turn off electricity and rescue them.



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The Almanac: Today

is Sunday, June 15, the 166th day of 2003 with 199 to follow. This is Father's Day. The moon is waning. The morning stars are Mercury, Venus, Mars, Uranus and Neptune. The evening stars are Jupiter, Saturn and Pluto.

On this date in history:

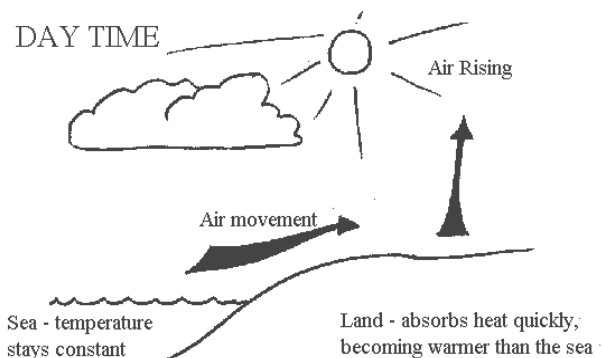
- In 1752, Benjamin Franklin, in a dangerous experiment, demonstrated the relationship between lightning and electricity by flying a kite during a storm in Philadelphia. An iron key suspended from the string attracted a lightning bolt.
- In 1785, two Frenchmen attempting to cross the English Channel in a hot-air balloon were killed when their balloon caught fire and crashed. It was the first fatal aviation accident.
- In 1963, Soviet cosmonaut Valery Bykovsky was launched on a space mission, during which he orbited the earth 81 times.

the movement of the earth), whilst at the same time trying to draw a straight line. The line you draw will appear curved.

A similar effect occurs when air is moving over the surface of the earth as it rotates. Instead of travelling in a straight line, the path of the moving air veers to the right. As a result instead of the air (or wind) moving in a straight line from areas of higher pressure to areas of lower pressure, it moves almost parallel to the isobars. The result is that the wind circles in a clockwise direction towards the area of low pressure. In the Southern hemisphere, the wind will circle in an anti-clockwise direction and clockwise in the Northern hemisphere.

2) the heating effect of the sun

The warming effect of the sun varies with latitude and with the time of day. Warmer air is less dense than cooler air, and rises above it, so the pressure above the equator is lower than the pressure above the poles. The warming effect is greater over the equator as the sun is directly overhead. Nearer the earth's poles the angle at which the sun's rays hit the earth is more acute, so the same amount of energy is spread over a greater area.



Land heats up and cools down more quickly than the sea. During the day the air above the land heats up, expands and therefore becomes less dense and rises. The atmospheric pressure above the land drops and air moves in from above the sea, where the air pressure is higher. This causes a sea breeze. During the evening, the temperature of the land drops more quickly than the sea, causing the breeze to operate in the reverse direction.

Summary

- Atmospheric pressure is caused by the mass of the air above us
- Pressure gradients are caused primarily by the rotation effect of the earth stirring up the atmosphere, and also by variation in the heating effects of the sun
- Air movement or wind is due to pressure gradients from place to place.

AIR & SPACE DAY 2003

Paul Manning has invited our club to participate in AIR &SPACE DAY 2003.

Tewksbury MA is hosting the event on June 21, from 10:00AM through to 8:00 PM the event will be held at Livingston Recreational Field, Livingston St. Tewksbury, MA.. with the expected crowd to exceed 10,000.

We have invited the GRANITE STATE BALLOON CLUB to participate in our CLAS HARE AND HOUND COMPETITION and FLYOUT at 6:30 PM.

AIR & SPACE DAY 2003 is a free, fun, family, educational event, created to show children that science, math, and history can be fun!

Some special guests will be:

Debut of the Worlds tallest hot air balloon...an 18 story high space shuttle...180 feet tall. See www.usflagballoon.com

An Astronaut.

John Dobson, noted astronomer & inventor of the Dobsonian telescope.

Lt.Col. Mike Stockwell, Dual qualified jet and helicopter pilot.

Tuskegee Airman, Cliff Reed (1st black fighter pilots 332nd Airborne WWII.

Don Rethke aka "Dr Flush" inventor of the spaceshuttle toilets.

F-22 Flight simulator

Cessna 152 "Berlin Candy Drop"

Skydivers

The Granite State Balloon club will be there to Tether and display their Balloons.

Powered Paraglider smoke show.

Model planes and much more.

Helicopters.... State Police, Coast Guard, and National Guard plus TV helicopters

Two Star Lab Planetariums

Many many displays by the leading manufacturers and Universities of our day

We will have a fly out and competition at 6:30 PM. FAA Rep. Sharon L. Felton will take care of the waiver's required.

The **GRANITE STATE BALLOON CLUB** has accepted the friendly challenge by **CLAS** to a **hare and hound competition**. I'll keep you informed as this develops. Perhaps the two clubs can buy a trophy that would be held by the winning club for the year.

There is already a good deal of camaraderie between the two Balloon Clubs. This Air and Space day is located somewhat between our two groups and should lend itself to a great time by all. Bring along your kids, grandkids, or neighbor's kids. This show is put on for them. Suggest you get there about noon to let the kids see the sights, then with lots of luck we might fly. Don't know about you, but I'm beginning to wonder if summer will ever come to Connecticut. For more details, check out www.spacemanning.net

Our Club will get a table for selling our club's products and we could use a few volunteers to help with that. We will need a count of those CLAS members planning to bring their Balloon up for the competition to assure enough field space. Please call or e-mail Erwin at edressel@cox.net or phone 203-272-6116.

AIR & SPACE DAY 2003 UPDATE

Dressel has been tasked to write up the waiver information. Those that want to fly and have not contacted me to date must do so ASAP. 203-272-6116 or e-mail castlevieballoons@cox.net

Dick Gordon will be the attending Astronaut

Bill Walsh will be flying the power glider

The record holder for the deepest underwater salvage operation, Curt Newport will be there. Among many interesting finds, he salvaged Gus Grissom's space capsule 16,000 feet deep.

Phil Rossoni with the coolest glider I ever saw. Check it out www.geocities.com/x_surfer2003

It will be an action packed day put on especially for kids! BIG KIDS TOO!!

LET YOUR KIDS GET A GREAT UNDERSTANDING OF SCIENCE, MATH AND PHYSICS WHILE THEY'RE HAVING FUN!

MT Brace Open Invitation

Dear Flying Folks:

The Brace Club Spring Fly-In is June 21-22nd. There will be Hot Air Balloon demos and rides, Fun flying, towing, Manufacturer Demos, and a big ole BBQ Saturday night. All the schools are invited to bring students (with their instructors) so as not to miss a day of training or a day of fun!

We hope that the spirit of togetherness and fun at the Brace Fly-In will help us all grow a safer flying community and encourage more students to take up the sport at their local schools. Feel free to e-mail me any questions you have about weekend's activities.

The price for full club members for the weekend is \$5. Non-members get a day membership at the event for \$25. ALL pilots must be USHGA members, including students with their instructors. Well trained children and dogs are welcome, leashes must be on hand for both.

The main Brace Peak launch is a 1,600' west site with a bald peak. Its a very simple, wide launch that is forgiving to the novice, with no steep drop offs. It easily accepts winds from WSW to WNW. The ridge is extremely smooth for several miles around launch. There is a 10 min hike from where the shuttle drops of the pilots.

The lower (1000') launch ("Stan's Launch) is a more abrupt, steep launch. Its virtue is that the shuttle can get right to launch.

The Club has over 75 acres of LZ directly below both launches, which include the campgrounds and training hills. There are also many other launches in the area (NW, ESE, and soon N-NE at Catamount), though not all are suitable for "2"s, and most involve a hike.

Feel free to e-mail with any questions!

Paul Niznik
 P&K Industries/Fly New York
 (917) 687-3748
 info@flyny.net
 5907 Boulevard East #D8
 West New York, NJ 07093

JUNE			JULY	
SUNRISE	SUNSET		SUNRISE	SUNSET
05:21	08:19	1	5:23 AM	8:30 PM
05:21	08:20	2	5:23 AM	8:30 PM
05:21	08:21	3	5:24 AM	8:30 PM
05:20	08:22	4	5:24 AM	8:30 PM
05:20	08:22	5	5:25 AM	8:29 PM
05:19	08:23	6	5:26 AM	8:29 PM
05:19	08:24	7	5:27 AM	8:29 PM
05:19	08:25	8	5:27 AM	8:29 PM
05:19	08:25	9	5:28 AM	8:28 PM
05:19	08:26	10	5:29 AM	8:28 PM
05:19	08:26	11	5:30 AM	8:27 PM
05:18	08:27	12	5:30 AM	8:27 PM
05:18	08:27	13	5:31 AM	8:26 PM
05:18	08:27	14	5:32 AM	8:25 PM
05:18	08:28	15	5:33 AM	8:25 PM
05:18	08:28	16	5:34 AM	8:24 PM
05:18	08:28	17	5:35 AM	8:24 PM
05:19	08:29	18	5:35 AM	8:23 PM
05:19	08:29	19	5:36 AM	8:22 PM
05:19	08:29	20	5:37 AM	8:21 PM
05:19	08:30	21	5:38 AM	8:21 PM
05:19	08:30	22	5:39 AM	8:20 PM
05:19	08:30	23	5:40 AM	8:19 PM
05:20	08:30	24	5:41 AM	8:18 PM
05:20	08:30	25	5:42 AM	8:17 PM
05:20	08:30	26	5:43 AM	8:16 PM
05:20	08:31	27	5:43 AM	8:15 PM
05:21	08:30	28	5:44 AM	8:14 PM
05:21	08:30	29	5:45 AM	8:13 PM
05:21	08:30	30	5:46 AM	8:12 PM
		31		8:11 PM

SKYBOUND

Santo Galatioto is now a dealer for "SkyBound" balloon replicas. This new collectable series has been advertised in all of the balloon publications.

There are currently four models available: Memories of Paris, Stars and Stripes, Kaleidoscope and Costal Journey. It is expected that new models will be released later this year. Santo has a small supply of each model on hand, ready for immediate delivery. If you are interested in purchasing any of these balloon sculptures, call Santo at home at 203-397-0521 or at work at 203-432-9873.

The Scoop



PO Box 53
Southbury, CT 06488-0053
WWW.LIGHTERTHANAIR.ORG

Measuring Wind Speed - Beaufort Scale

Winds have been rated according to the Beaufort Scale since the early 19th century, when a man named Sir Francis Beaufort, a British Admiral, introduced a set of descriptions for wind according to the types of things that the wind could move. You can tell that he was British by the wording of the descriptions in the scale. We still use this scale to describe the wind, but we also more accurately measure the speed of the wind now, providing more detailed and useful information for scientists. An instrument called an anemeter is the instrument used by weather scientists to measure wind speed. These are usually electronic now and computers convert electronic signals from instruments into digital displays.

Force Range	Wind Name	Description	Speed
0-1	Calm to Light	Chimney smoke rises upwards or drifts slightly	0 - 5 km/hr
2-3	Gentle Breeze	Soft wind on your face. Leaves and twigs sway gently on the trees.	6 - 20 km/hr
4-5	Fresh Breeze	Dust and rubbish blow along the ground. Small trees bend.	21 - 40 km/hr
6-7	Strong Breeze	Big trees sway and branches toss. Washing on the line flaps.	41-60 km/hr
8-9	Gale	Branches snap on trees. Tiles fall from roofs. Wind is hard to walk into.	61-85 km/hr
10-11	Storm	People can be blown over and trees uprooted. Chimneys collapse and sheds blow over.	86-120 km/hr
12	Hurricane	Houses blown down. Cars and trucks are thrown about.	Over 120 km/hr
