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FOR IMMEDIATE RELEASE

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ICAS Workshop Explores Electrical Possibilities for the Future

“The More Electrical Aircraft” was the focus of the biennial workshop of the International Council of the Aeronautical Sciences (ICAS) held in Cape Town, South Africa on 2 September 2013. Full presentations made by leading aerospace industry experts are now available (see www.icas.org).

ICAS President – Prof. Murray Scott of Australia’s CRC for Advanced Composite Structures, said “Once again in this series of ICAS meetings and specialist workshop, full advantage was taken of this unique group of over 50 representatives from the world-wide aeronautics and aviation communities, interacting with invited international experts”.

The ICAS biennial workshop was part of the ICAS Programme Committee Meeting held from 1-5 September 2013, co-hosted by the Aeronautical Society of South Africa (AeSSA) and the Council for Scientific & Industrial Research (CSIR) in South Africa. Dr Christian Mari – R&T Executive Vice President of Safran’s Messier-Bugatti-Dowty and ICAS Programme Committee Chairman, led this timely meeting, which was co-located with the annual International Aerospace Symposium of South Africa (IASSA).

The need to find disruptive technologies to meet goals such as those set for Flight Path 2050 was one of the points made by the opening speaker, Mr Sébastien Remy from the Airbus Group Innovation Works (France). This was followed by presentations by Dr Askin Isikveren from Bauhaus Luftfahrt (Germany), Mr Bruno Stoufflet from Dassault Aviation (France), Dr Artur Mirzoyan from CIAM (Russia) and Mr Patrice Nevoret from Safran (France). A final contribution was also made by Prof. Antonín Pištěk from Brno University of Technology (Czech Republic).

Full electrical propulsion is not anticipated for large commercial aircraft in the medium term, however various hybrid aircraft could be envisaged with gas turbine engines providing electrical power along with batteries or propellers powered by electrical motors. Key challenges to be addressed are associated with energy storage, power density, energy transmission, power electronics and certification aspects.

Dr Mari concluded the proceedings by stating, “Greater electrification of aircraft systems will bring substantial benefits through the replacement of both pneumatic and hydraulic energy. Development effort needs to be on optimising resources for several systems, maturing high voltage networks, thermal management of electronics, and ensuring lightning and electromagnetic compatibility.”

The outcomes of the workshop will be used to inform the next ICAS Congress – to be held in St Petersburg, Russia, 7-12 September 2014 (see www.icas2014.com), of the recent achievements and most important challenges associated with aircraft electrical issues. “Setting research and technology directions in key areas impacting our global industry are high priority objectives for ICAS”, stated Prof. Murray Scott.

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