



*Fédération
Aéronautique
Internationale*



Minutes

of the
Annual Meeting
of the
**FAI Medico-Physiological
Commission (CIMP)**

held in Paris, France
on 8 and 9 June 2013
at Aeroclub de France

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Saturday, 8 June 2013

1. Welcome by President

Opening Remarks by JK welcoming all. He announced the outline of the agenda, the evening function at the French Aero Club and the excursion to Le Bourget.

Introduction of Rob Hughes, FAI Senior Sports Manager from FAI Head Office, Lausanne.

2. Roll-Call 8 June /2013

President:

- Juergen Kneueppel President (JK)

CIMP Bureau Members

- Rene Maire President of Honor Delegate Switzerland (RM)
- Peter Saundby President of Honor Delegate UK (PS)
- Kazuhito Shimada Vice President Delegate Japan (KS)
- Martti Lepojarvi Vice President Delegate Finland (ML)
- Marja Osinga Vice President Delegate Netherlands (MO)
- Richard T. Garrison Secretary Alternate Delegate USA (RG)

CIMP Delegates:

- Bernhard Schober Delegate Austria (BS)
- Jaques Berlo Delegate Belgium (JB)
- Samuel Sammuelson Delegate Iceland (SS)
- Antonio Dal Monte Delegate Italy (AdM)
- Thierry Villey Delegate France (TV)
- Hiltrud Garthe Alternate Delegate Germany (HG)
- Vladimir Zharov Delegate Russia (VZ)
- Geoff McCarthy Delegate USA (GM)

CIMP Guests:

- Wolfgang Lintl CIMA, Microlight, Germany (WL)
- David Bareford CIA, Ballooning, UK (DB)

FAI Representative:

- Rob Hughes FAI Head Office (RH)

Apologies:

- Oldrich Truska, Delegate Czech Republic

The 'Conflicts of interest' question was raised. All delegates made a personal statement. The only conflict noted was that some delegates were active aero-medical examiners (AME); some are national aero club officers. Any other conflicts of note would be delivered to the secretary.

3. FAI Report, Current Issues: (RH)

RH greeted CIMP from the Secretary General JM Badan. He announced Frits Brink (NEDL) as new member from the Executive Board. FAI membership increased to 113 countries. He informed us that FAI in 2012 was 168 000 CHF over budget.

The FAI has added the national museum of Aero Modelling in Muncie, Indiana, USA to its list of Recommended Museums.

Announcement of the General Conference in Malaysia in October 2013.

He explained the new Regional Management system of FAI, he clarified Expert Groups and their function in FAI along with Technical Commissions. He stated that these have been doing quite well.

Sports Strategy of FAI now includes the formation of FAME. It is concerned with increasing the visibility of Air Sports with the main Strategy of "bringing Aero Sports to people". This would be done by developing venues for air sports, which attract media and large spectator groups.

FAI is now 100% WADA compliant with In-Competition and Out-of-Competition, Registered Testing Pool, having been formed in their operation satisfactory. The FAI is endeavouring to stress the importance of therapeutic use exemptions (TUE) to all participants.

There has been a new database overhaul performed. This will improve many functions of FAI such as rapid Sporting License Verification along with other streamlining of functions.

Breitling Sponsorship has developed as well as expected. There have been many new events which Breitling has helped to support. This has benefited FAI with financial and visibility being primarily rewarded. The global partnership with Breitling has brought increased financial resources to FAI. With this partnership comes a greater exposure of FAI through marketing.

There will probably be a renewal of the Red Bull racing series in 2014.

The World Air Games had a number of bidding sponsors. It will be decided soon.

He finally announced the new employees including himself as Senior Sports Manager. His assistant will be Annick Hauser. IT Information Technology will be the responsibility of Visa Matti Leinikki. He is presently also a current European Gliding Champion.

4. Aviation Medicine

5.1 Peter Saundby: "*What is the aeromedical problem?*"

The reported following challenges include training failures, disqualifying diseases, aging pilots and tailoring regulations to applicable risk profiles.

Examples of the highest risks include 1 pilot with many passengers. Lower risk would be 'two' pilot operation, or solo with no passengers.

It has been shown that periodic examinations are ineffective to detect disease. The hope is that with the increased number of pilots having an accessible electronic record would augment aeromedical decision making.

The ultimate measure of flight safety is accidents and damage. Our measure is purely medical. A review of transport accidents in the UK related to medical causes showed the majority were related to psychiatric conditions. This could not be addressed or prevented by current examination procedures. 20% of accidents have incidental medical factors, but usually are not related to the primary cause of the accident. Interventions include medical regulations, periodic exams, disqualifications and medical certification problems. - Who needs protection? Third party and passengers!

Causes of accidents include training failures, disqualifying diseases and aging pilots.

5.2 Marja Osinga: "*What is new in EASA Regulations?*"

She reviewed the makeup of the members of the current Rule making group. Air-Sports and National Aero-clubs are now more represented. There has been an increase in the requirement that AeMC be required to independently certify or deny pilots. This is a mayor change from JAR times. This has increased the responsibility of the AME and his liability; it decreased those of the CAA. With this change airmen must appeal to the AME, not to the governmental organizations.

GPs have only been given the ability to certify LAPL in UK and Sweden.

Hot Topics include Diabetes, Epilepsy treated by medication and new Anticoagulants. 'Cumarins' are accepted for preventive reasons, not for therapeutic use.

Deaf pilots are also an issue that has been dealt with. It was discovered that gyroplanes were not included in the initial EASA regulations. The situation has currently been remedied; it is important to apply appropriate medical certification.

Another issue includes tow-planes piloted by OPL certified pilots. The question raised that the glider pilot being towed was seen as a passenger fixed to the towing plane by EASA. Then it would be currently forbidden by EASA. It was stated that the glider pilot is not a passenger.

5.3 René Maire: *Computed Tomography Coronary Angiography in pilots with Left Bundle Branch Block*

He presented the study protocol of an international study which he performs together with the University Hospital of Zurich. The aim of the study is to analyse the presence and severity of coronary artery disease (CAD) in asymptomatic pilots and air traffic controllers (ATC) with newly detected left bundle branch block (LBBB) by using multi-slice computed tomography coronary angiography (CCTA) and to assess the clinical consequences of those pilots and ATC in whom CAD-lesions are detected and the consequences regarding the fitness to fly. The presentation of René Maire was a call for participation at this study, he stated that European officials involved in aviation medicine are asked to support this project by stimulating AeMCs, other aeromedical institutes and AMEs to participate at this study and provided contact information.

5. WADA / FAI Anti-Doping Program

5.4 Hiltrud GARTHE: *"History of Doping Procedures in Germany"*

HG outlined the use of Alcohol and other drugs in ancient times and more currently the use of testosterone and others in the GDR in comparison the old GFR. The obvious incentive for all these Doping Agents, -'the pressure to perform'-, is widely seen in a variety of sports. The formation of WADA and NADA in 2004 has markedly decreased the incidents. These have been highlighted by several famous doping cases. The aim is to prevent doping and doping entrap. It is important that experienced flight surgeons support the athletes in air sports by promoting and reviewing current regulations and helping them upfront to comply with the rules. Personal engagement of the 'Anti-Doping Physician' in Federations can help to prevent unnecessary conflicts inside the WADA system.

5.5 Geoff McCarthy: *"The FAI TUE Panel: Current Data and decisions"*

He presented a demonstration of the WADA ADAMS Internet Web-Page. After accessing the system he showed the WADA Web-Page setup, how applications are sent, how medical reports have to be evaluated and how joint decisions in the 'FAI TUE Panel' are decided. He also reviewed the criteria for allowing a therapeutic use exemption (TUE). Secure WADA-ADAMS communication between the FAI Anti-Doping Manager (ADM), Segolene Rouillon and the FAI TUE Panel delegates provide the basis for the administration of FAI TUEs.

5.6 Rob Hughes: *"The WADA code and the New FAI Anti-Doping Plan"*

He presented a summary of the current status of the new FAI Anti-Doping Plan, which was developed by the FAI Anti-Doping Advisory Group (ADAG) during the last 18 months. FAI CIMP was included. A summary of the new FAI Anti-Doping concept can be seen on the FAI Web Page. Rob Hughes reviewed the FAI arrangement with Sport Accord which administrates the FAI decided annual plan. He presented details of the new FAI Anti-Doping Plan, which is now adapted to FAI Air Sport needs. Supported by the new Anti-Doping Advisory Group (ADAG) and the new Anti-Doping Hearing Panel, the FAI Anti-Doping Manager together with Sport Accord will plan ahead for various international FAI championships and execute the required In-Competition Tests. Annually a small number of international athletes (up to 10) from the different FAI Air Sport Commissions will be elected and form the new Registered Test Pool ('RTP') for Out of Competition Testing. The need for well elaborated Educational Material and good Promotion for the FAI Anti-Doping Program was proposed.

6. Flight Safety and Air sports

5.7 Richard T Garrison: *"Comparison of FAA and EASA 'GA' Accident Statistics"*

RG stated that accidents are stabilized in most categories in most countries (EASA, FAA) at about the same level. He stated the biggest accidents occurred in the GA with 'manoeuvring accidents' and 'weather related incidents', having the highest fatality accident ratios.

For the past decade Experimental-Amateur built AC (EAB-AC) have seen a disproportionate higher number of accidents when compared with certified AC. The main cause of these accidents and fatalities occur due to mechanical failures (power plant) and are seen in the initial first flights in 'inexperienced in-type' pilots.

There have been multiple initiatives to mitigate accident factors with some success being seen. RG then stated that FAI CIMP should begin collecting more data from member Countries on particular air-sports that are underreported or ignored by governmental agencies to this day.

5.8 Antonio Dal Monte: *"New Italian Cervical Spine support Equipment for in flight Operation"*

AdM presented the newest version of long time developed, now operationally usable Heavy Helmet-Support System to reduce the strain on the cervical spine of helicopter pilots, carrying i.e. Night Vision Goggles (NVG).

The system is constructed of a very light weight reinforced carbon fibre apparatus which allows the pilot in his pilot seat all required moves. It is a readily AC crash proof system, even for quick egress situations.

Technical drawings and a small film showed the system in pilot operation. It will serve to improve carrying heavy helmet Systems over a long time without damaging the vertebral spine.

5.9 Geoff McCarthy: *G-Forces and new Operational Training Simulators*

The presentation provided new information about modern centrifuge simulator training. Besides the flight induced G-Forces in acrobatic manoeuvres special vision displays can support the simulated training flights. Modern equipment was demonstrated and its physiological impact discussed. – 'Simulator Sickness': After simulator flights no actual flights in airplanes should be performed on that day. 'Tumbling Sensations' may influence the trainee. The inner ear is individually susceptible to that kind of centrifuge exposure. It was stated that in acrobatic flying pilots need to get the right information and instruction for 'Anti G-Straining Manoeuvres', before being able to perform them in aerobatic competitions sufficiently.

7. Ballooning, Flight Safety and other Aeromedical Concerns

Thierry Villey, David Barford, Juergen Knueppel:

The intention is to present and discuss current issues of the various FAI Air Sport disciplines. CIMP delegates should be able to understand better the individual demands, physiological and mental stresses for/of operators and pilots in the specific sport. Ballooning was chosen 2013 for information and presentation.

5.10 German Ballooning Safety Team: *"Film-Document; Balloon WCC, Gordon Bennet, 3 days in Flight"*

JK presented this film. It showed the 3 day World Championship, Gordon Bennet Race, in the perspective of the individual 'Gas-Balloon-race-team'.

It starts with scenes of preparing the balloon; 'Take Off' in the darkness of the evening; at night 'Over-Flying Paris'; en route During Day Flight; Gas Balloon Operations; over Sea; Sleeping and Activity; Navigation and Meals; bad Weather; and finally an "about-near" Crash Landing in Sweden. – This impressive document showed markedly the various environments and typical Gas Balloon operations to the critical observer.

5.11 Klaus Hartmann, Juergen Knueppel: *"PPT Presentation; 'Human Factors' in 'Gas- and Hot Air-Ballooning'"*

The PPT Presentation provided an oversight about the technical and human issues in Ballooning. Basically the rules in both disciplines, -Gas- and Hot Air Ballooning-, are very similar.

Take Off and Landing should be done early in the morning and in the evening, when there is no thermals and little wind. Basically No G-Forces, Exposure to Heat and Cold, Vision and Hearing become a different value, the Typical Day of the balloonist requires Long Term standing, Perfect Planning is essential, every Landing is a Venture, Physical Exposures are variable.

Accidents happen, but mainly often not to seriously. Real bad Accidents are rare. – Ballooning is not very dangerous if professionally performed.

It is a totally different world, compared to all the other air-sports.

5.12 The Balloonists Thierry Villey and David Barford were asked multiple questions which were answered with various interesting comments.

GM presented shortly Balloon-Statistics from the 2013 Aero-Space-Medical Associations Meeting (ASMA) in Chicago. Ballooning continues to be statistically one of the safest air-sports.

Final Conclusion: Special Experiences in Aviation Medicine, Physiological- and Human Factors Expertise are welcome and required also in Ballooning.

P-S: The "Safety Balloon Power Point Briefing" (author: Klaus Hartmann, Germany) can be freely distributed for safety briefings and information.

8. Alcohol and Air-Sports; Should Alcohol stay on the WADA prohibited list?

JK, PS, GM, DG started the discussion by providing basic information on the above mentioned subject. Previous research was done by GM and JK, additional scientific medical, pharmaceutical and aviation medicine information was gathered on this topic to provide enough respective background for the question, if FAI should agree to the "WADA Consideration Request to delete eventually Alcohol from the additional FAI forbidden Drug List".

FAI was approached in 2013 by WADA to review the requirement to keep Alcohol on the forbidden drug list. Alcohol ingestion would not show performance enhancements in other sports. The different known medical aspects of Alcohol in Flight Operations and its potential known social, physical and mental impact through the voluntary incorporation of alcohol in performing flying operations was discussed.

Concerning this issue, the primarily important question to decide on was, if Alcohol is potentially capable to have a positive effect for performance enhancements in Air Sport Competitions?

The various opinions and facts were intensively communicated.

After all different aspects and specialist opinions had been widely discussed CIMP delegates openly voted and recommended:

- a. Alcohol has the potential to improve flying performances in FAI competition in all air-sports.
- b. Alcohol should not be taken off the forbidden WADA / FAI Drug list.

See below: Letter and Conclusion: Advice to the FAI Executive Board on that subject.

9. Information on Aeromedical Conferences and FAI Representation

Following Aerospace Medicine related meetings will be attended 2013 and 2014:

- ECAM, ICASM, ASMA, others: FAI CIMP Delegates will participate in all and report.

The program was adjourned by JK at 17:30.

Sunday, 9 June 2013

10. Welcome of delegates

Welcome by JK. Outline of agenda and announcement of important particulars of the morning.

11. Roll Call of delegates

Same as previous day.

12. National Reports

National reports will be downloaded and presented in entirety to the FAI-CIMP website. -
Excerpts of these notes from selected reports:

All EU countries (MO): New EASA medical regulations are in force since April 2012.

Japan (KS), aero modelling injuries: many are surprisingly serious.

Switzerland (RM) outlined that the Swiss government (the Swiss Federal Council) stated that it is recognized, that the new European (EASA) regulations lead to an overregulation without any visible benefit of safety, this being especially true for the Recreational Aviation. It was stated that Switzerland intends to influence the EASA regulation process in order to slim down the set of regulations.

UK (PS) changes in EASA regulations has forced UK-CAA to have responsibilities that were in the past delegated among others to sport aviation associations. This change has caused multiple problems due to CAA staffing issues and increased workload. National economic hardships have exaggerated these problems.

US (GM) outlined the area of air-sports with a focus on gliding accidents. Discussion: FAI and OSTIV should possibly follow CIMP input for improving crash worthiness of gliders and consecutively survivability of pilots by demanding technical advances (i.e. a more rigid safety cockpit) in sanctioned competitions. (GM) as delegate of the FAI Flight Safety Expert Group will draft a short summary of the discussed safety issues for presentation to them.

Italy (AdM) concerning the previous discussion with (GM) some slides of destroyed glider cockpits were shown. This highlighted again, as in previous CIMP minutes-, the findings of real carbon fibre crashworthy glider cockpits (like in Formula 1 race cars) which would substantially improve the survival rate in glider crashes. (AdM) pointed out emphatically that it is not understandable that this safety tool and some others are still not accepted by the glider industry and FAI / OSTIV representatives.
Summary: Basic engineering changes could yield marked safety benefits.

Germany (HB, JK) presented the annual official accident data which were stable with a slight rising tendency in fatalities in fixed wing airplanes. The need for a new accident prevention program for air-sports in Germany was vitally discussed. The new EASA Regulations will be enacted over the next 2 years to allow for transition of older certificates.

Finland (ML) : Microlight fatalities were increasing due to deficiencies in basic fundamental training.

13. Minutes of the last FAI-CIMP meeting:

The Minutes of the last FAI-CIMP meeting were reviewed and finally accepted by all delegates.

14. Matters arising from the previous minutes:

The previous mentioned requirements to improve the accident statistics and tasks to improve reporting by nations, EASA and federations still exist. CIMP is convinced that these are basic requirements which are needed to identify and improve Accident Prevention Programs, as tasked already for many years to the national governments by ICAO / Montreal.

CIMP continued with (MO) and (JK) to join the EASA Medical Expert Group (MEG) and Europe Air-Sports (EAS). They participated in two EASA expert medical group meetings in Cologne.

15. President's report:

See attached report.

- Continuation of further development and discussion with stakeholders about the FAI Anti-Doping Plan (ADP) will be made.
- Interaction of CIMP members to the FAI-AS-Commissions is important and is going to be improved.
- Some EASA expert groups have representatives with inclusion of FAI CIMP members (i.e. Flight Safety).

16. Formal approval of any resolutions:

GM as delegate of the 'FAI Flight Safety Expert Group' will draft a short summary of discussed safety issues for presentation to this new Expert Group.

17. Formal approval of any advice to the FAI EB

Advise on "Alcohol as a Doping Drug in Air Sports" to the FAI Executive Board

1. The FAI is in receipt of a letter from WADA dated March 2013 asking if alcohol (ethanol) should remain on the FAI prohibited list of substances. CIMP were asked to consider and advise on this matter.
2. At an earlier date alcohol together with certain other substances was listed by WADA as optional by Sports Federations for inclusion on the prohibited list of substances. CIMP then recommended that alcohol should be included but only above a specified level of 0.2 and during 'in contest' testing. Moderate social consumption 'out of competition' is neither hazardous nor injurious to health. After prescribed legal abstinence from alcohol for 10 hours before flight, a medically and technically safe 0.2 test-level 'in contest' time period could easily be achieved.
3. The concentrated discussion that took place within CIMP can be divided under several headings: Medical, scientific, practical, legal and political.
 - a. For the scientific evidence some eighty papers had been reviewed. Low dose ethanol (0.2 – 0.6 pm BAL) had been shown to improve performance individually in specific circumstances. These are for example: Reduction of tensions, anxiolytic effects, stress relaxation, improvement of self-confidence. Its use can be noted also for traumatic or unpleasant circumstances. It accounted also for the documented use in war, because it was known that pilots flying were taking more chances and risks to succeed. Sadly, overuse had often led to addiction. Details also exist in misguided consumption by both military and civilian pilots. Ethanol can also potentiate or mask other doping agents. A specific air-sports related aspect is that detrimental effects of ethanol will be increased through hypoxia at altitude. On the other hand it is confirmed that due to either ethanol above 0.2 pm BAL or its metabolites, a linear deterioration of other mental and physiological pilot performance skills exist. In that respect the safety and doping aspect of ethanol is connected. It cannot be viewed isolated, it cannot be separated from each other.
 - b. For the practical and legal issues: Ethanol should stay on the list, as it is considered by scientists as a potential performance enhancing drug in air-sports. Single athletes consumption in various competitions is reported. Ethanol use in competition can be checked anytime more easily under the WADA rule, as this is agreed and signed by all stakeholders. National practices and prosecution rules differ on the other hand.
 - c. For flight safety reasons alcohol might only be legally controlled by national authorities. In principle such an alcohol test can be executed on the individual person only in an apparent doubt.

Both procedures might have to exist next to each other, but out of two totally different reasons and objectives.

A removal from the WADA list would in addition become very problematic given the widely differing legal requirements and limitations in nations.

d. CIMP could not ignore the political impact of removing alcohol from the WADA prohibited list. Even if the limits would stay identical we do also fear that a deletion of alcohol from the drug list could encourage pilots to alcohol consumption. This seems not to be wise. To fly when intoxicated is not only a flight safety issue but can endanger also fellow competitors. This is considered as contrary to the spirit of sport and hence another type of doping offence.

4. After two votes,
 - a. "Does alcohol have performance enhancing capabilities in air-sports"?
 - b. "Should alcohol be removed from section P1 of the WADA list for air-sports"?

CIMP resolved to advise that alcohol (ethanol) has performance enhancing capabilities and it should remain on the WADA prohibited list for Air Sports.

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18. Any other Business

It was noted by JK and RH after comment from GM that the CIMP website will be improved with the ability to download and store Reports, Data and special Aviation Medicine Opinion for publication. Delegates felt the web should better reflect CIMP's true purposes to inform about ongoing subjects. Another suggestion is to create an individual FAI Anti-Doping Web Page, which will be linked to additional Anti-Doping expertise on the FAI CIMP page.

19. Election of officers:

RH officiated over the election process :

- a. Nominations for president were requested. By secret vote J. Knueppel was nominated and he accepted.
- b. Vice president nominations were as follows :
 - Kazuhito Shimada, Marja Osinga-Meek, Geoffrey McCarthy, Martti Lepojarvi,
 - Rene Maire declined
- c. By affirmation Juergen Knueppel was re-elected President. Vice presidents: McCarthy, Lepojarvi, Osinga and Shimada were elected. Garrison re-elected Secretary

20. CIMP Programme 2013 / 2014

The emphasis of the next meeting will be Aviation Safety aspects in Aerobatics with emphasis on G-induced effects in training and competition flying of powered airplanes, aerobatic gliders and potentially other FAI Sport Disciplines.

Appropriate representatives will be invited to participate. Details will be finalized prior to the conference.

21. Nomination of TUE panel:

The group appointed GM as chairman of the TUE panel and nominated KS, MO, JB, RG, HG as additional members. At least three votes are required for a decision.

22. Date and place of next CIMP meeting:

Next meeting will be in Lausanne, June 28 through 29, 2014. RH will make required arrangements with the FAI-Head Office.

Meeting adjourned at 12.30 h, 9 June 2013,
Richard T. Garrison, Secretary FAI-CIMP
Juergen Knueppel, President FAI-CIMP