

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
LOK SABHA
UNSTARRED QUESTION NO.1816
TO BE ANSWERED ON 30.07.2025**

**RAILWAY INFRASTRUCTURE AND SENSITIVE RADIO ASTRONOMY
OBSERVATORY**

1816. DR. AMOL RAMSING KOLHE:

Will the Minister of RAILWAYS be pleased to state:

- (a) whether there are successful international examples of coexistence between railway infrastructure and sensitive radio astronomy observatories;**
- (b) if so, the details of technical solutions, shielding technologies, and regulatory frameworks adopted globally to mitigate Radio Frequency Interference (RFI) and protect astronomical research;**
- (c) whether the Government is aware of the concerns regarding the proposed Pune-Nashik semi-high-speed rail corridor's proximity to the Giant Metrewave Radio Telescope (GMRT) near Pune, if so, the details thereof;**
- (d) whether similar engineering and scientific safeguards can be adapted for this corridor to ensure GMRT's operational integrity, if so, the details thereof; and**
- (e) whether the Government proposes to conduct a detailed technical and financial evaluation of such mitigation strategies through a structured expert committee, in coordination with the Department of Atomic Energy, Department of Science & Technology, and the National Centre for Radio Astrophysics (NCRA), if so, the details thereof?**

ANSWER

**MINISTER OF RAILWAYS, INFORMATION & BROADCASTING AND
ELECTRONICS & INFORMATION TECHNOLOGY**

(SHRI ASHWINI VAISHNAW)

(a) to (e): The protection from interference is essential to the advancement of radio astronomy and associated measurements. Radio astronomy sites

are chosen specifically to minimize interference from Earth based transmitters. The sites are usually at a considerable distance from the major fixed sources of terrestrial interference to make it as free as possible from interference. So radio astronomy observatories are placed in remote locations that have good natural protection from interference.

For connectivity between Pune and Nashik, DPR was prepared by MRIDC, a Joint Venture company of Government of Maharashtra (50%) and Ministry of Railways (50%). The proposed alignment in the DPR was passing through Narayangaon where National Centre for Radio Astrophysics (NCRA), Pune has installed Giant Meterwave Radio Telescope (GMRT) observatory. This alignment was not found acceptable due to adverse impact of proposed railway line on operation of the GMRT observatory.
