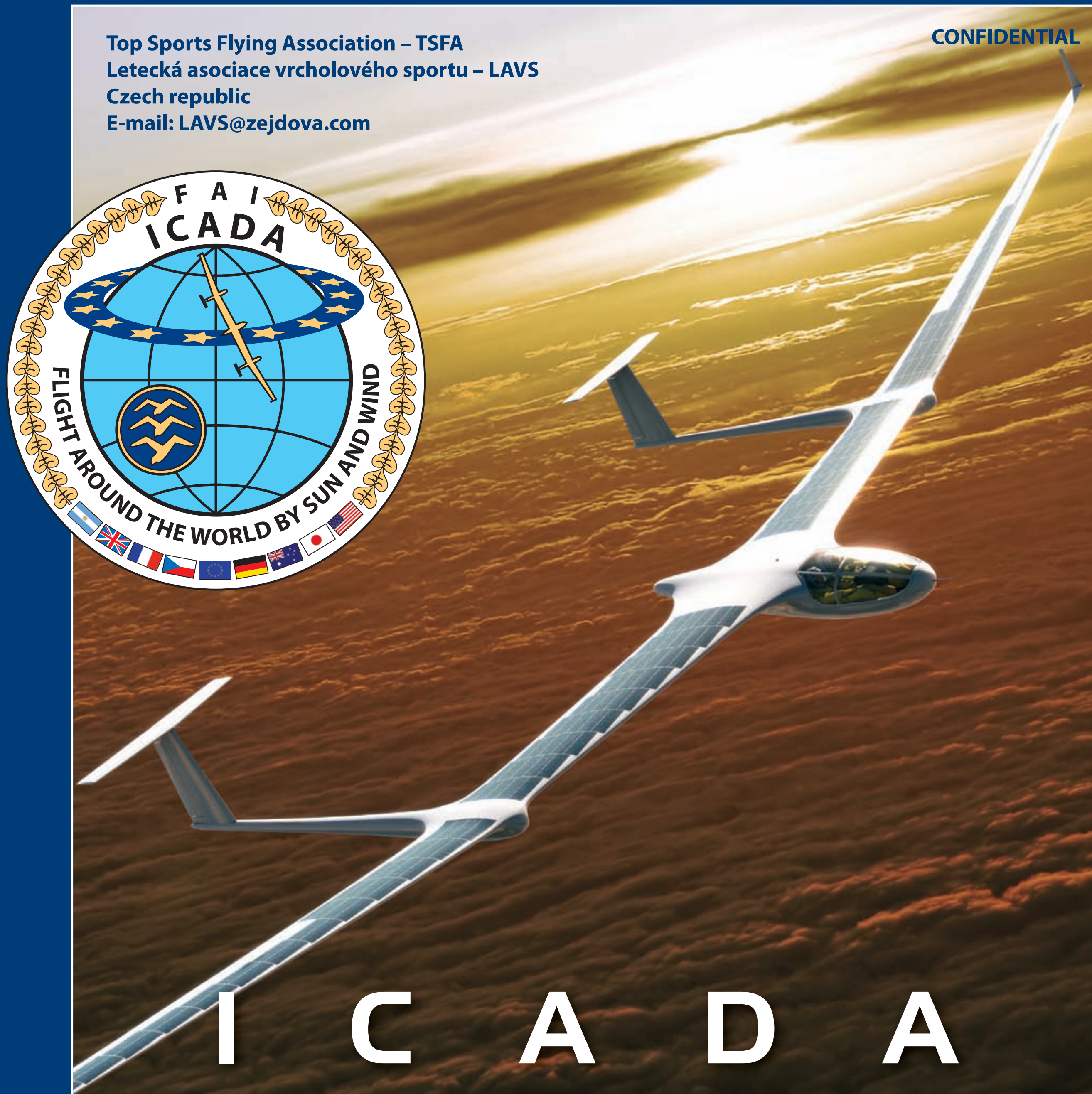
Advertising and promotion

Using the most modern technical and electronic options, in agreement with partners
(during the record flight with online video spots transmitted to the media)
The names of all contributors will be listed in the records and documents of the ICADA project
and permanently placed on the rudders of the record aircraft EB 29 and STGL.

Top Sports Flying Association – TSFA
Krásného 12, 636 00 Brno, Czech Republic
E-mail: info@lavs.cz
web: www.lavs.cz

Prospekt ICADA 20. 02. 2014

ICARUS DREAM COMING TRUE



ACHIEVEMENTS OF THE THIRD MILLENNIUM

**INTERCONTINENTIAL FLIGHTS 2, 3, 5, 10 THOUSAND KILOMETERS,
OVERCOMING THE ALTITUDE OF 20, 30KM
TENS OF WORLD RECORDS AND NUMEROUS FIRST PLACES
EXPLORATION FLIGHTS WITH SCIENTIFIC OBJECTIVES**

FLIGHT OVER THE ATLANTIC

NORTH AMERICA - EUROPE

TRANSCONTINENTAL FLIGHT

EUROPE - ASIA

TECHNICAL READINESS FOR ULTIMATE OBJECTIVE OF THE HUMANKIND

FABULOUS FLIGHT AROUND THE WORLD BY SUN AND WIND

A FEW WORDS TO THINK ABOUT

Is 57 world records of the Czech pilot Hana Zejdová enough to make the ICADA project happen?

Can we raise funds from a few private individual to execute the project or would it be better to hand it over to the European Union to cooperate with the top experts and fans from all continents?

People are beginning to be increasingly aware of the risk of fatal air pollution. They must manage to solve this problem in time on a global scale in order to find new ways of power generation, in particular to replace depleted fossil fuels. For the time being, the only way is renewable energy offered by the largest power reservoir – the solar energy. People are starting to still more realize the need to preserve ecological conditions in order to maintain a healthy life on Planet Earth.
The ICADA project is one of the solutions to how to gain, in conjunction with breakthrough performance with the aerodynamically best-designed motorless aircraft, a deeper understanding of the application of the future use of the environmentally clean solar energy for the benefit of mankind. Step by step, we come to believe that the natural energy of the sun is the principal source of power generation for the future.

Organisation of meteorological and control services.
Establishment of a meteorological and control centre with crew training to guide the flight to wave and jet stream conditions and areas with the smallest upstream and downstream instabilities.

Members of the Team

Vladislav Zejda
LAVS President, author of the project

Ing. Jan Buček
Vice President, technical advisor

Main ICADA project pilot
With her extraordinary achievements, Hana Zejdová, European champion, participating in the Kangaroo expeditions in Australia, ranking amongst the best record-braking aviatress of the world and the first female astronauts, has entered the FAI Hall of Fame. She has received the highest FAI awards for women in motorless aviation, Pelagia Majewska Medal and Otto Lilienthal Medal, and an absolute award for the record-breaking performance during the first stage of the ICADA project.

Miloslav Bouška
Promotion

Ing. Milan Soukup
Visualisation

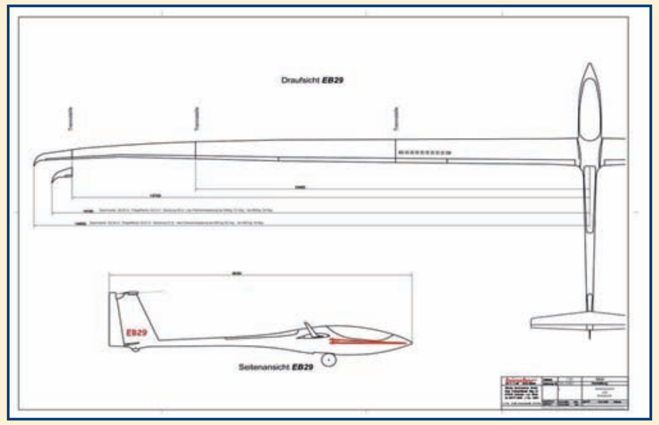
Distinguished colleagues, who gave a scientific basis to the development of the ICADA project:

Dr. Jiří Förchtgott – former meteorologist and glider pilot, employee of Czechoslovak Airlines.
Prof.Dr. Joachim Kuetner – former meteorologist and glider pilot, Weather Bureau, Washington.
Prof.Ing. Milan Daněk, DrSc. – flight aerodynamics and mechanics expert, former glider pilot, employee of Military Technical Academy and Hydrotechnical Institute in Brno.
Doc.Ing. Milan Nedělka, DrSc. – aerology and climatology, former manager of the aerology station at Poprad airport.

- Acquisition of a modern glider, class ASH EB29, manufactured by BINDER Flugmotoren-&Flugzeugbau, Germany, modified for long-distance flights and stratosphere-altitude flights.

Technical data:

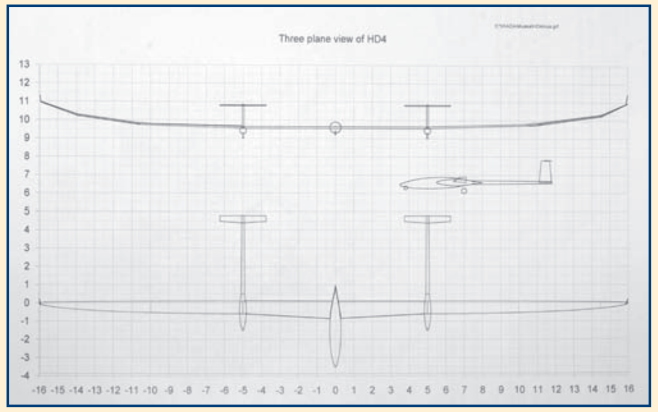
Single-seater, wing span	29 m
Max. speed	280km/h
Min. rate of descent/max. glide ratio	40cmSEC/68

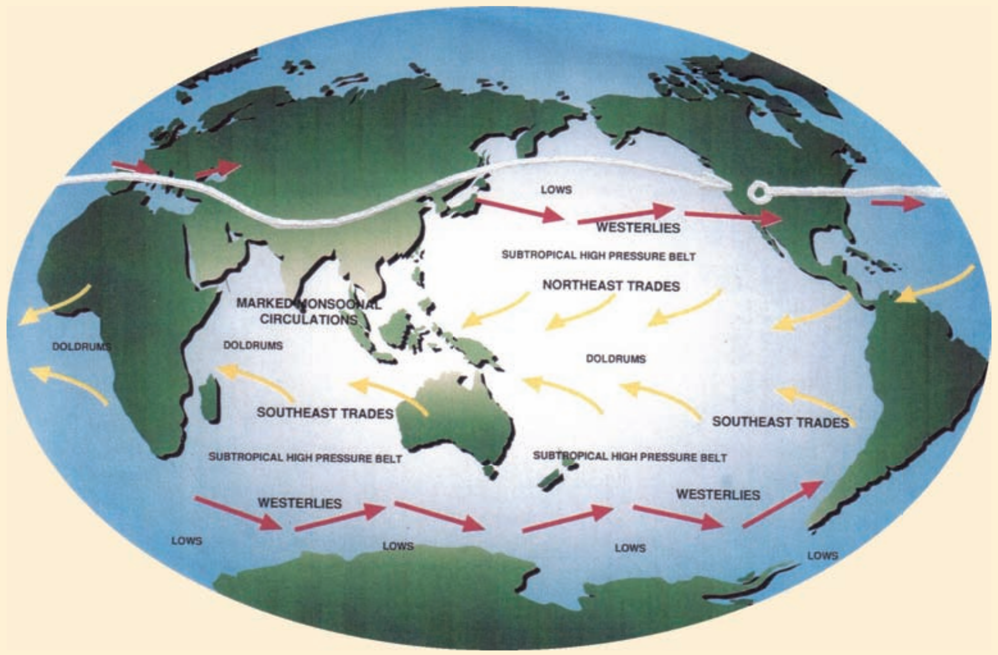


Stage III - USA (Sierra Nevada), Europe (Scandinavia, Alps), Asia (Caucasia, Himalayas).
- future STGL, design employing modern technologies for attempt at the greatest human achievements in an unpowered aircraft.

Technical data:

Double-seater STGL, wing span	34 - 38 m
Max. speed	280 km/h
Min. rate of descent/max. glide ratio	30cmSEC/ 90-100

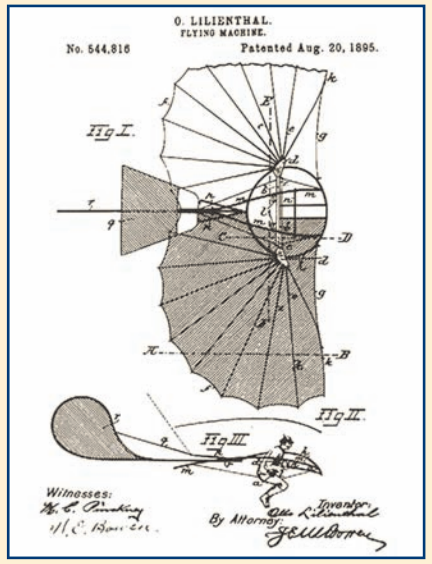




Drawing of the approximate flight around Earth with respect to Earth surface, polar circulation, occurrence of obstacle and free altitudinal long waves –natural drivers of unpowered aircrafts

Short trip to the history of AVIATION and opportunities offered by the current aviation pioneering.

Since the very start, aviation pioneering has been characterised by a number of milestones. It has been a privilege of distinguished individual and promoters who have managed to forge the path towards technical development.



Leonardo da Vinci, Montgolfier brothers, Otto Lilienthal, Wright brothers, Luis Bleriot, Charles Lindbergh, Amelia Erhardt, Jurij Gagarin, Neil Armstrong, Steve Fossett and many other pioneers making sacrifices and often dedicating their entire lives to aviation and astronautics to reach the present level of advanced air transport, military and sport flying and exploration of the Universe.

Great efforts of individuals or groups arouse the human desire to win many primacies in aviation.

In the 1970's, in former Czechoslovakia, a Blaník glider aircraft was geared up to make an attempt to reach an altitude of 20 km and to make a long-distance flight in the mountain range of the High Tatras in Slovakia.

The America project PERLAN to overcome the altitude of 30km in an unpowered aircraft and the Swiss project SOLAR IMPULS to fly around Earth using solar energy represent other attempts to gain great primacies in aviation.

With its objectives in long-distance and high altitude flights set high, the project ICADA ranks amongst the historic milestones in the history of aviation.

Stage II is only a question of the pilot's courage to make use of the perfectly equipped super modern aviation equipment readily available in the market. The development to accomplish fantastic performances of intercontinental flights, flight over the Atlantic and the ultimate flight around the globe without using a motor power calls for going beyond the individual efforts under the auspices of the Fédération Aéronautique Internationale (FAI) and establish a truly international cooperation between the best researchers technicians, aerodynamicists, meteorologists and university students. All these great fans of human evolution with financial assistance of institutions, aircraft manufacturers, airliners and courageous promoters from all continents.

What is the ICADA project?

(ICArus and DAidalos)

Its importance and challenge for humankind.

The ultimate achievements of unpowered aviation are technically more demanding on people than performance achieved using thrust or motors. ICADA includes achievements – breaking unpowered aircraft speed and long-distance world records as well as attempts at the absolute altitude records which will foretell the ultimate human achievement - future flights around the globe using the natural sun and wind energies - being back-up by an auxiliary motor, most likely using solar energy -with the perfect utilisation of aerodynamic and technical development of unpowered aircraft. Besides appealing performances that the humankind keeps outperforming, the objective is to gain new scientific knowledge from the field of meteorology and better application of ecology driving the human potential forward in many scientific disciplines: including the research into the lower stratospheric layers:

- Not yet well known and explored meteorological phenomena over the tropopause.
- Safer use of jet stream flows in air transport, validation of the occurrence and influence of strong turbulences - CAT, hazardous for air traffic.
- Range of the areas of air wave motion caused by Earth obstacles, effects of polar flows, and high-altitude wind shear strength effects on free waves.
- Long stay in low layers of the stratosphere in the conditions strong ultraviolet radiation affecting changes in the ozone hole, solar storms and solar wind on living organisms.
- Validation of the possibility of using environmentally-friendly clean air tourism without the use of combustion engines.

During the implementation of Stage II, it will be possible to make technical and design preparation of the final Stage III, provided we manage to find a sponsor for funding. With the current advanced aviation design, aerospace and other industries, it is realistic to prepare a more universally applicable future Stratoglider (STGL) for performances following up on the U.S. project PERLAN, mainly aimed at altitude records, and the Swiss SOLAR IMPULS with the objective to circumnavigate the Earth with solar-powered engines. The aerodynamically sophisticated STGL will have high performance standards: the lift-to-drag ratio approaching the value of 100 and another important variable - the descent rate - will approximate to a value of 0.3 m/sec. These are the values predicted by scientists in order to be able to reduce the permanent descent rate of the motorless aircraft to an acceptable value.

A much greater complexity of the ICADA project is obviously compared to flights around Earth by balloon or engine-driven aircraft. Every pioneering has to face doubts. When in the fifties of the last century considerations arose of crossing the Atlantic and even a flight around Earth by balloon, sceptics deemed it an insurmountable fantasy. We always have to find someone with a vision and the courage to overcome scepticism, find friends who support us, huge fans and irreplaceable sponsors.

Main objectives of LAVS in the ICADA project

- Participation in World and European Championships
- Attempt at a long-distance record and reaching the altitude of 30km
- Flight over the Atlantic from the USA to Europe
- Trans-continental flight Europe - Asia
- Promotional flight around the globe
- Uninterrupted flight around the globe
- Exploration flights
- Use of solar energy for environmentally-friendly aviation tourism

ICADA at three stages – venue, equipment and ultimate achievements

Stage I – exploration of the wave flows in the High Tatras - Slovakia 1961
– reached altitude of 10,500 m, 1975 - 1983 reached altitude of 11,000 m.
– validation of the technical and human possibilities during the expeditions to Australia in 1995 - 2000. A total of 57 world records gained by the most successful unpowered aircraft woman pilot in the world, the largest number of world records ever achieved by anyone in unpowered aviation, including the ultimate number of record-breaking achievements and the top international awards

Stage II - Implementation in appropriate meteorological terrains of Australia, Argentina, USA, presuming the achievement of 20 world records and many primacies.