



The 2006 Cessna/ONR Design/Build/Fly Competition Flyoff was held at Cessna Field in Wichita, KS on the weekend of April 21-23, 2006. This was the 10th year the competition was held, and it had record participation in several ways. A total of 49 teams submitted written reports to be judged. At least 41 teams attended the flyoff, 40 of which completed the technical inspection. An estimated 500-600 students, faculty, and guests were present. Near ideal weather allowed for non-stop flights to be conducted each day. Of the 101 official flight attempts, 54 resulted in a valid score. In almost every respect, the quality of the teams, their readiness to compete, and the execution of the flights was better than in any past flyoff.

The primary design objective for this year was to fly three diverse payloads: 48 tennis balls, two 2-liter bottles of water, and a 4"x4"x24" wooden block. The score for this mission was based on cargo loading and unloading time. The change in timing from overall flight time to loading time was made to reduce the impact of pilot skill into the overall score and to reflect the importance of cargo loading time for a commercial aircraft operation. The Rated Average Cost (RAC) formula was changed to be the empty weight in pounds - greatly simplified from previous years. The two other missions included a minimum RAC mission to fly 96 tennis balls, which was scored based on RAC only, and an incremental payload mission which was scored based on the highest weight carried. As in past years, total score was the sum of the two best flight scores. More details can be found at the competition website: <http://www.ae.uiuc.edu/aiaadbfc>

The battle for the top places again included the two teams from Oklahoma State. The Black team took first place with the combination of a high report score (second overall), the lowest RAC (4.75 lb), and completion of the Payload Flexibility and Minimum RAC missions. The OSU Orange team nosed out Cal Poly SLO 24" Wood for second place. The OSU Orange team also had the top report score of 96.00. The complete standings are listed in the table below.

We owe our thanks for the success of the DBF competition to the efforts of many volunteers from Cessna Aircraft, the Office of Naval Research, and the AIAA sponsoring technical committees (Applied Aerodynamics, Aircraft Design, Flight Test, and Design Engineering). These volunteers collectively set the rules for the contest, publicize the event, gather entries, judge the written reports, and organize the flyoff. Thanks also go to the Corporate Sponsors: the Office of Naval Research, Cessna Aircraft, and the AIAA Foundation for their financial support. Special thanks go to Cessna Aircraft for hosting the flyoff this year.

Finally, this event would not be nearly as successful without the hard work and enthusiasm from all the students and advisors. If it weren't for you, we wouldn't keep doing it.

David Levy
For the DBF Governing Committee

2006 DBF Competition Final Results

Place	University	Team Name	Report Score	RAC	Total Score	Cargo Flexibility	Minimum RAC	Incremental Payload
1	Oklahoma State University	Black	95.50	4.75	1414.2	38.76	31.58	0.00
2	Oklahoma State University	Orange - The Flying Slug	96.00	5.10	790.3	40.73	0.00	1.25
3	Cal Poly - San Luis Obispo	24" Wood	85.50	6.70	774.0	38.27	22.39	0.00
4	University of Southern California	SCtingray	94.85	7.64	674.1	34.66	19.63	0.00
5	Istanbul Technical University	ATA 7	83.50	5.31	669.3	14.31	28.25	0.00
6	Washington State University	Thrust or Bust	80.75	6.59	627.3	28.44	22.76	0.00
7	University of California - Irvine	Volo Voloce'	86.50	7.80	601.6	35.02	19.23	0.00
8	Technion - Israel Institute of Technology	Stingray	92.25	8.09	567.1	31.19	18.54	0.00
9	University of California San Diego	Tempus Volat: TLAR VII	83.25	9.04	471.3	34.58	16.59	0.00
10	University of Illinois at Urbana-Champaign	The Flying FOM	93.50	9.54	396.2	24.70	15.72	0.00
11	Massachusetts Institute of Technology	Team UNO	85.00	8.93	324.2	17.26	16.80	0.00
12	University of Colorado at Boulder	Buffaloader	70.25	8.09	302.3	16.27	18.54	0.00
13	Auburn University	AUAV-1: Freeloader	91.25	10.49	299.2	20.10	14.30	0.00
14	The University of Texas at Austin	Swan Song	68.88	6.76	265.3	3.85	22.19	0.00
15	Western Michigan University	Cruise Goose	71.73	14.93	133.6	17.75	10.05	0.00
16	Purdue University	Purdue Pete	83.50	10.00	130.3	0.60	15.00	0.00
17	The University of Texas at Austin	The Burnt-Orange Wrights	70.25	9.76	110.6	0.00	15.37	0.00
18	Queen's University at Kingston	Alouette	87.50	10.91	110.3	0.00	13.75	0.00
19	Mississippi State University	Chimera	81.25	10.74	110.0	14.55	0.00	0.00
20	University of Florida	The InstiGator	84.49	11.10	102.9	0.00	13.51	0.00
21	Massachusetts Institute of Technology	The Ostrich	85.75	16.92	101.9	0.00	8.87	11.25
22	Wichita State University	Black	74.97	11.10	91.3	0.00	13.51	0.00
23	University of Central Florida	Knightro	70.98	20.04	70.2	12.33	7.49	0.00
24	University of California Los Angeles	Dodo	83.13	13.92	64.3	0.00	10.78	0.00
25	Massachusetts Institute of Technology	Alpha Plane	87.00	16.31	49.1	0.00	9.20	0.00
26	Georgia Institute of Technology	Spirit of the Competition	84.50	7.53	16.1	1.44	0.00	0.00
27	Virginia Polytechnic University	Divided by Zero	92.75	8.73	10.6	0.00	0.00	0.00
28	Wichita State University	Firefly	75.91	10.51	7.2	0.00	0.00	0.00
29	Middle East Technical University	Pelikan	82.00	13.36	6.1	0.00	0.00	0.00
30	Wichita State University	Eleanor	69.35	11.49	6.0	0.00	0.00	0.00
31	Case Western Reserve University	The Rust Belt Revenge	87.00	16.21	5.4	0.00	0.00	0.00
32	Cal Poly - Pomona	Silver Phoenix	79.50	15.07	5.3	0.00	0.00	0.00
33	West Virginia University	MinDI	54.25	11.54	4.7	0.00	0.00	0.00
34	University of Texas at Austin	Balsa Bevo Bombers	38.25	8.16	4.7	0.00	0.00	0.00
35	University of Maryland	Testudo's Paratroops	71.50	15.93	4.5	0.00	0.00	0.00
36	University of Arizona	Don't Believe Bernoulli	74.00	17.87	4.1	0.00	0.00	0.00
37	City College of New York	Spartan	61.75	17.36	3.6	0.00	0.00	0.00
38	University of Oklahoma	SSA	74.88	25.73	2.9	0.00	0.00	0.00
39	United States Military Academy	BAMF C-106	59.25	23.10	2.6	0.00	0.00	0.00
40	University at Buffalo	Cyrus	39.00	21.08	1.9	0.00	0.00	0.00
41	San Diego State University	Monty Python	79.05	100.00	0.8	0.00	0.00	0.00
42	Syracuse University	Black Box II	79.00	100.00	0.8	0.00	0.00	0.00
43	Clarkson University	Golden Skunks	78.25	100.00	0.8	0.00	0.00	0.00
44	Columbia University	Lion in the Sky	75.13	100.00	0.8	0.00	0.00	0.00
45	West Virginia University	Chasseur de Canard	71.88	100.00	0.7	0.00	0.00	0.00
46	Embry-Riddle Aeronautical University	ATSAH	55.25	100.00	0.6	0.00	0.00	0.00
47	Arizona State University	Schmoo	47.17	100.00	0.5	0.00	0.00	0.00
48	University of Alabama	Crimson CQD	43.75	100.00	0.4	0.00	0.00	0.00
49	Tennessee Tech University	Golden Eagles	43.50	100.00	0.4	0.00	0.00	0.00



First Place Winner: Oklahoma State University Black Team.



Second Place Winner: Oklahoma State University Orange Team.



Third Place Winner: California Polytechnic San Luis Obispo 24" Wood.