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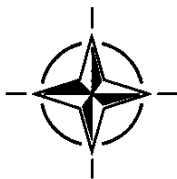
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**AGARD CONFERENCE PROCEEDINGS 593**

## **Advances in Flight Testing**

(les Avancées dans le domaine des essais en vol)

*Copies of papers presented at the Flight Vehicle Integration Panel Symposium held in Lisbon, Portugal, 23-26 September 1996.*



North Atlantic Treaty Organization  
*Organisation du Traité de l'Atlantique Nord*

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# The Mission of AGARD

According to its Charter, the mission of AGARD is to bring together the leading personalities of the NATO nations in the fields of science and technology relating to aerospace for the following purposes:

- Recommending effective ways for the member nations to use their research and development capabilities for the common benefit of the NATO community;
- Providing scientific and technical advice and assistance to the Military Committee in the field of aerospace research and development (with particular regard to its military application);
- Continuously stimulating advances in the aerospace sciences relevant to strengthening the common defence posture;
- Improving the co-operation among member nations in aerospace research and development;
- Exchange of scientific and technical information;
- Providing assistance to member nations for the purpose of increasing their scientific and technical potential;
- Rendering scientific and technical assistance, as requested, to other NATO bodies and to member nations in connection with research and development problems in the aerospace field.

The highest authority within AGARD is the National Delegates Board consisting of officially appointed senior representatives from each member nation. The mission of AGARD is carried out through the Panels which are composed of experts appointed by the National Delegates, the Consultant and Exchange Programme and the Aerospace Applications Studies Programme. The results of AGARD work are reported to the member nations and the NATO Authorities through the AGARD series of publications of which this is one.

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<b>14. Abstract</b>					
<p>The Symposium comprised six sessions, each being devoted to a particular field, with one session on Systems Evaluation, including avionics, navigation, propulsion and weapons aspects, two sessions on Technological Advances covering all technical fields such as avionics software, simulation, instrumentation, aerodynamics, test methods etc., one session devoted to an Overview of Current Programmes, one session on Flight Dynamics, incorporating handling qualities, performance and flight controls, and one session addressing Management Problems in Testing. The symposium closed with a discussion between government representatives and manufacturers on "The role of governments in development testing in the 21st century".</p> <p>Copies of papers presented at the Flight Vehicle Integration Panel Symposium held in Lisbon, Portugal, 23-26 September 1996.</p>					

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# **Advances in Flight Testing**

## **(AGARD CP-593)**

### **Executive Summary**

The Flight Vehicle Integration Panel, formerly the Flight Mechanics Panel, has a long history of supporting the widest dissemination of state of the art technologies and techniques relevant to the field of Flight Testing. This symposium's objective was to continue in that tradition. The symposium met its objective. Different parts of this Conference Proceedings should be valuable to anyone currently involved in the field of flight testing. Sessions dealt with the following topics:

- Systems Evaluation
- Technology Improvements
- Test Programme Overviews - to include the Airbus Beluga, the OPHER, the Rafale, the EH101, and an update on the Tornado Integrated Avionics Research Aircraft.
- Flight Techniques
- Test Management

This symposium provided an excellent forum for the exchange of the most up-to-date information on flight test. As flight test centers throughout the NATO Nations continue to be downsized and consolidated, it will become even more crucial to share recent flight test experiences in order to enhance the efficiency, cost-effectiveness, and overall quality of flight testing throughout the Alliance. The knowledge gained and exchanged at this symposium should assist the attendees in helping to provide NATO with the flight testing capabilities it will need to maintain the finest air forces in the world.

# **Les avancées dans le domaine des essais en vol**

**(AGARD CP-593)**

## **Synthèse**

Le Panel Conception intégrée des véhicules aérospatiaux de l'AGARD, anciennement le Panel de la mécanique du vol, hérite d'une longue tradition de dissémination des technologies et techniques de pointe dans le domaine des essais en vol. Ce symposium a eu pour objectif de maintenir cette tradition. Cet objectif a été atteint. Ce compte rendu de conférence intéressera donc tous ceux qui travaillent dans le domaine des essais en vol. Les différentes sessions ont porté sur les sujets suivants:

- l'évaluation des systèmes
- les progrès technologiques
- les bilans des programmes d'essais de l'Airbus Beluga, de l'OPHER, du Rafale, de l'EH 101 et de l'avion expérimental TORNADO à électronique intégrée
- les techniques de pilotage
- la gestion des essais

Ce symposium a fourni un excellent forum pour l'échange des dernières informations sur les essais en vol. Au fur et à mesure de la réduction et de la consolidation des centres d'essais en vol dans les pays de l'OTAN, il importera de plus en plus de partager l'expérience des derniers essais en vol afin d'améliorer leur efficacité, leur rentabilité et leur qualité générale au sein de l'Alliance. Les connaissances acquises et échangées lors de ce symposium devraient permettre aux participants de fournir à l'OTAN les installations d'essais dont elle aura besoin pour maintenir au niveau opérationnel optimal les meilleures forces aériennes du monde.