

## Part B

### Impact of WRC decisions on protected radio astronomy services

The purpose of this section is to highlight the impact of WRC decisions on radio astronomy observatories that are located in areas that are not declared as radio astronomy advantage areas. No. 5.149 of the Radio Regulations offers satisfactory local protection in listed frequency for observatories not located in protected areas.

The following table provides a list of WRC Resolution, the affected frequency band and the impact on radio astronomy allocations. Telescopes such as MeerKAT and other that are located inside KCAAA benefits from the established RQZ. However, telescopes such as HartRAO, which are located in non-RQZ areas, should be protected on the established provisions of the radio regulations.

WRC Resolution	IMT band (MHz)	Impacted RAS band (MHz)
Resolution 223 (Rev. WRC-15)	1 710 – 1 785	1 718 – 1 722
Resolution 223 (Rev.WRC-12)	2 500 - 2690	2 655 – 2 690
Resolution 223 (Rev. WRC-15)	3 300 – 3 400	3 332 – 3 339 and 3 345 – 3 352.5

The above mentioned RAS bands are protected under No. 5.149 which reads as urges administrations to take all practicable steps to protect the radio astronomy service from harmful interference. As a result, recent discussions in national preparatory meetings for WRC-23 concluded that the Authority shall establish means to offer satisfactory protection for all radio astronomy stations that are notified to the ITU operating in these RAS bands.

The Authority has not proposed any protection measures on the draft NRFP2021. SARA0 has three radio astronomy stations notified to the ITU-R that are located near the Hartebeestport dam and that undertakes observations in the aforementioned bands.

It is proposed that, until adequate technical studies can be established to determine the separation distance between a radio astronomy station and IMT stations, all IMT stations located within 15-km radius of notified radio astronomy earth stations, coordinate their operations and technical parameters with SRAO, so that satisfactory conditions can be established for RAS observations. The separation distance is based on the practicality, given the location of the observatory. However, a technically determined separation distance will have to be established before the next development of the band plan.

