

the

alchemist



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Volume 2

Reporter: Doctor, does an airborne vehicle composed of a sleigh and eight reindeer fall into the category of a vertical-take-off-and-landing aircraft?

Professor: Well, no, I don't believe this is a true vertical-take-off-and-landing craft. I've analysed the aerodynamics and it appears to me that it falls more in the category of a short-take-off-and-landing aircraft.

Rep.: Then you appear to have no doubt that such a craft is capable of flight.

Prof.: No, no doubt at all.

Rep.: Why are you so certain?

Prof.: Well, we recently constructed a model of such an aircraft, based on a few closely guarded eyewitness reports, and conducted tests in the subsonic and supersonic wind tunnels. We measured the lift and drag characteristics of the craft as well as its stability and control properties, and although its longitudinal stability appears to be marginal, we have no doubt that the vehicle can be flown by an experienced pilot.

Rep.: That's all well and good, but it's still difficult for some of us to believe that such a contraption could fly. I mean, it has no propeller or jet engine. And it doesn't have any wings. Where would it get its thrust and lift?

Prof.: Well-I will admit that the

answer to this question is not too obvious. The thrust is probably provided by a mixing action of the air produced by the extremely rapid movement of the reindeer's hoofs. We call this flow entrainment. This flow entrainment produces a thrust (augmentation) by accelerating a steady mass of air in the rearward direction. This thrust then is the same as the thrust produced by a propeller. Actually, the reindeer do not have to provide very much thrust. Wind tunnel measurements show the drag of the sleigh to be surprisingly low. The lift that keeps the sleigh airborne is provided in a manner very similar to the reentry lifting body configurations presently under study by the National Aeronautics and Space Administration. These bodies don't have wings either, but they fly. It's simply a matter of flying at a high enough angle of attack. Hence, on take-off at the North Pole, at full design gross weight, the pilot would have to fly at a very nose-high attitude. Of course, as he drops off his payload, which is the primary purpose of this suborbital mission, the vehicle will assume a more level attitude.

Rep.: Well now, I guess you have demonstrated that the thing could fly, but what about the question of whether it would be permitted to fly. Doesn't the FAA, for example, require outboard lights on all airborne vehicles?

Prof.: Oh yes, the FAA has doubtless

required a rotating beam light for this flood had receded.
this aircraft, but everyone knows
how that requirement is met.

Rep.: How?

Prof.: Why, the pilot went out a few years back and located an additional reindeer (Rudolph) who was possessed of a bright, red olfactory member. This, bobbing up and down throughout the mission, and radiating one kilowatt of power, more than satisfied the FAA regulation.

Rep.: Then you see no obstacles aerodynamically or otherwise to this aircraft completing its mission this year?

Prof.: Only one.

Rep.: What's that?

Prof.: People who call up aeronautical engineers and try to undermine the whole thing by asking too many questions.

Rep.: Oh.

AN AFTERNOON IN CORNING

On October 22, the ACS went on a tour of the Corning Glass Center. Although there was a poor turn-out, (only the officers and our loyal secretary, Fae, made it.) it was an enjoyable trip. (Ed. note: Ye Editor, who usually attends these affairs, unhappily had too many tests, [+ 1 seminar] in her way.)

The ride down was enhanced by the splendor of the changing colors of the leaves, heralding the fall season.

After driving for approximately two hours, we arrived at Corning. And after partaking of the exquisite cuisine of the local Red Barn, we sought out the Glass Center.

It was some sight! The modernistic buildings are still scarred by water marks, two years after the

The museum section of the tour is historically as well as scientifically interesting. The displays showing the uses and development of glass in the industry and home were superior in this context..

The "cream" of the trip, as I see it, was the watching of actual glass-blowers at work. The Steuben glassware which is created there, is sent all over the world, as gifts from our nation to other nations. A display of that glassware is one of the most stunning to be seen there. Just don't knock over that \$1000 glass dolphin, and don't eat at that Red Barn, unless you want to be sick all the way home, like our beloved Pres, Tim.

PMAB

POETRY COLUMN (or How the Editor Gets Sued by the Treasurer, in One Easy Lesson)

There was a young lady named
Burge.
To drink and carouse was her urge.
She could guzzle or gavort(?)
Of wine, beer, or Port,
Then into the scenery merge.

PG

Give the freshmen a centimeter, and they take a kilometer. Look what happens when you teach them BASIC to program the Mini for their labs:

```
10 DIM A$[20]
20 INPUT A$
30 ; "CHEM. IS" A$
```

RUN

? #! !/@! !& **\$\$\$

CHEM. IS #! !/@! !& **\$\$\$

(Just for that, you can do three more titrations, kids.)

ACS MEETS ALLIED CHEMICAL

Wednesday, October 17, the Student Affiliate of the ACS visited the Allied Chemical Corporation for a tour of their dye-processing plant.

The program started out with some short summaries of the work which is carried out at Allied. Mr. Robert White spoke on the "Genesis of a Golden Dye", which showed the synthesis of a simple yellow food color in outline form, and the important role of the analytical chemist in this work. Mr. D. M. Marmian, who is an analytical research chemist, described the use of nuclear magnetic resonance spectra to characterize food colors. This particular presentation seemed to snow the freshmen who attended, but it was all too familiar to the senior chem students who had gone through Spec already. Don't worry frosh! By the time you're Seniors that sort of stuff will be a piece of cake for you.

One of the other speakers was Mr. K.H. Ferber, who is manager of the Environmental Control Dept. at Allied. He discussed a dye plant's problems in protecting the public air and water pollution, as well as protecting its employees from the harmful chemicals.

Then, the actual tour of the buildings followed. Allied liked us so much, that they didn't want to let us go- we got locked inside the building and had to find a guard to get us out! And then Dr. Heffley was locked out of the lot where he had parked. And so, another typical ACS trip ends.

PMAB

FUN IN ORGANIC LAB (?)

And now, it's time for that all-new, action-packed game, now running

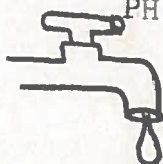
rampant through those usually hum-drum Organic labs! Does watching the bubbles in the liquid of your round-bottom flask as you wait for a 172-hour reflux bore you? Well, take a shot at this game to wile away some of your time. All you need is some glassware and a bad case of the klutz:

THE SCORE

Name	# of pts.
Dean F. (1 beaker)	50
"ACE" (professional John Hurley acid bather)	1000
Dennis Durma (1 tube)	4
Mike LaHood (340 ml. grad. cylinder(?) and developer of UC* ERLNMEYER)	400.51
Philip (Xylene) Aliotta 7 holes in lab coat	125
(1 hole in Frank Barnashuk pants)	35
Joanie (100ml graduate)	150
Jeff Brown (NaCl bottle)	200
*** Dan Wopperer***- formation of "GRADUATED HOT PLATE"	(+50 500 for originality)
FRANK BUSTED MY THERMOMETER!!!!!!!!!!!!!!	-500

Prize to be awarded upon termination of the semester:
1 case of broken beer bottles

PHILOSOPHER'S CORNER:



ETERNAL VIGILANCE IS THE PRICE OF A SLOW TITRATION
(or is it the other way around?)

dedicated to all those suffering through freshman lab

THE TWELVE DAYS AFTER CHRISTMAS

The first day after Christmas,
my true love and I had a fight!
And so I chopped the pear tree
down and burned it just for
spite;
Then with a single cartridge, I
shot that blasted partridge,
my true love gave to me.
The second day after Christmas, I
pulled on the old rubber gloves
and ver-r-r-y gently wrung the
necks of both the turtle doves.
The third day after Christmas, my
mother caught the croup;
I had to use the three French hens
to make some chicken soup.
The four calling birds were a big
mistake, for their language
was obscene.
The five gold rings were completely
fake, and they turned my
fingers green.
The sixth day after Christmas, the
six laying geese wouldn't lay.
I gave the whole darn gaggle to the
A. S P C A !
On the seventh day, what a mess I
found—all seven of those swim-
ming swans had drowned!!!

On the eighth day after Christmas,
(Before they could suspect),
I bundled up the
Eight maids a-milking,
Nine pipers piping,
Ten ladies dancing,
'Leven lords a-leaping,
Twelve drummers drumming
(Well, actually I kept one of the
drummers!)

And sent them back collect!

I wrote my true love: "we are
through, love",
And I said in so many words,
"Furthermore your Christmas
gifts were for:
The four calling birds,
Three French hens,
Two turtle doves
And a partridge in a pear tree."

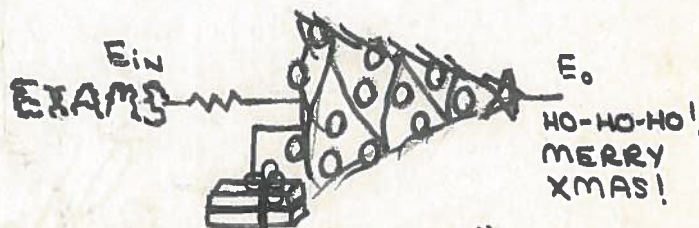
CHEM ABSTRACTS

...Another senior bites the dust...
We just found out that Dave
Nalewajek got engaged...The Big
Band of Canisius has a rival in the
Chemical Band of Horan O'Donnell...
With Phil on the condenser, it
should be a big hit...Is it true
that Hugh Hefner wants the rights
to use Len's and Gary's advanced
analytic discovery for his next
centerfold?...Dec. 8, instead of
Dec. 7, was Pearl Harbor Day for
some of the seniors...Instead of
being blitzed by the Japanese, they
were done in by the GRE's... Dr.
Annino has been seeing strange
things as a result of his advanced
analytic class... It seems as if
there's all these little people
popping up, here and there...



Don't let anyone tell you
that scientists don't believe in
Santa! In fact, I found a whole
bunch of letters that the Chem
Dept. was sending to him:

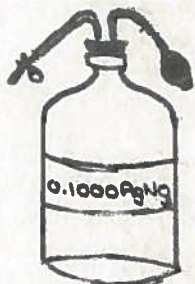
Dear Santa,
Please bring me this circuit:



Danke schön,
Herr Annino

Dear Santa,

Could I possibly obtain a one(1) 20-liter carboy of 0.1000 AgNO₃ solution for the freshman lab? I can't seem to locate any.



"The one and only one"

Yours truly,
P. Heffley

Saint Nick,

All I want is a little balloon for my kids to play with.

Thanks,
J. Leone

Santa,

I don't want too much this Christmas. But a good set of GRE scores from the Seniors would be terrific, and so would an unwobbly blackboard for S-300.

See you soon,
R. Stanton

Dear Santa,

Could I have my very own nylon factory this Christmas?

R. Salomone

Pere Noel,

One BUS, please.
P.S. If you can't get me a bus, how about 30 pairs of snowshoes so the Ski Club can get to KB?

Think snow,
P.J. McCarthy

Dear Santa,

A new bottle of bubble solution for my wondrous, earth-shaking, Boom-Boom Machine sure would be nice.

Signed,
F. Dinan

Dear St. Nick,

I seem to have lost my face mask. Could you bring me a nice natural one for the up-coming ski season?

Thank you,
J. Van Verth

Santa,

I wouldn't say no if a handsome senior in Majorca offered to come back with me to the States. That would be a nice Christmas present.

Gracias,
Fae

Dear Santa,

What day is it?

Phorgetfil

Hi Santa!

I could really use a bunny rabbit costume so that I can get out of religion exams, and a SCUBA tank so I can hide in the distilled water tank when I have an Alchemist deadline.

Luv and kisses,
The Editor

Hey Shanta!

I want a bottle of Ripple, please. (And a good lawyer, so I can sue the Editor for slander).

Thanksh,
Pauline

(Ed. note: can't sue, if you know it's true!)

Saint Nicholas,

We want a video-tape machine to record all the action on the oscilloscope when we demonstrate our advanced analytic discovery.

Gary & Len

Dear Santa,

We'd all like some Juniors, who be active in the ACS.

The Seniors

P.S. If not juniors, how about some sophomores?

P.S.S. If not sophomores, how about some freshmen?

EGG NOG!

COOKIES



REMEMBER to COME to

the S.A. - A.C.S.

CHRISTMAS PARTY,

SAT. DEC. 22, in S-300,

at 7:00 P.M.

WAFFLES

admission \$1.00, prepaid to Foe Johnson in the Chem Office, if possible

WINE

BEER

HOT MULLED
CIDER!