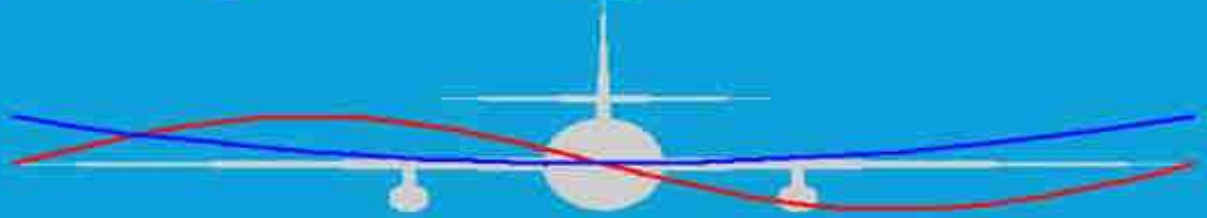




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PRODERA

Enclos d'Esquerre
32 Chemin du Ségala
31380 VILLARIES
France

Phone : +33 5 61 84 36 98
Fax : +33 5 61 84 17 91

E-mail : prodera@prodera.com
Web : www.prodera.com

ETTC 2011

14 – 16 June 2011
Pierre Baudis Convention Center
Toulouse, France



During the final stage of aircraft design, telemetry is a very important matter.

After the flutter prediction using GVT results, real-time in-flight tests are carried out in order to compare predicted results with measurement values transmitted to the ground station and recorded during the flight test.

PRODERA is glad to announce its participation in the **ETTC 2011** Telemetry Conference held this year in the Pierre Baudis Convention Center, in Toulouse, France, between 14 and 16 June 2011.

Please note this important event on your agenda and inform your colleagues.

For further information, you can consult the Web site www.ettc2011.org or contact Joëlle STELLA at aaaftlse@aol.com (phone: +33 5 62 17 52 80).

During the exhibition, ETTC 2011 will host as well the SFTE (Society of Flight Test Engineers) European Chapter Symposium (<http://www.sfte-ec.org>).

Information concerning Toulouse, located in the South-West of France, 1 hour by plane from Paris, can be found at http://www.uk.toulouse-tourisme.com/accueil/index_en.php

For your information, Toulouse is the French 4th town due to its population and the 2nd University town. As a matter of fact, all the important Aeronautical Schools and Universities are located in Toulouse. We can mention:

- ENAC (National School of Civil Aviation)
- IAS (Aeronautical and Spatial Institute)
- ISAE - from the merger of the two prestigious French "Grandes Ecoles": SUPAERO (1909) and ENSICA (1945).

Looking forward to seeing you at this unique telemetry event in Toulouse.

EDUCATION



PRODERA is glad to announce that the **Bauman Moscow State Technical University**, worldwide recognized Institute for Engineering, purchased for educational purposes a complete PRODERA Modal Analysis System for precise modal analysis.

The Institute, already an earlier PRODERA customer, purchased this multi-channel system to complete the earlier purchased equipment.

The Russian Market is very important for PRODERA and the Russian Scientists, after thorough study and evaluation, have accepted PRODERA equipment as a standard.

The methods used by PRODERA were originally in the years 1960/1970 developed by the French Aerospace Institute ONERA. PRODERA since the manufacture of the first system has been involved in prestigious projects with its customers:

Among our customers, we can mention the following companies:

- Brazil: EMBRAER
- Czech Republic: VZLU
- France: AIRBUS, ALSTOM, AREVA, ASTRIUM, CEA GRENOBLE, CEA SACLAY, CEAT, DASSAULT AVIATION, EADS, EDF, EUROCOPTER, INTESPACE, ONERA, PEUGEOT, RENAULT, THALES UNDERWATER SYSTEMS
- Germany: BMW, DLR
- Italy: AGUSTA WESTLAND, ALENIA AERMACCHI
- Poland: ILOT
- Romania: STRAERO
- Russia: BAUMAN UNIVERSITY, ILYUSHIN AVIATION COMPLEX, IMASH, MiG MAPO, RKK ENERGIA, SUKHOI DESIGN BUREAU, TsAGI, TUPOLEV
- Spain: EADS CASA
- Turkey: TAI
- Ukraine: ANTONOV
-

INERTIAL SHAKERS

We recently received a repeat order from the car manufacturer BMW to deliver several inertial shakers type EI 20 for modal analysis of car bodies.

FRF

From the standard PRODERA P-WIN-MODAL database, the FRF software has been improved with new features. So we are glad to announce that the modal or GVT data is available for more intensive data proceedings.

NEW P-SYS-MODAL "EMM" BOARD



For electromechanical modeling (EMM) of the aerodynamic forces acting on a structure (www.prodera.com/uk/articles.htm) a 32 channel board has been developed and added to the P-SYS-MODAL chassis.

LONG RANGE MODAL SHAKERS

without spiders' stiffness

The complete range of Modal Shakers for long stroke excitation now comprises:

EX 58 C40 (75 N - \pm 20 mm)

EX 220 C40 (250 N - \pm 20 mm)

EX 320 C50 (300 N - \pm 25 mm)

EX 520 C50 (550 N - \pm 25 mm)

EX 2060 C50 (2000 N - \pm 25 mm)

EX 1070 C50 (1200 N - \pm 25 mm)

The shakers EX 58 C40 and EX 220 C40 are compatible with the standard amplifiers types A 735 and A 648 S and therefore directly interchangeable with the earlier designed shakers types EX 58 and EX 220 SC.

PRODERA IN-HOUSE PRODUCTS

Our leaflet can be downloaded by clicking [here](#)

The products mentioned below are standard PRODERA products, fully operational. Our Design Team is at your disposal for special developments, either hardware or software.

GROUND VIBRATION TEST EQUIPMENT

- Range of **Constant Force Modal Shakers** (CFMS) and **Current Controlled Amplifiers** (CCA), Modal Accelerometers and Conditioning Amplifiers. *The list of shakers and amplifiers can be downloaded by clicking [here](#)*
- **Multipoint excitation and acquisition system** P-SYS-MODAL
- Latest version of P-WIN-MODAL software: the software calculates the modal parameters of a structure by using 4 different modal methods for increased accuracy **completed with FRF module**
- **Suspension Systems** for modal shakers and structures
- **Suspension Systems** for up to 40 tons' aircraft
- **Shaker calibration systems** certified according to NIST standard
- **Modal Software Calibration device** Strucsim-3-D[®]

GROUND STATIONS AND IN-FLIGHT TEST EQUIPMENT

- New range of **inertial shakers** and on-board 115 V / 400 Hz **power amplifiers**
- P-FLIGHT-MODAL **Flutter Prediction Software** covering the sub, super and transonic ranges. Import data: GVT results or external
- P-FLUTTER-MONITORING: 32 channel **Flutter Monitoring Software**
- In-flight excitation equipment:
 - **Pyrotechnical thrusters**: ideal for multipoint synchronic in-phase or out of phase in-flight excitation
- Ground Stations:
 - **1.8 m S-Band antenna, continuous rotation, GPS and Signal Strength Position Control**

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