

CONCLUSIONS OF THE 1st WORKHOSP ON AVIATION SAFETY

The Federal University of Rio de Janeiro gathered a group of scientists from academic Institutions in Brazil, USA and France, to establish an open scientific forum for discussing and exchanging information on aviation safety in general. At this first meeting, emphasis was placed on the AF 447 accident of May 31st, 2009. The following questions and observations were raised as a result of the two days workshop:

1. It is of crucial importance to learn from the past accidents and experiences to improve safety in aviation, such as allowed for by the FAA database presented during the meeting. Relevant information, technical or otherwise, needs to be fully disclosed and preserved, so as to allow for independent analysis and conclusions regarding the various previous accidents.
2. In order to achieve a higher level of safety, urgent revision of the international certification rules and standards should be stimulated worldwide.
3. Safety records should be made public so as to be used as an asset in the present scenario of increased market demands and competition among airlines.
4. Three major questions have been raised towards the understanding of the AF 447 accident. First, why that particular flight path was followed, through an adverse cloud formation, while all the other flights in the same time period have been redirected. Second, why the certification authorities did not issue a mandatory airworthiness directive for immediate replacement of Pitot tubes that had previously malfunctioned. Third, why even after such conditions, and for such a modern and automated aircraft, the pilots were not able to control the flight.
5. In the particular case of the AF 447 accident, not enough technical information has been disclosed so far to allow for an engineering assessment of the accident causes, including the behavior of the velocity sensors (Pitot tubes) under icing conditions.
6. Available technologies should be adopted to improve the level of weather information during the flight, through satellite and base communication. In addition, as well as to report not only maintenance messages but critical flight parameters, thus minimizing the reliance on airdata recorders ("black boxes").