

# EL TORBELLINO

NEWSLETTER OF SAN DIEGO ORBITEERS FREE FLIGHT CLUB

JUNE 2019



## The Prez's Corner – Mark Chomyn

June is here and we finally got some flying in. As I write this, I'm just back from the Scale Staffel two-day event in Perris. Good turnout. And, those who got their flights in early were saved from the northern drift on Saturday and the southwest drift on Sunday. Flying was generally over on both days by a little after 11AM. Still a good time was had by all and I'm looking forward to the next event on Sept 21-22. I'll need to do some building though. I lost one plane and augured in three others that are likely beyond reasonable repair. So, I'm going to need to stock up on building supplies. A big thank you to John Hutchison and Kathy McLaughlin for running this event and herding all us flying cats for the mass launches.

About the conditions at the flying field (Taibi Field), several paths have been plowed through the mulch piles trending north/south. This allows you to move quickly through the piles to get some idea of where your plane is generally headed. But you still need to carefully monitor location as you move down the plowed path. I put up a decent flight with my Jimmy Allen Skokie and though I thought I had it spotted I was unable to locate the plane. Bob Hodes put up an amazing flight in old time rubber. I mean that plane was up in March Field airspace and drifting north. Amazingly, the next time I saw Bob he was getting out of his vehicle with that high-flying plane in hand. Some guys not only fly well their experience over the years makes them darn good at knowing where their planes end up. An art for which I need to put in a little more practice.

Back to the mulch piles. Word is that at some time in the future, those piles will be plowed

into the soil. That event however may suffer some delay. As I understand it, the property is owned by two partners, one of which is recently deceased. This leaves a one partner to carry on management of the property. This change in circumstances may mean that we'll need to wait a bit longer than originally expected to see the mulch piles get plowed in. In any case, our flyers seem to be taking it in stride and carrying on the best we can. Free flight will never die.

The June 2<sup>nd</sup> indoor meet was well attended and we had four juniors flying with us. Don Bartick was unable to attend but he asked the Orbiteers who were attending to check in on the juniors to see if they need any help. I noticed Benjamin (Benji) Pureco and Jose Cetina set up at the end of the fight line near the back wall of the gym. I began walking toward them and got half way there when one of the boys released his plane. So, I stopped and I watched. And I watched. And, I watched. The plane was up for well over a minute and during the flight it retrieved a badminton shuttle cock from the roof beams. I decided as I walked toward Benji and Jose's staging area that I would probably learn more from them and decided I would keep my comments to a minimum. So, we worked on some minor things like prop balancing, rubber size and number of turns.

Don't forget the next Orbiteer outdoor contest is scheduled for Sunday, June 23. Events will be coupe, glider and power. This is your last chance to fly before we go "dark" for the hot months of July and August. Hope to see you there.

If you read last month's Prez's Corner, you caught my diatribe on the tendency to get stuck in building the same old, same old. Well

I'm continuing my crusade for building out of the box with the purchase of a Steve Patti Co., Supreme Models "Breezy". It's a short-bodied, twin boom, rubber powered free flight model with a 26-inch span and a copyright date of 1943. Wood in the kit looks like wartime pine. So. I'll need to copy the print wood and replace it and all sticks with balsa. Will share a picture when it gets built. Hope to enter it in two-bit rubber at the Scale Staffel two-day in September.

Well, got to get back to packing for a trip to Nova Scotia and Massachusetts. Did a quick check for hobby shops in Nova Scotia, but unfortunately the search turned up craft stores, bead stores, model boat shops and model car outlets. Oh well guess I'll have to stick to all-you-can-eat lobster and local craft beer. I'll get by somehow.

That's it for now.

*Smooth landings are inversely related to the number of people watching.*

*Anonymous from RC Groups Blog*

## 2019 INDOOR FLYING SCHEDULE

July 7 - A-6 & Phantom Flash\*  
 Aug 4 - Limited Penny Plane & No-Cal\*  
 Sept 1 - P-18 & Embryo\*  
 Oct 6 - A-6 & Phantom Flash\*  
 \*Scale Staffel Event



## 2019 OUTDOOR FLYING SCHEDULE

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All are AMA Sanctioned & National Cup Events  
 (Contests at Perris CA unless otherwise noted)  
 (All Contests include E36, Power, & HLG/CLG)

June 23 - **Coupe**

July / August - No Club Outdoor Contests

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**Results of the 2019 Dual Clubs Free Flight Bonanza**  
**A National Cup & America Cup Event**  
May 18-19, 2019 LOST HILLS, CA



*Don Bartick, San Diego Orbiteers, Contest Director*  
*William Booth, San Diego Orbiteers, FAI Contest Director*  
*Doss Porter., Fresno GMC Contest Official*

The Dual Club Free Flight Bonanza is the joint annuals for the San Diego Orbiteers and Fresno Gas Model Clubs. This was the 61<sup>st</sup> and 80<sup>th</sup> annuals respectively for the clubs. Having dual club participation in waning attendance significantly reduces the overhead cost to put on a successful event. It has worked well over the past 18 years. Unfortunately, this year we had rain in the forecast leading up to the contest weekend. Didn't look good for the contest. Many flyers stayed away because of the forecast. Even so, 29 flyers did show up to take their chances knowing that many times the weather forecast hasn't played out correctly. As it turned out, Saturday was good weather from 7am to 3pm. At that time, a new weather front came in and ended the flying for the day. The FAI group, under the leadership of William Booth decided to fly the Sunday Mini events on Saturday and not take a chance on the weather. This was a good call. Those flyers that stayed around for Sunday discovered calm winds and no rain at 7am. This worked out well for the F1B flyoff. They got their flyoff in before the winds came up as another front was upon us. The F1G flyoff was cancelled. At 10am, I cancelled the contest and we broke camp to get off the field before the rains started.

The scheduled Saturday noontime 1-hour break from flying for lunch and the now famous Ice Cream Social at the end of the break continues to be a favorite. Leftover ice cream and condiments are giving to the local Lost Hills Fire Department. The tradition of having a Saturday night potluck feast was cancelled because of the weather.

We planned for an attendance of 50 because of adding America Cup status. The 29 that did show up was broken down to 28 Sr/Open and 1 Junior. The FAI flyers did help the count. We most likely would have achieved the 50 if not for the weather forecast. Even so, we did have some new faces. This is encouraging. The hobby still has life.

Special thanks to Arline Bartick and Linda Piazza who spent a great deal of time at the CD table registering folks and recording times. I can't express more gratitude for their help. This gave me an opportunity to participate in the competition. Arline also handles the camera duty. She has honed her action shots to perfection. Some shots are as far away as 100 feet. Furthermore, she culls out individual shots of flyers and shares the pictures with them via email.

**Highlight of the contest:** The most contested events this year were Vintage FAI(8)-Randy Secor: Gold, FAI F1B(6)-William Booth: Gold, & 1/2A gas(4)-Bob Scully: Gold, Many AMA events were scheduled for Sunday. Nostalgia events were scheduled for both days. The loss of Sunday greatly affected AMA, Nostalgia and Old Time entries.

Until next year, have many delightful FF moments. *Don Bartick, Ramona, CA*

(Contest results follow on the next page)



## For the record . . . .

### DAWN P-30 MASS LAUNCH (3)

1	Don Bartick	93
2	Glen Schneider	92
3	Doss Porter	56

### ½ A Gas (4)

1	Bob Scully	486
2	Phil Ronney	388
3	Eric Strengell	300

### C/D Gas (2)

1	Terry Kerger	678
2	Randy Secor	484

### ½ A Golden Age Gas (3)

1	Guy Mennano	544
2	Ron Garras	409
3	Mike Callas	325

### C Nostalgia (1)

1	Don McNamee	531
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### Large OT Rubber Cabin (2)

1	Mike Mayea	540
2	Mark Stanbridge	25

### Bill Booth Sr. Memorial (1)

1	Bud Romak	472
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### F1G (3)

1	Tiffany O'Dell	TBD
1	Mike Richardson	TBD
3	Mike Pykelny	450

### P-30 (1)

1	Don Bartick	120
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### ½ A Gas Junior (1)

1	Henry Feister	381
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### E-36 (2)

1	Bill Gannon	202
2	Don Bartick	120

### A Nostalgia (3)

1	Glen Schneider	415
2	Doss Porter	341
3	Daniel Heinrich	108

### A Fuselage (1)

1	Brad Levine	131
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### ½ A Texaco (1)

1	Brad LeVine	4:58
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### F1A (1)

1	Jim Parker	1256
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### F1H (2)

1	Blake Jenson	600
2	Jim Parker	589

### P-30 Junior (1)

1	Henry Feister	247
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### ½ A Classic Gas (2)

1	Scott Batz	540
2	Eric Strengell	456

### Vintage FAI (8)

1	Randy Secor	900
2	Jim Kelly	870
3	Guy Mennano	850

### B Nostalgia (2)

1	Guy Mennano	720
2	Jim Kelly	502

### B/C Fuselage (1)

1	Bud Romak	472
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### Twin Pusher (1)

1	Doss Porter	482
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### F1B (6)

1	William Booth	1739
2	Blake Jensen	1581
3	Roger Morrell	1252

### F1S (2)

1	William Gannon	579
2	Don Bartick	126



Photos by Arline Bartick

(More contest photos follow on next page)



**Results of the 2019 Dual Clubs Free Flight Bonanza**  
**A National Cup & America Cup Event**  
May 18-19, 2019 LOST HILLS, CA



Photos by:  
Arline Bartick





## 2019 AMA Indoor Nats

*By Mike Jester*



I made the long trek from Coronado to Eagar, Arizona to participate in the 2019 AMA indoor Nats from May 29 to June 2, 2019. The contest was held in the Round Valley Dome, which is the only indoor high school football stadium in the United States. It qualifies as a Cat III flying site with a hundred feet of unobstructed flying height. The weather was perfect all five days. I had a great time and will describe a few of my experiences. I hope that a complete report on the times achieved in the many events will eventually be published by the AMA.



**Round Valley Dome in Eagar, Arizona**

I only competed in the P-18, Limited Penny Plane (LPP), A-6 and Embryo events. I achieved my personal best times in the first three of these events. The artificial turf was not kind to landing gear on FAC models and my Embryo needed extensive repairs before putting in three good flights. The level of competition was extremely high so I did not place in any of my events. P-18 was won by John McGrath of Laser-Cut Planes with a 4-minute flight! LPP was won with a flight of over 14 minutes! I personally saw that flight and watched the model rise 30 feet in a thermal just as it was about to land. There are four skylights in the dome and flyers were constantly trying to predict the appearance and location of thermals created by bright sunlight striking a 60-foot diameter black circular region centered at the 50-yard line. I think the best flight in A-6 was about 8 minutes with a bizarre looking tandem. The Embryo event had a flyoff.

I had to deal with a number of challenges during the contest. The picture below shows what the tissue-covered wing of my P-18 looked like after experiencing the incredibly low humidity in Arizona. Other flyers joked that it would make a good helicopter rotor.



**Warped P-18 Wing**

The produce bag covering on another P-18 that I flew kept releasing from its balsa wood wing frame and had to be glued on with thinned Duco cement. There was speculation at the contest that the reformulated 3M 77 spray adhesive is no good.

Flying in a Cat III site, located at 7,000 feet altitude, is challenging, to say the least. It presents a conundrum. If you size your rubber motor to get your model near the ceiling, it runs out of turns way above the artificial turf. If you size your rubber motor so that your model does not go dead stick, it often won't make it near the ceiling. I soon learned that my usual style of flaring LPP prop that I fly with at Grossmont did not produce sufficient climb. Fortunately, I anticipated this and brought a symmetrical LPP prop I had built specifically for flying in the Round Valley Dome. I was able to get my LPP up to 95 feet on a consistent basis using this prop. My pictures of my LPP way up high just wouldn't show the model well in this article. My best LPP time was a little over 9 minutes.

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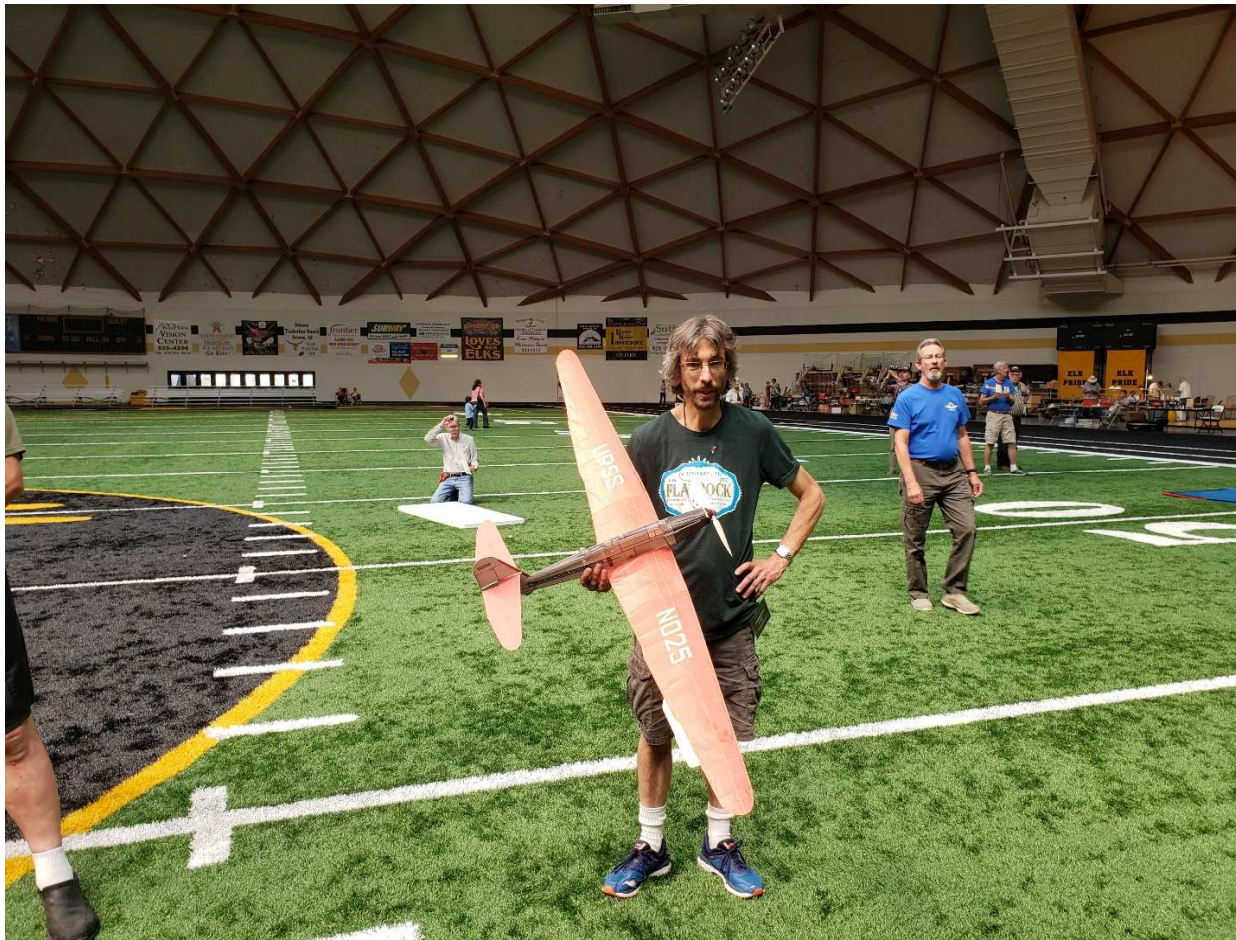
**Mike Jester and His Limited Penny Plane in Eagar, Arizona**

My best A-6 would not climb so I flew another A-6. The long rubber motor constantly bunched up at the rear and/or front of its motor stick. Even then, it landed dead stick on every one of its high flights.

One of the many highlights of the contest was the consistently long flights of a beautiful Coconut AN-25 that had a 5 foot wing span. Kudos to David Arenstein of the Magnificent Mountain Men flying club in Colorado.





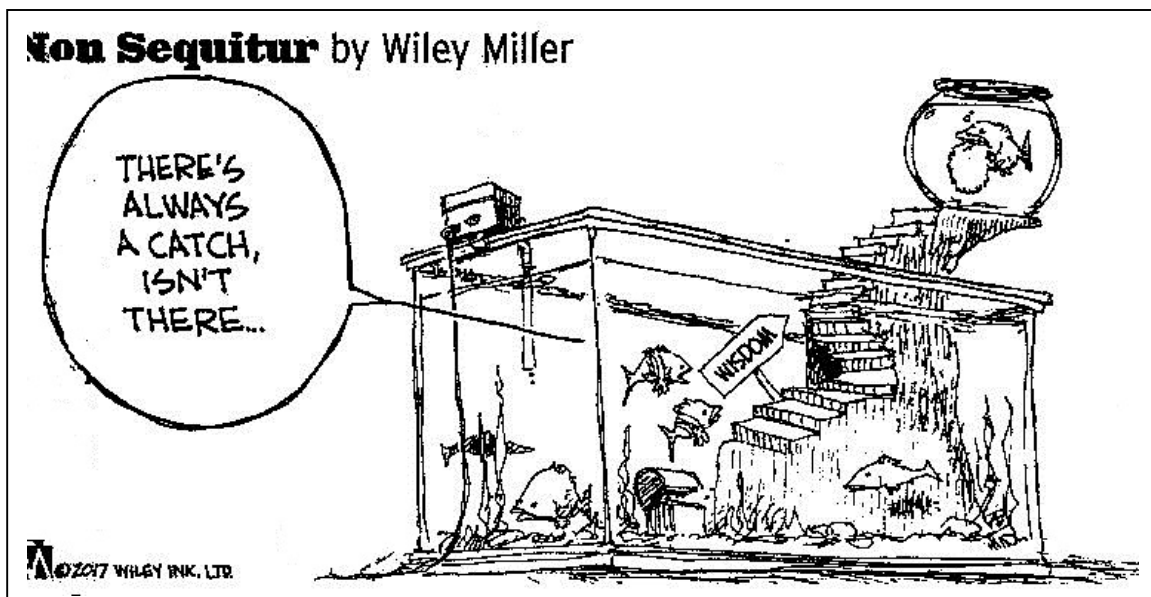


**AN-25 by David Aronstein**

Contest Manager Tom Gaylor and Contest Manager Don DeLoach along with their Nats committee deserve a great deal of credit for all their hard work putting together such an enjoyable and successful 2019 AMA Indoor Nats.



**Non Sequitur** by Wiley Miller



## Orbiteers - Indoor Contest Results - June 2, 2019



### P-18

<u>Flier</u>	<u>Best 2 of 5 flights</u>		<u>Total</u>	<u>Rank</u>
John Hutchison	110	112	223	1
Don Brent	102	100	202	2
Jose Cetina#	84	94	178	3
Benjamin Pureco#	81	74	155	4
Nick Panousis	42	102	144	5
Greg Hutchison	35	37	72	6

## Scale Staffel - Indoor Contest Results - June 2, 2019

### Embryo

<u>Flier</u>	<u>model</u>	<u>3 flights</u>			<u>Total</u>	<u>Rank</u>
Don Brent	Prairie Bird	46	50	47	143	1
John Hutchison	Prairie Bird	51	29	39	119	2
Walter Ainslie	Prairie Bird	40	35	36	111	3
Greg Hutchison	Pacific Ace	30	36	38	104	4
Nick Panousis	Big Cat	10	13	10	33	5

# junior member

## ORBITEERS MEMBERSHIP DUES

Annual Membership - \$20  
Lifetime Membership - \$250  
Non-Member Newsletter Subscription - \$15  
Junior Members 16 years old or younger - Free

### Submit Dues to Club Treasurer:

Howard Haupt  
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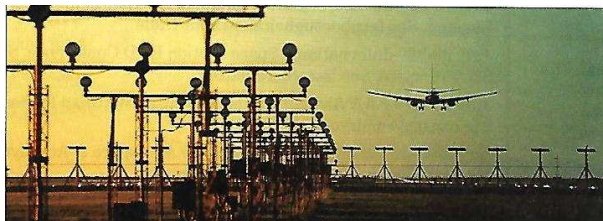
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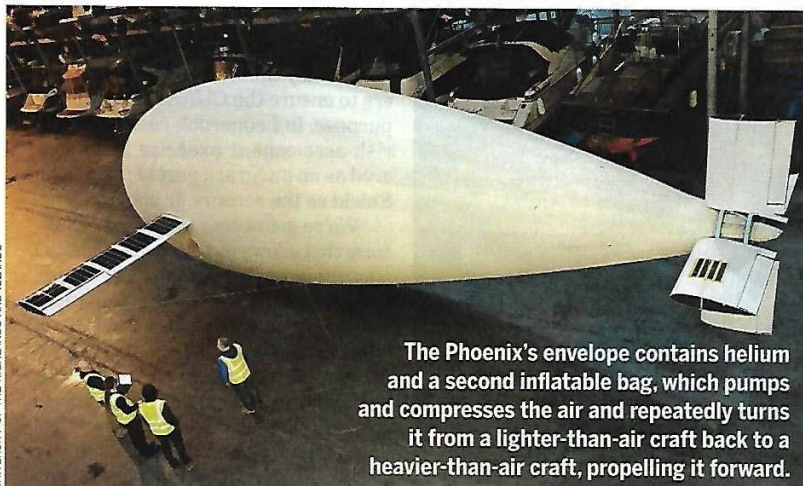




## Lung-Like Propulsion Drives British Long-Endurance UAV

- > THE PHOENIX FLEW FOR THE FIRST TIME INDOORS IN MARCH
- > REVERSIBLE FUEL-CELL TECHNOLOGY COULD SUPPLEMENT BATTERIES AND RECHARGE HYDROGEN

Tony Osborne London



The Phoenix's envelope contains helium and a second inflatable bag, which pumps and compresses the air and repeatedly turns it from a lighter-than-air craft back to a heavier-than-air craft, propelling it forward.

A British team has flight-tested an autonomous aircraft powered by variable-buoyancy propulsion that engineers say could deliver a novel lower-cost approach for the missions performed by high-altitude pseudo-satellites (HAPS).

The Phoenix, a joint development of several UK universities and small businesses, is the result of a three-year project to study the potential of a variable-buoyancy propulsion system on an aircraft.

Until now, such a propulsion system has been adopted for use only on autonomous underwater vehicles (AUV), giving them the endurance to survey the oceans.

Essentially a 15-m-long (49-ft.) monoplane with a 10.5-m wingspan, the Phoenix features a large bulbous fuselage filled with 120 m<sup>3</sup> of helium to help the aircraft ascend. Also contained inside the fuselage is an inflatable bag with a 6 m<sup>3</sup> volume that draws in and compresses air, making the craft heavier than air. As a result, the Phoenix descends, and the wings convert that movement into forward motion. When the compressed air is released through a vent in the rear of the aircraft, it then becomes lighter

than air and ascends again, with the wings again converting that into forward flight.

Once airborne, the platform is virtually self-sufficient and could theoretically stay aloft for an unlimited period, says Andrew Rae, professor of engineering at the University of the Highlands and Islands, who led the design of the aircraft.

And most crucially, say engineers, it can do so at a much lower cost than other HAPS platforms such as the solar-powered monoplanes developed by Airbus and Prismatic.

Some comparable vehicles are more complex and expensive, says Rae: "A cheap, almost disposable aircraft like this will mean you can do things with it you would not contemplate with a more expensive aircraft."

The fuselage—constructed from a Vectran-based woven material—retains its rigidity through internal pressure; the wings use carbon-fiber sandwich panels for the ribs, spars and a lightweight skin.

Solar panels on the wings and horizontal stabilizers charge lithium-ion batteries that drive the pumps and the compressors, enabling the Phoenix to slowly porpoise gracefully through the

sky. Its electrical system, designed by a team from the University of Southampton, is capable of providing power at night and has a safety margin for periods of poor weather and emergency use. Bristol, England-based Stirling Dynamics developed the flight-control system using its experience working out control laws for AUVs. Stirling's system controls the pumps and compressors and also receives data from the power pack.

Initial flights of the Phoenix were performed indoors in the Drystack—an enclosed boat storage facility in Portsmouth, England. The aircraft first flew on March 21, although details were not released until April 23. It flew a distance of 120 m repeatedly, making about five transitions of the propulsion system during each flight.

The team had wanted to fly the aircraft outdoors but was unable to secure certification from the UK Civil Aviation Authority. In its current configuration, the Phoenix would likely be able to operate comfortably at altitudes of 3,000 ft. Even at those altitudes, the platform could act as a flying cellphone mast in areas struck by natural disasters. However, the team is firmly focused on the HAPS mission, although Rae says the aircraft would have to be scaled up considerably to give it stability and inertia to counter wind gusts at high altitude.

Hydrogen, a gas given "bad press," according to Rae, could also be used as an alternative to helium, in part because it allows higher altitudes to be attained and is now considerably cheaper than helium, due to international shortages of that gas. The team has also explored use of a reversible fuel cell developed by the University of Newcastle to complement the batteries and allow the aircraft to recharge the hydrogen gas onboard for future versions.

Funding for development of the Phoenix has been provided by the British government's Innovate UK agency. Other academic institutions involved in the project include the University of Bristol, which worked on the carbon-fiber wing and tail structures, wing skins and gondola, and the University of Sheffield, which conducted wind-tunnel testing.

The future of the Phoenix and its technologies will very much depend on market interest and "specific missions," says Rae. ☛

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## WHAT'S HAPPENING -

June / July 2019

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June 23 - **Orbiter Outdoor Monthly**

SCAMPS Field, Perris CA, 8:00 am.

Feature Event: **Coupe**

Other Events: **E36, Power & HLG/Catapult Launch Glider**

July 7 - **Indoor Flying**

Grossmont College (Upper Gym), 7:30 am to 11:30 pm.

Feature Events: **A-6, Phantom Flash\***