Date: Mon, 23 Oct 2000 14:18:15 -0500
From: Elizabeth Steinbrenner <steinbre@purdue.edu>
X-Accept-Language: en
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: Re: Water rocket data for Tuesday (10/24/00)

> Prof. Andrisani,

> Here is group 10's information
>
> me=0.37044 lbs %rocket empty mass, lb (note: units are pounds)
>
> AA=7.0408 in^2 %projected area, in^2 (area as viewed from the
> front)
> V=591.3 cm^3 %bottle volume, in^3 (probably 20 oz. converted
> to
> cubic inches)
>
>
> Team Number___10_____
>
> Flight Number 1

> fuel fraction (nondimensional) 199/591.3 mL

> Altitude of flight (feet) 29 ft.

> Comments on the flight: Everything went well on this flight, we really did
> not have any errors or strange happenings.

>

> Flight Number 2

> fuel fraction (nondimensional) 299/591.3 mL

> Altitude of flight (feet) 52 ft.

> Comments on the flight: After this one was set up some water started

> leaking out of the top, we stopped and refilled it, and then it landed
> funny. The string did not stay in anyone's hands on this one and it did on
> the last one.

>

Thanks, Beth Steinbrenner

Date: Tue, 24 Oct 2000 08:48:48 -0500
From: Brandon Michael Rowe <browe@purdue.edu>
X-Accept-Language: en
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: Re: Water rocket data for Tuesday (10/24/00) Team 27

Team 27

me = 0.1 lbs

AA = 35 in^2

V = 36.09 in^3

Flight Number	Fuel Fraction	Altitude	Comments
1	2/3	37'4"	somewhat unstable flight

Leah Wyman
Nathan Meade
Brandon Rowe

Date: Tue, 24 Oct 2000 06:38:17 -0700 (PDT)
From: Jessica jones <eowyn23@yahoo.com>
Subject: rocket results (A&AE 190)
To: andrisan@ecn.purdue.edu

group 2
A&AE 190
10-24-00

me= 3/4 lb %rocket empty mass, lb (note: units are pounds)

AA= 35 in^2 %projected area, in^2 (area as viewed from the front)

V= 20 oz. %bottle volume, in^3 (probably 20 oz. converted to cubic inches)

Team Number 2

Flight Number	fuel fraction (nondimensional)	Altitude of flight (feet)
1	6.76:20	35.5 ft

Comments on the flight: the string knotted & restricted the flight

Flight Number	fuel fraction (nondimensional)	Altitude of flight (feet)
2	10:20	56 ft 3 in

Comments on the flight: the cord worked better than the fishing line

From: "Jeri Metzger" <metzgejl@purdue.edu>
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: Re: Water rocket data for Tuesday (10/24/00)
Date: Tue, 24 Oct 2000 07:02:36 -0500
X-Priority: 3

Sent: Thursday, October 19, 2000 3:08 PM
Subject: Water rocket data for Tuesday (10/24/00)

> Please bring in your your rocket to class on Tuesday.
>
> Each team needs to e-mail me the following information about your
> rocket by class time on Tuesday (10/24/00).
>
> me=.17632 %rocket empty mass, lb (note: units are pounds)
> AA=50.2655 %projected area, in^2 (area as viewed from the front)
> V=36.094 %bottle volume, in^3 (probably 20 oz. converted to
> cubic inches)
>
> Please include the following table from our flight tests today (Thursday).
>
>
> Team Number 6
> Flight fuel fraction Altitude of flight Comments on the
flight
> Number (nondimensional) (feet)
1 .423012 38.5
First group to try string rather than fishing line
2 .507614 54.0
No unusual circumstances

>
> An example of a comment might be "string tugged rocket to an abrupt halt."
>
> Fuel fraction is the ratio of the volume of water used to the total
> volume of the cylinder (20 fluid oz.).
> --
>
> Professor Dominick Andrisani, II
> Director, Indiana Space Grant Consortium
> School of Aeronautics and Astronautics
> Purdue University
> 1282 Grissom Hall
> West Lafayette, IN 47907-1282
> Internet: andrisan@ecn.purdue.edu
> Phone: 765-494-5135
> Fax: 765-494-0307
> http://aae.www.ecn.purdue.edu/~dominick.andrisani.1

> http://roger.ecn.purdue.edu/~isgc/
>
From: "Chuck Weaver" <ceweaver@purdue.edu>
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: water rocket data for team 12
Date: Tue, 24 Oct 2000 00:17:52 -0700
X-Priority: 3

Team 12
Chuck Weaver
Joe Taylor
?..?..?..?
?..?..?..?

Prof. Andrisani,
Here is the water rocket data for team 12. I am not sure if the values are correct for the volume and surface area, but they sound right. Although nothing seemed visibly wrong, our team had a poor first flight and no time for a second. Problems could be due to not enough fuel or flimsy fins.

V= 366.1425539 in^3
AA= 10.743 in^2
me= .375 lb

Flight #	Fuel Fraction	Altitude of flight	Comments
1	190ml	25'11"	didn't have time for a second flight

From: ammills@purdue.edu
Date: Mon, 23 Oct 2000 23:29:39 -0500
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Reply-To: ammills@purdue.edu
Sender: ammills@purdue.edu
Subject: Team 21 data

I'm not sure if you recieved this the first time I sent it, so I'm trying again just in case.

Volume = 36.09375 in^3
Mass = 0.05 lbs
Projected area = 3.61799 in^2
Team 21

Flight No.	Fuel Fraction	Height	Comments
1	1/3	45'	None

From: ammills@purdue.edu
Date: Mon, 23 Oct 2000 23:24:57 -0500
To: andrisan@ecn.purdue.edu
Reply-To: ammills@purdue.edu
Sender: ammills@purdue.edu
Subject: team 21 info

TEAM 21

Volume = 36.09375 in^3
Mass = .05 lbs
Projected area = 3.61799 in^2

Flight No.	Fuel Fraction	Height	Comments
1	1/3	45'	None

X-Originating-IP: [128.210.251.11]
From: "Miguel Gonzalez" <mike_the_g@hotmail.com>
To: andrisan@ecn.purdue.edu
Subject: A&AE 190 water rocket team 4
Date: Tue, 24 Oct 2000 02:49:42 GMT
X-OriginalArrivalTime: 24 Oct 2000 02:49:42.0534 (UTC)
FILETIME=[0F606260:01C03D65]

me= .201 lbs
AA= 90,000 in^2
V= 36.09375 in^3

Please include the following table from our flight tests today (Thursday).

Team Number: four
Miguel Gonzalez
Robert Manning
Jeremy Mikkelsen
Julian Moriarty
Kelby Haase

Flight Number	fuel fraction (nondimensional)	Altitude of flight (feet)	Comments on the flight
1	one third	not available	-We were not able to calculate the altitude of the rocket because the string broke.
2	one third	63.5 feet	-The flight path was pretty straight, except the descent. It was carried by the wind because of the lack of weight.

From: "Matthew Ernst" <ernstm@purdue.edu>
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: Re: Water rocket data for Tuesday (10/24/00)
Date: Mon, 23 Oct 2000 21:41:44 -0500
X-Priority: 3

Mass of empty rocket= I do not have this yet. I'll try to get it to you before class tomorrow.
Projected area= 7.18 in^2
Bottle volume= 36.09 in^2

Test data for team # 24:

Flight Number	fuel fraction (nondimensional)	Altitude of flight (feet)	Comments on the flight
1	200ml (approx 1/3)	31ft	held string loosely (caused excess drag)

Subject: Water rocket data for Tuesday (10/24/00)
Date: Thursday, October 19, 2000 3:08 PM

Please bring in your your rocket to class on Tuesday.

Each team needs to e-mail me the following information about your rocket by class time on Tuesday (10/24/00).

me=? %rocket empty mass, lb (note: units are pounds)
AA=? %projected area, in^2 (area as viewed from the front)
V=? %bottle volume, in^3 (probably 20 oz. converted to cubic inches)

Please include the following table from our flight tests today (Thursday).

Team Number_____

Flight Number	fuel fraction (nondimensional)	Altitude of flight (feet)	Comments on the flight
_____	_____	_____	_____

An example of a comment might be "string tugged rocket to an abrupt halt."

Fuel fraction is the ratio of the volume of water used to the total volume of the cylinder (20 fluid oz.).
--

Date: Mon, 23 Oct 2000 22:37:35 -0400
From: Brandon Henzes <henzes@purdue.edu>
X-Accept-Language: en
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: Re: Water rocket data for Tuesday (10/24/00)

Team number 7
Brandon Henzes
Steven Lambert
Alessandro Ianniello
Amos Mckinnon

Mass: .3 lb
Projected area: 42 in^2
volume: 36.093149 in^3

Team number 7
test fuel fraction altitude
Comment on flight
1 1/3 42
Went up shot towards the ground
2 1/5 42
Went up used all full and fell towards ground

X-Originating-IP: [128.210.251.11]
From: "Steven Feuerborn" <esteban1013@hotmail.com>
To: andrisan@ecn.purdue.edu
Subject: Group 16 rocket data
Date: Mon, 23 Oct 2000 20:41:23 CDT
X-OriginalArrivalTime: 24 Oct 2000 01:41:23.0679 (UTC)
FILETIME=[8444BEF0:01C03D5B]

Sputnik

me=? .5 lb AA=? 18 in^2 V=?
36.09375 in^3

Team Number 16

Flight	fuel fraction (nondimensional)	Altitude of flight (feet)	Comments	Number
1	1/3	33'10"	Too much surface	

Skylab
me= .35 lb AA= 6.2831 in^2 V=
36.09375 in^3

Team Number 16

Flight	fuel fraction (nondimensional)	Altitude of flight (feet)	Comments	Number
1	1/3	44'7"	None	

From: apostol@purdue.edu
Date: Mon, 23 Oct 2000 18:53:19 -0500
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Reply-To: apostol@purdue.edu
Sender: apostol@purdue.edu
Subject: Water Rocket Data

Team 1 Data:

me = 0.25 lb
AA = 2.25 in^2

V = .009684 in^3

Flight 1: Fuel Fraction = 200 mL / 591 mL
Altitude = 67 ft
Comments: none

Flight 2: Fuel Fraction = 200 mL / 591 mL
Altitude = 54 ft
Comments: air pump had hole in tubing
causing a loss in overall pumped pressure as we were
pumping. To solve this, we had to pump while the rocket
was released to compensate for the pressure loss and to
try to keep the pressure at a constant 50 psi.

Date: Mon, 23 Oct 2000 19:50:46 -0400
From: Eric Gustafson <gustafse@purdue.edu>
X-Accept-Language: en
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: Water Rocket Data

Team Number 5

Flight fuel fraction Altitude of flight Comments
on the flight
Number (nondimensional) (feet)
1 1/3
35 very unstable flight, string was tugging,
possible leak

2 1/4 42'
4" added duct tape to fins, much better flight, more
normal trajectory

me=.28125 lbs
AA=5.75 in^2
V=36.09 in^3

Eric Gustafson

Drew Hosford
Matt Heinemann
Tyson Mowery
Robert Rhea

Date: Mon, 23 Oct 2000 16:44:03 -0700 (PDT)
From: Paul <pauljedi18@yahoo.com>
Subject: Water Rocket Data
To: andrisan@ecn.purdue.edu

Professor Andrisani,
Here's Team 22's flight data for the water rocket.

me= .2 lbs.
AA= 8.8 inches squared
V= 36.094 inches cubed

Team #22

Flight Number	Fuel Fraction (non-dimen)	Altitude (feet)
1	.3381	55.5
2	.2198	46.0

Comment on 1: The recorded altitude is higher than the actual altitude received due to the string still extending as the rocket followed a parabolic path to the ground.
Comment on 2: This altitude is a better indication of the rockets path since it was as fairly straight flight with little parabolic arching.

Team 22: Alex Kovach, Andrew Lieberman, Ross May, David Neubauer, and Paul Niziolek.

=====
There's a silver lining to every dark cloud. But every year, hundreds of people are killed by lightning as they try to find it.

Reply-To: "Patrick McGlone" <mcglone@purdue.edu>
From: "Patrick McGlone" <mcglone@purdue.edu>
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: Re: Water rocket data for Tuesday (10/24/00)
Date: Mon, 23 Oct 2000 18:23:43 -0400
Organization: Purdue University
X-Priority: 3

me=0.3
AA=7.324
V= 232.68

Please include the following table from our flight tests today (Thursday).
>
>
> Team Number____4____
>
> Flight fuel fraction Altitude of flight Comments on the flight
> Number (nondimensional) (feet)
>1 .3469 40 Rocket snapped
string, may have caused an abrupt slowing of the ascent.
>2 .5415 32 After nose down
landing of first test, rocket body may have had some structural damage
internally.

X-Originating-IP: [128.211.159.11]
From: "David Brodrecht" <dbrodrecht@hotmail.com>
To: ivorbula@ecn.purdue.edu, andrisan@ecn.purdue.edu
Subject: Re: rocket constants: Second Request
Date: Mon, 23 Oct 2000 17:28:44 EDT
X-OriginalArrivalTime: 23 Oct 2000 21:28:44.0457 (UTC)
FILETIME=[38AB0990:01C03D38]

The diameter of the nozzle is: 0.44 inches. Also, the mass of the nozzle is 42.45 grams.

Dave

From: Ivor Bulathsinghala <ivorbula@ecn.purdue.edu>
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
CC: Dave Brodrecht <dbrodrecht@hotmail.com>
Subject: Re: rocket constants: Second Request
Date: Mon, 23 Oct 2000 13:06:53 -0500

Professor,

50 psi was used for all launches. The nozzle diameter is approximately 1/2". Dave and I are going to go over to ASL today to measure the diameter with a caliper and get you a weight as well. We will email the results ASAP.

Ivor

"Dominick Andrisani, II" wrote:
>
> Dave or Ivor:
>
> Please measure the nozzle diameter for the water rocket (inches) and
> send it to me by e-mail. This is the diameter of the passage through
> which the water exits the water rocket.
>
> What was the pressure used in the water rocket tests today? Was it
> the same for all tests?
> --
>
> Professor Dominick Andrisani, II
> Director, Indiana Space Grant Consortium
> School of Aeronautics and Astronautics
> Purdue University
> 1282 Grissom Hall
> West Lafayette, IN 47907-1282
> Internet: andrisan@ecn.purdue.edu
> Phone: 765-494-5135
> Fax: 765-494-0307
> http://aae.www.ecn.purdue.edu/~dominick.andrisani.1
> http://roger.ecn.purdue.edu/~isgc/

From: "Adam Goodson" <goodson@purdue.edu>
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Subject: Re: Water rocket data for Tuesday (10/24/00)
Date: Mon, 23 Oct 2000 18:29:10 -0400
X-Priority: 3

me=.414 lbs %rocket empty mass, lb (note: units are pounds)
> AA=9pi %projected area, in^2 (area as viewed from the front)
> V=36.09375 %bottle volume, in^3 (probably 20 oz. converted
to
> cubic inches)
>
> Please include the following table from our flight tests today (Thursday).
>
>
> Team Number_____20__
>
> Flight fuel fraction Altitude of flight Comments on the flight
> Number (nondimensional) (feet)
> _20_____ _____190_; 250_____ ____53 ; 42_____
_____String did not play a factor, rocket was not obstructed, flight went
well._____
>
> An example of a comment might be "string tugged rocket to an abrupt halt."
>
> Fuel fraction is the ratio of the volume of water used to the total
> volume of the cylinder (20 fluid oz.).
> --.32% for the 150ml and 42% for the 250 ml
>

From: shew@purdue.edu
Date: Tue, 24 Oct 2000 01:37:47 -0500
To: "Dominick Andrisani, II" <andrisan@ecn.purdue.edu>
Reply-To: shew@purdue.edu
Sender: shew@purdue.edu
Subject: Re: Water rocket data for Tuesday (10/24/00)

Team number 23

me = about 0.3 lb
AA = about 6.4 in^2
V = about 36.1 in^3

Flight number	fuel fraction	altitude of flight
1	40% 2/5	48' 10"

Comments on the flight:

Our flight was not as stable as it should have been because we had too much weight on the fins and not enough weight in the nose-cone.