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Media Statement
For Immediate Release

ATNS and CSIR make meaningful strides in the deployment of Passive Radar Technology

Air Traffic and Navigation Services (ATNS) SOC Limited and the Council for Scientific and Industrial Research (CSIR) are working together to improve civil aviation safety in South Africa and beyond. The two entities signed a Memorandum of Agreement (MoU) in 2017, which was renewed in April 2023. The MoU outlines the deployment of Passive Radar System technology for civil aviation operations, and both entities are making significant progress in meeting its requirements.

The CSIR developed the technology, while ATNS provides the technical know-how on the system configuration, to meet Air Traffic Management technical standards requirements, in line with the International Civil Aviation Organization Standards and Recommended Practices (ICAO SARPs).

ATNS and CSIR engineering teams are currently at Kruger Mpumalanga International Airport (KMIA) to measure and survey Passive Radar site coverage. The aim is to determine the coverage that the system will provide in the area once deployed. This exercise will also determine the sites and the number of radar antennas to be installed.

Passive Radar is a type of radar that uses third-party illuminators, like public broadcasting services (for example Radio), to locate and track aircraft by processing the signals reflected from them. Passive radar does not require a dedicated transmitter subsystem, making it a cost-effective radar solution that requires no spectrum licensing and has significantly lower acquisition and operational costs compared to a conventional radar system. Passive Radar can be used for air surveillance or to fill gaps in active radar networks, and in the long term, may replace primary surveillance radars.

Deploying a Passive Radar at KMIA is an ideal opportunity to test the system, refine the current software and hardware solutions, and monitor continued Passive Radar performance characterisation testing over a predetermined period. This will include a robust systems engineering approach followed by customisation updating, verification and validation of the Air Traffic Control Passive Radar technology.

Ends,

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