

# SKA radio frequency ban excludes aviation and safety services

By [Andiswa Maqutu](#)

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Aviation and "safety-of-life" services are exempt from draft regulations proposing a ban of certain radio frequencies in the Karoo to protect the Square Kilometre Array (SKA), according to the project's management.



Mike Peel via [Wikimedia Commons](#) - SKA site, South Africa

If aviation services were included in the restrictions, aircraft flying the Johannesburg-Cape Town route could be redirected via Port Elizabeth, the Atlantic Ocean or over Upington. The ban would also have a negative effect on mandatory search, rescue, and alerting services in the area.

SA's aviation authorities including the South African Civil Aviation Authority (CAA) and Air Traffic Navigation Services (ATNS), are opposed to the possible ban.

## Restriction on radio frequencies

The SKA project, in SA and Australia, operates over a wide range of frequencies and will be able to detect radio waves from objects billions of light years away. About 131,500ha surrounding the telescope's 176-dish core, which lies 90km from Carnarvon, needs to be free from radio frequency interference.

The frequencies ban will have implications for people living in the astronomy advantage areas (AAA). The AAA's declared to date include the Northern Cape excluding Sol Plaatje municipality, as well as the Karoo Core AAA consisting of 13,406ha of land 90km north of Carnarvon.

The restriction on radio frequencies between 100MHz and 2.25GHz was published by the Department of Science and Technology as part of the Karoo Central Astronomy Area regulations in November 2015. Interested and affected parties have until June 20 to submit written representations to the department.

SKA SA project director Rob Adam said the Astronomy Management Authority within the department had discussions with the CAA and ATNS regarding the matter. "The net result of these draft regulations is that commercial air traffic would not be affected. As low-level flight directly over the SKA could damage the sensitive SKA equipment, we will continue to engage with the CAA to ensure that this does not happen," he said.

## **Ban could soften corridors**

Transport economist and aviation expert Joachim Vermooten said with new technology, airlines were trying to make their flight patterns more efficient to reduce fuel costs and carbon emissions. However, airlines had specific channels to communicate and specific corridors to fly that were assigned by air traffic controllers to monitor an aircraft's whereabouts.

He said the ban on certain radio frequencies with an exemption for aviation services could soften corridors. "It may be an easier way for pilots and air traffic controllers to operate. At the moment, aircraft have to remain in their assigned corridors. Now, they could actively go out of those corridors," Vermooten said.

Despite the exemptions for aviation and safety services in the draft regulations, aviation authorities are opposed to the ban on radio frequencies.

The CAA said a ban on the frequencies would hamper two-way communication between pilots and the relevant air traffic control sector.

*Source: Business Day*

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