

Indian SBAS

GAGAN

December 13 - 17, 2004

UN meet on GNSS

Vienna, Austria

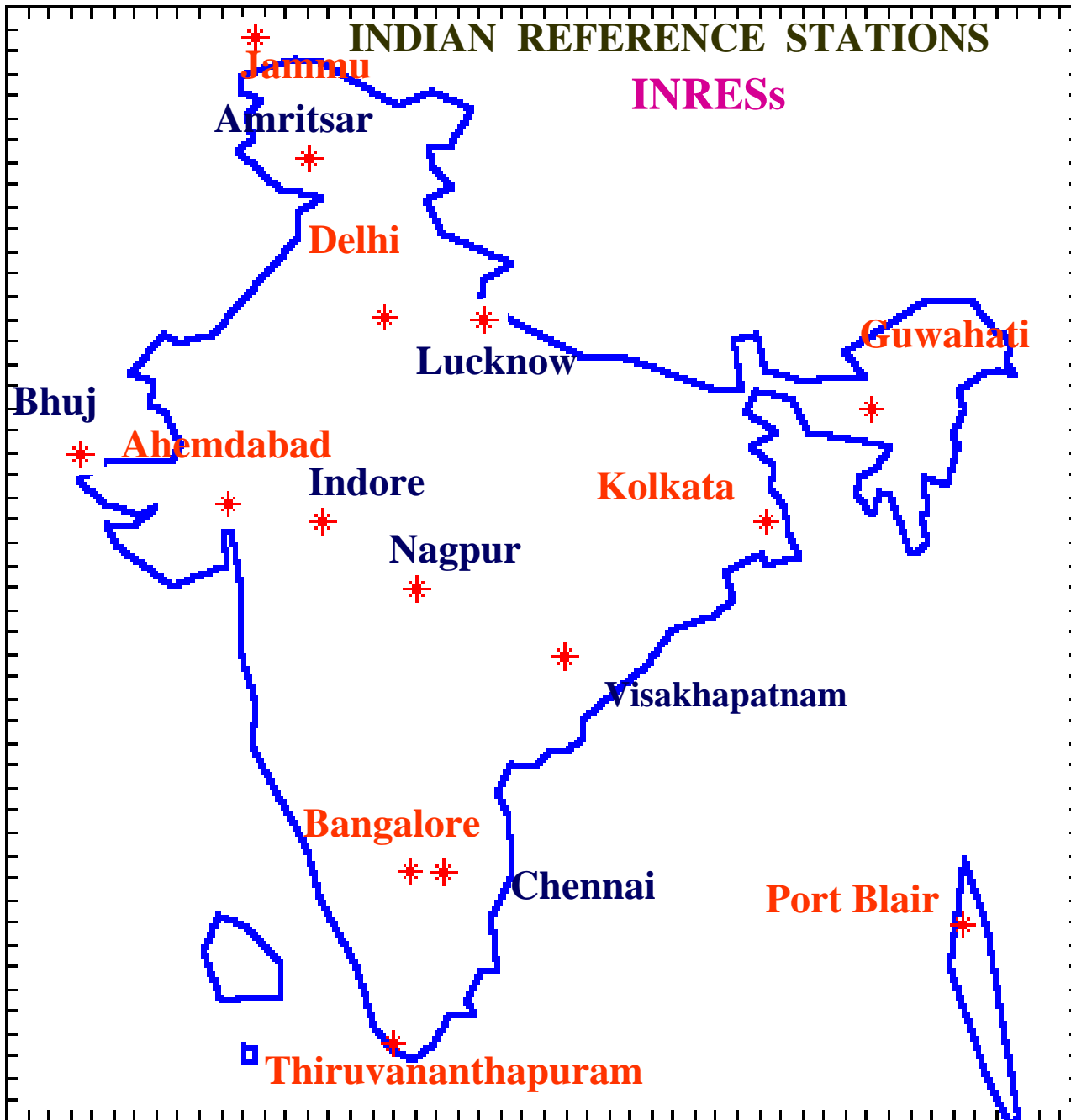
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GAGAN Configuration

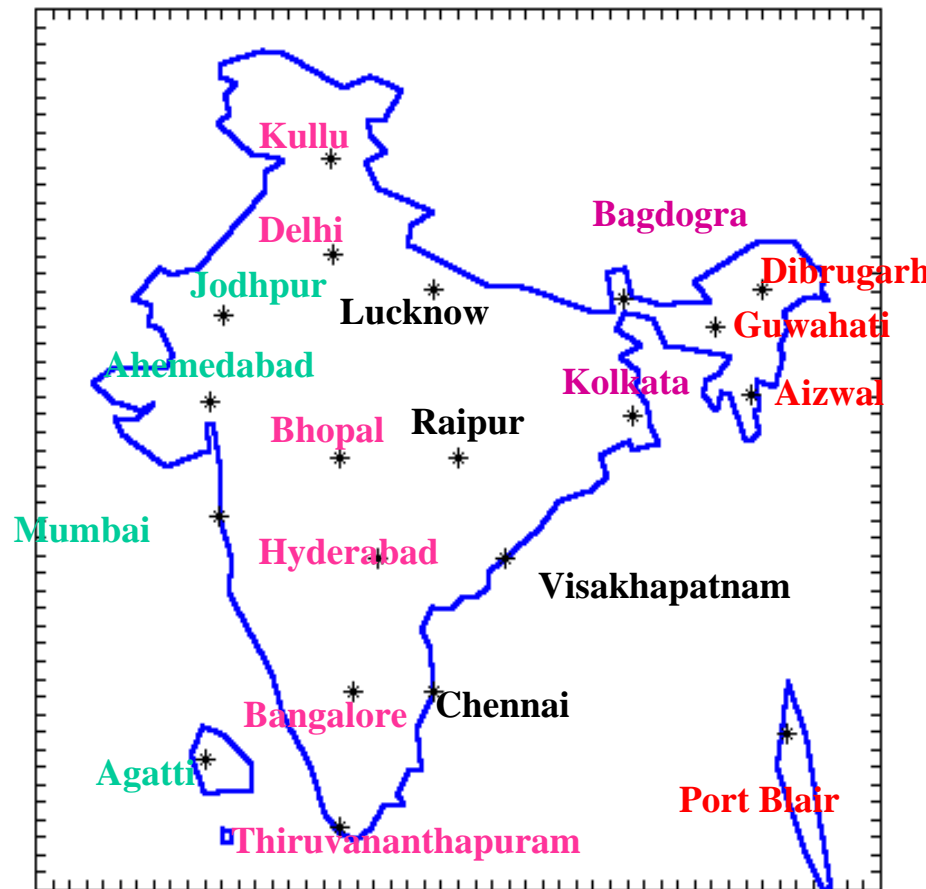
- In the Technology Demonstration System (TDS) Phase, the configuration will consist of:
 - A GEO Payload with L1 and L5 downlinks at 82 deg.E.
 - A Master Control Centre (MCC) and Indian Land Uplink Station (INLUS) at Bangalore
 - 8 Indian Reference Stations (INRESs)
 - 18 TEC Stations at GPS Grid Points
 - Inter-Connectivity between MCC, INLUS, INRESs



- Delhi
- Ahemdabad
- Bangalore
- Thiruvananthapuram
- Kolkata
- Guwahati
- Port Blair
- Jammu

- Future INRESs**
- Indore**
- Bhuj**
- Amritsar**
- Chennai**
- Nagpur**
- Lucknow**
- Visakhapatnam**

Planned TEC Stations



SATNAV TDS Project

Stations planned for TEC Modelling

72° E

1. Agatti
2. Mumbai
3. Ahmedabad
4. Jodhpur

77° E

5. Thiruvananthapuram
6. Bangalore
7. Hyderabad
8. Bhopal
9. Delhi
10. Kulu

82° E

11. Visakhapatnam
12. Raipur
13. Lucknow
14. Chennai

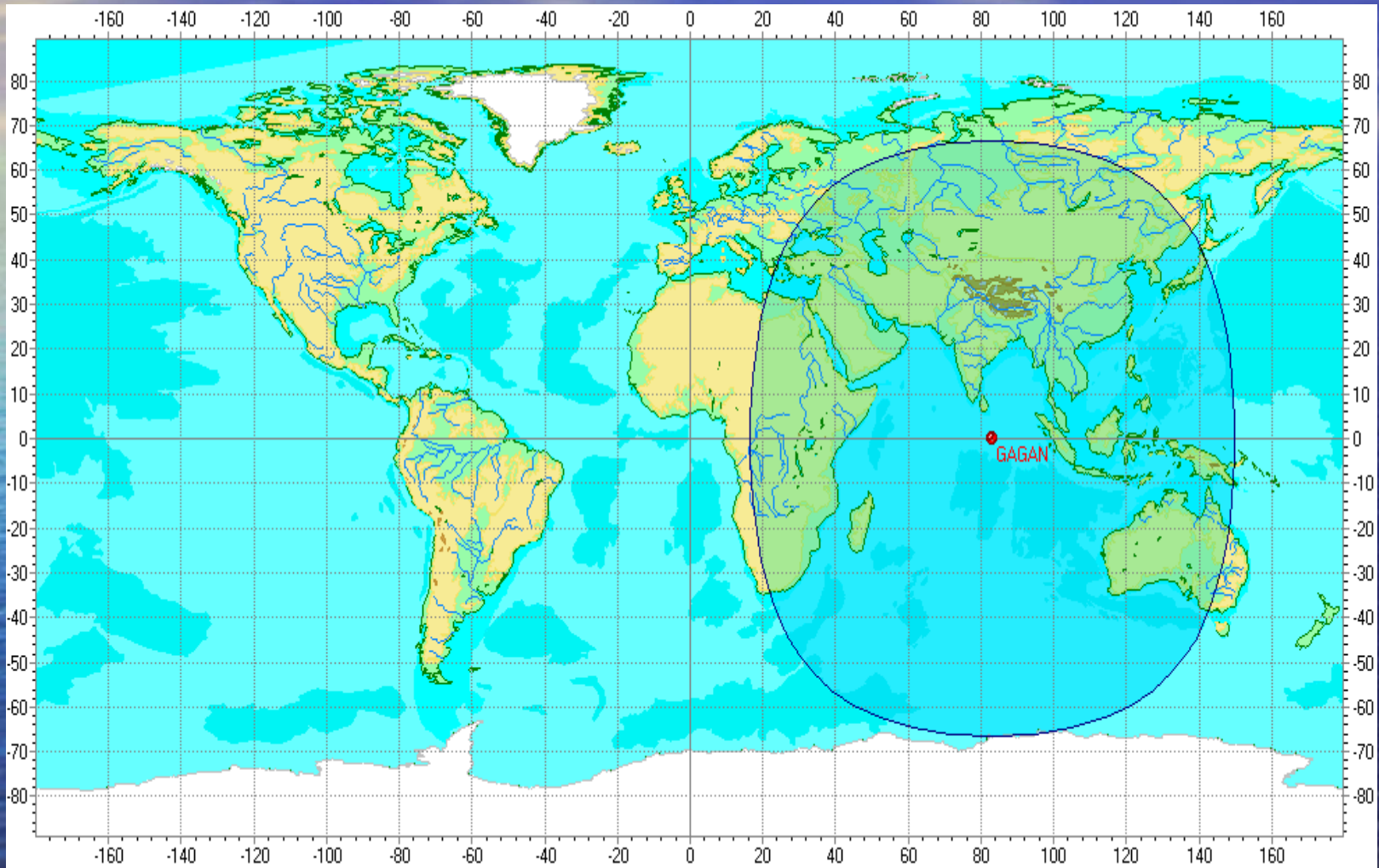
88° E

15. Bagdogra
16. Kolkata

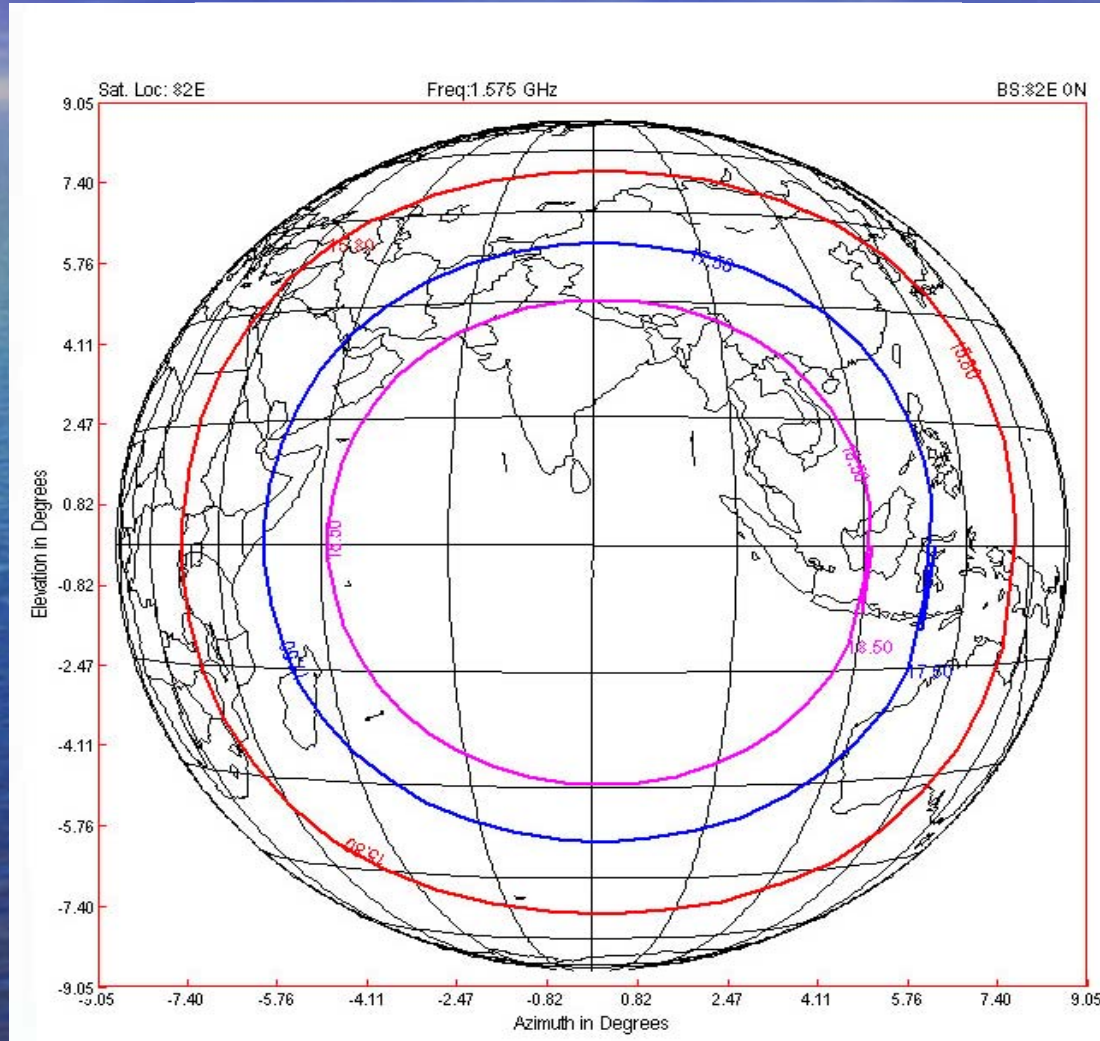
93° E

17. Guwahati
18. Dibrugarh
19. Port Blair
20. Aizwal

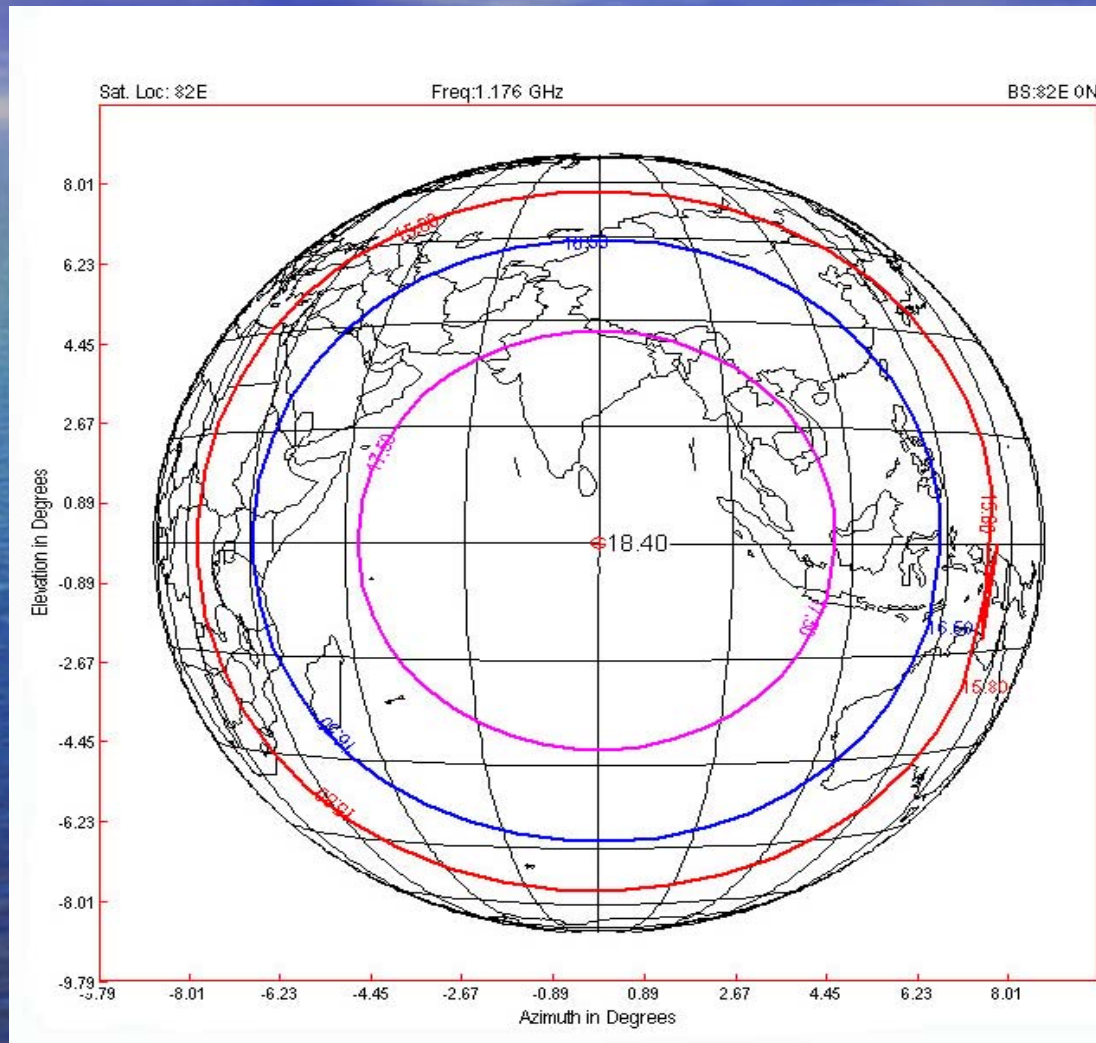
COVERAGE FROM 82 Deg.E



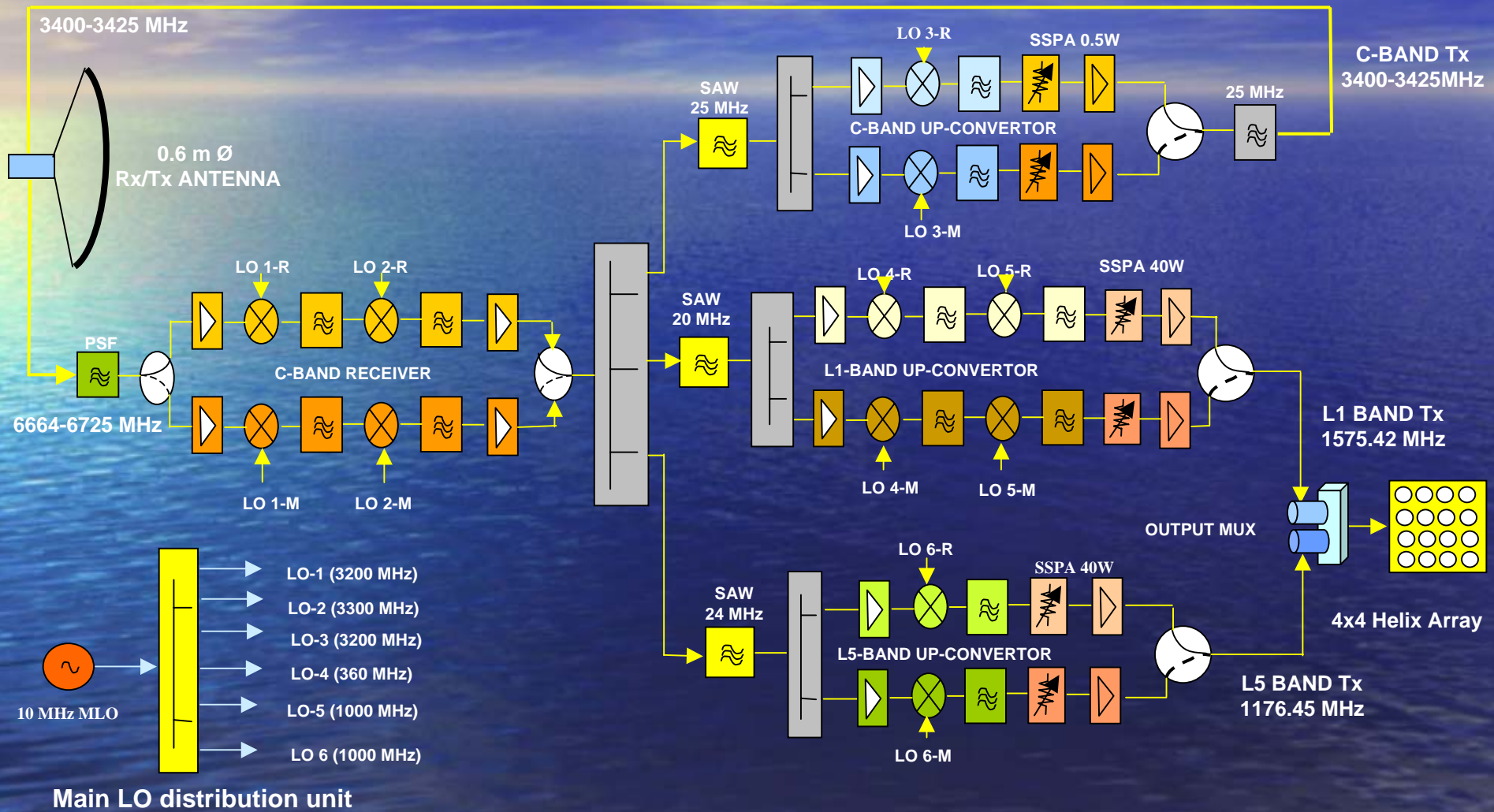
GEO L1 COVERAGE



GEO L5 COVERAGE



SATNAV P/L CONFIGURATION



Redundant LO distribution unit

STATUS & SCHEDULE

- Contract for ground based elements for GAGAN has been placed with a 24 month schedule.
- TEC receivers deployed at 18 grid points
- Work on iono tropo model development progressing satisfactorily. Many algorithms such as, krigging, tomography with Kalman filtering, are being compared with IRI and PIM model with Indian data.
- Indian Land Uplink Station, RF modules in an advanced stage of development.
- MCC & INLUS co-located at Bangalore.

Thanks