



FEDERATION AERONAUTIQUE INTERNATIONALE

FAI ASTRONAUTIC RECORDS COMMISSION (ICARE)

MEETING HELD AT THE FAI HEADQUARTERS
24 AVENUE MON REPOS, 1005 LAUSANNE, SWITZERLAND
FRIDAY 25 APRIL 2003

MINUTES

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|------------------------------|--------------------------|
| Dr Sanz Fernandez de Cordoba | President |
| Mr Christian Marchal | France, Technical Expert |
| Dr. John Miles | UK |
| Mrs Karen Feldstein | USA |

In Attendance :

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|------------------------|----------------------------|
| Mr Max Bishop | FAI Secretary General |
| Mr Thierry Montigneaux | FAI Asst Secretary General |

Apologies :

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|------------------------------|------------------------|
| Mr. Nikolay Bodin | Vice-President, Russia |
| Mr. Prof. Antonio Castellani | Italy |
| Mr. Mike Collins | USA |

Proxies:

Russia to the USA

1 WELCOME BY THE PRESIDENT AND ROLL-CALL

Dr Sanz Fernandez de Cordoba welcome all delegates to the meeting of ICARE, and in particular to Mrs Feldstein (US alternate delegate) who was attending an ICARE meeting for the first time.

2 APPROVAL OF THE MINUTES OF THE LAST MEETING (19 April 2002)

The minutes of the previous meeting were approved as presented.

3 FAI GENERAL CONFERENCE

- a. Dr Sanz Fernandez de Cordoba presented his report to the Dubrovnik FAI General Conference, October 2002 (***Annex 1***).

The FAI Secretary General reported on the following FAI developments:

- The Dubrovnik General Conference changed the membership criteria to accept under specific circumstances to have more than one member organisation per country in the case of countries already active members of the FAI.
- All members of the FAI Executive Board were re-elected in Dubrovnik for another two-years term.
- Membership in FAI is slightly on the increase, having now reached 100 countries represented in the organisation.
- The preparation of the celebration of the FAI Centenary in 2005 is progressing well, with a number of events already scheduled for that year, including the Centenary General Conference in Paris, a book on the history of the FAI, and an airshow in Lausanne.
- A new FAI visual identity, including a new logo, is being worked on, and will be presented for approval at the 2003 FAI General Conference.
- The next FAI General Conference will take place in Cracow (Poland) on 09-12 October 2003.
- The new FAI Strategic Plan includes an "FAI Corporate Patrons" project. Mr. Bishop invited all ICARE delegates to promote this project in their country and advise FAI of companies eligible to be contacted by FAI.
- The next World Air Games are expected to take place in 2005. A new concept will be introduced to have a smaller event.

4 ASTRONAUTICS ACTIVITIES AND PROJECTS

- a. **Reports by Delegates from Member countries**

France: Mr Marchal reported that the main elements of the French activity in the past year had been the failed launch of an "Ariane 5" in December 2002, followed by a successful launch in April 2003.

Spain: Dr Sanz Fernandez de Cordoba reported. A meeting had taken place during the Spanish presidency of the European Union concerning the Galileo project. An agreement was reached to lower the share of the Spanish participation in order to increase the respective shares of Italy and Germany. However Spain later opposed Galileo developments, which has resulted in delaying the start of the project. Amongst the other projects Spain is involved in is the ESPASAT satellite which is due to be launched in the near future.

UK: Dr. Miles reported :

- The UK governmental space policy still views the cost of conducting research on manned platforms as too high and does not support space activities.
- There is a lot of interest from the private sector, and recent visits to two companies involved in the X-Prize competition confirmed that private venture manned spaceflight is currently receiving a great deal of interest and attention in the UK.
- The first group competing for the X-Prize is Bristol Spaceplanes Limited. Their Ascender spaceplane is designed to be the first sub-orbital aeroplane since the X-15, and the first ever to carry passengers to space. A radio controlled model designed to investigate the aerodynamic behaviour of Ascender has already flown successfully. The project aim is to build and flight test a full scale, two man, slow speed, low altitude (atmospheric) demonstration vehicle within 2 years.
- Dr. Miles presented to Dr Sanz Fernandez de Cordoba a book entitled "Spaceflight revolution" written by David Ashford from Bristol Spaceplanes Limited. Dr. Sanz Fernandez de Cordoba expressed his thanks on behalf of ICARE and FAI for this gift to the FAI library.
- The other British group competing for the X-Prize is called Starchaser Industries Limited and consists of an enthusiastic group of young people with dream and passion. Their "thunderbird" is a low cost multi stage rocket designed to carry the crew on short sub-orbital flights into space. The recent test firing of the "Churchill Mark 2" bi-propellant liquid rocket engine was a complete success. The single seat NOVA capsule was recently unveiled in the UK. It has since then been shipped to the USA for manned parachute drop tests from 14,000 feet. The project aims to carry out the first manned flights before the end of 2004.

USA: Mrs. Feldstein presented her report on the five missions flown during the year 2002. She also reported on the present situation at NASA, following the STS-107 Columbia accident on February 1, 2003. As a consequence of the accident, the International Space Station (ISS) crew was to go down to two people, and investigation were being carried out on how to reschedule the resupplying of ISS using Russian vehicles only. The final report of the Columbia Accident Investigation Board was expected in June 2003 and NASA was already positioning to be ready to fly again by the end of 2003. Dr Sanz Fernandez de Cordoba expressed his condolences to Mrs. Feldstein and asked her to convey a message of support from ICARE to the families and colleagues of the astronauts killed in the accident.

b. X Prize Project

Dr Sanz Fernandez de Cordoba advised delegates that several X-Prize newsletters had been received throughout the year, indicating that several projects were well under way. It was highly possible that a first flight could take place in 2004.

5 FAI SPORTING CODE – SECTION 8 (ASTRONAUTICS)

a. Proposals for new record categories in connection with X-Prize :

Delegates discussed and reviewed the five proposals made by Dr Sanz Fernandez de Cordoba in his letter dated 03 May 2002.

- Delegates agreed to modify paragraph 2.6 and reword the last part of the definition from "... For near space missions the reference axis will be centred at the Earth Centre but not rotating with Earth, as defined in paragraph 2.12.6" to read "*... For near space missions the reference axis will be centred at the Earth Centre but not rotating with Earth. For suborbital flights, as defined in paragraph 2.12.6, the reference axis will be centred at the Earth Centre and rotating with Earth.*".
- Delegates agreed to introduce a new definition as paragraph 2.6.1 to read : "*2.6.1 TAKE-OFF EMPTY MASS: The total mass of the spaceship at take-off place and time, excluding the masses of the crew, the propellant and all other consumables needed for the mission. If part of the crew and their life support consumables are replaced by ballast, that ballast will not count for the total mass.*"
- Delegates agreed to add a new subparagraph to paragraph 2.2 to read: "*c) Reusable Spaceship (Class K or Class P) : A spaceship capable of making two manned consecutive flights in such manner that a minimum of 90% (in mass) of the elements constituting the take-off empty mass of the first flight will be present in the take-off empty mass of the second flight.*"
- Delegates agreed to introduce a new record for aerospacecraft as paragraph 5.2.1.5 to read : "*5.2.1.5 Number of people in suborbital flight'*
- Delegates agreed to introduce two new records for suborbital flights as paragraphs 4.2.1.6 and 5.2.1.6 to have the exact same wording as follows : "*Minimum time between two consecutive flights in a reusable vehicle. The time is to be measured from the time of termination of the first flight to the time of take off of the second flight.*
Notes: Both flights have to comply with all other conditions for completed space flights. The record holder will be the crew commander of the second flight."

- b. The proposal to specify which axes are used for measurement in paragraph 5.2.1.4 was discussed and delegates agreed unanimously to withdraw it.

NOTE: In the meeting of ICARE, 2002, it was noted the need to specify the axis used for this record. However, on deeper study, it was realized that the record refers to length along the trajectory of suborbital astronautic (beyond 100 Km) flights. Suborbital flights are nowadays essentially short in time, thus using rotating or non rotating axis will not have real influence in the records

6 PROPOSALS FOR FAI AWARDS

ICARE approved the following awards:

- a. **Yuri Gagarin Gold Medal**: International Space Station Expedition Four crew. (Note: ICARE agreed to give one copy of the medal to each member of the 3 man crew, it being understood that this is a unique award to three people, since current By-Law 12.9.2.2 allows this medal to be awarded to a crew.)

NOTE: Current policy on giving multiple copies of medals for a single award will need revision. This matter will be in the Agenda of next ICARE meeting.

- b. **Komarov Diplomas**: Crew of STS-113 (ISS 11A) and ISS Expedition 5 Crew. The US delegate inquired about the possibility that Russia had sent a request to have one of the crew originally proposed for a Komarov Diploma nominated for a second Gagarin Gold medal instead. Mr. Montigneaux reported that no such request had been received by FAI. He reminded delegates of the nomination procedures for FAI awards, which can be found in chapter 10 of the By-Laws to the FAI Statutes.

- c. **Korolev Diploma**: Crew of STS-109

7 INTERNATIONAL ASTRONAUTIC FEDERATION

Dr Sanz Fernandez de Cordoba reported on the 2002 IAF Congress and World Space Conference. ICARE decided to appoint Dr Sanz Fernandez de Cordoba as official representative to the 2003 IAF Congress.

8. PRESENT WORLD RECORDS - REPORT

Mr. Marchal reported that one new World Record had been ratified since the last meeting, for "Assembled mass of spaceships linked in flight". The record was claimed for STS-112 and ISS Expedition Crew 5 and the performance is 264'432.8 kg.

Dr Sanz Fernandez de Cordoba commented that the International Space Station had now reached a size superior to that of the former MIR Space Station.

10 ANY OTHER BUSINESS

Dr Sanz Fernandez de Cordoba asked all delegates present to assist him in trying to get delegates to attend the ICARE meeting from countries having space activities. Agreed unanimously.

11 ELECTIONS

The following people were elected :

President : Dr Sanz Fernandez de Cordoba

Vice Presidents : Mr Nikolay Bodin

Dr. John Miles

12 DATE AND PLACE OF NEXT ICARE MEETING

It was agreed that the next meeting would be held in Lausanne on Friday 30 April 2004

END

REPORT FROM ICARE PRESIDENT
95th FAI General Conference, Dubrovnik, Croatia, October 2002

1.- General Activities of ICARE Committee 2001/2002

The ICARE Committee held its annual meeting on April 19, 2002, at the FAI Headquarters in Lausanne, Switzerland.

The meeting was honoured by the attendance of Mr. Wolfgang Weinreich, President of FAI, whom contributed positively to the meeting, and encouraged our work. This gesture was more than welcome considering that ours is a small Commission when compared with other ones within FAI. However, it is a significant one when considering that we, people in aeronautics and astronautics, are always looking for new human achievements beyond the limits set out in previous generations. Space achievements are obviously the latest challenge, and our Commission is taking care that the real records are duly recorded and recognised.

In that sense, during the meeting the FAI Secretariat called the attention to the fact that Chapter 3 of Section 8 of the FAI Sporting Code (the Section dealing with Astronautic Records), was currently refraining from calling "absolute records" the records envisaged in that part. This made difficult to consider whether or not they will qualify for the FAI "de la Vaulx" medal. This was an historical development, coming from the times when astronautics was not such a well-established activity. Nowadays, with astronautics developing firmly, there are good reasons to have absolute space records, and the Commission agreed to call the best performance in that chapter "absolute record".

2.- X Prize

I have been reporting about this private initiative in the last few conferences. The exciting part of this initiative is that, for the first time, a kind of competition with a significant bourse for the winner is being settled for space activities. Historically, this kind of competition was a major helper in developing aeronautics, and we believe a similar thing may happen in astronautics. We are glad to report to the Conference that several initiatives are under way to win the prize, and even, as was reported to the Commission, some proof concept vehicles have already flown successfully.

Our Commission took some further steps to help the initiative by establishing new records on reusable spaceships, a condition established for the X-Prize, that has been highly considered as a major step towards opening space flights.

3.- Other points of interest for FAI ruling

We had in our Commission in the present year a case that may be of interest to the Assembly. As you all know, the two highest FAI Awards are the "FAI Gold Air Medal" (Statutes, Chapter 11, art 11.2) and the "FAI Gold Space Medal" (Statutes, Chapter 12, art 12.9). The latest, although created at a later time, "is of equal stature with the FAI Gold Air Medal" (Statutes, art 12.9.1.1).

This year, a nomination of a crew of three people for the FAI Gold Space Medal was presented to our Commission. It was clearly seen, after some discussion, that the ruling for the Space Medal is identical to the ruling for the Air Medal, and the members of the Commission were in the opinion of keeping the ruling in parallel, since both awards are of equal stature. However, the Commission opinion was divided on whether the wording, common for both medals, were meant to award a maximum of one medal per year to one person, or allowed to award a maximum of one medal per year shared by several people, for instance, a crew. Apparently, both medals have been historically assigned to just one person in one year, but the ruling is not clear.

The problem was solved in our Commission when the nomination of the award for the crew was withdraw. The Commission decided not to take further action, for the time being, in trying to clarify the point unilaterally, considering that we do not want the ruling for the Space Gold Medal to separate from the ruling for the Gold Air Medal. However, we will welcome a clarification on the point.

Dr. S. Sanz Fernández de Córdoba