

Outline:

LOFAR (LOW Frequency ARray) is the largest radio telescope operating at the lowest frequencies that can be observed from Earth. LOFAR makes observations in the 10 MHz to 240 MHz frequency range with two types of antennas: Low Band Antenna (LBA) and High Band Antenna (HBA), optimized for 10-80 MHz and 120-240 MHz respectively. The electric signals from the LOFAR stations are digitised, transported to a central digital processor, and combined in software in order to map the sky. Now there are LOFAR stations in Netherlands (38 stations), Germany (six stations), Poland (three stations), France, Ireland, Latvia, Sweden, and the United Kingdom (one station each); stations in Italy and Bulgaria are funded to be built.



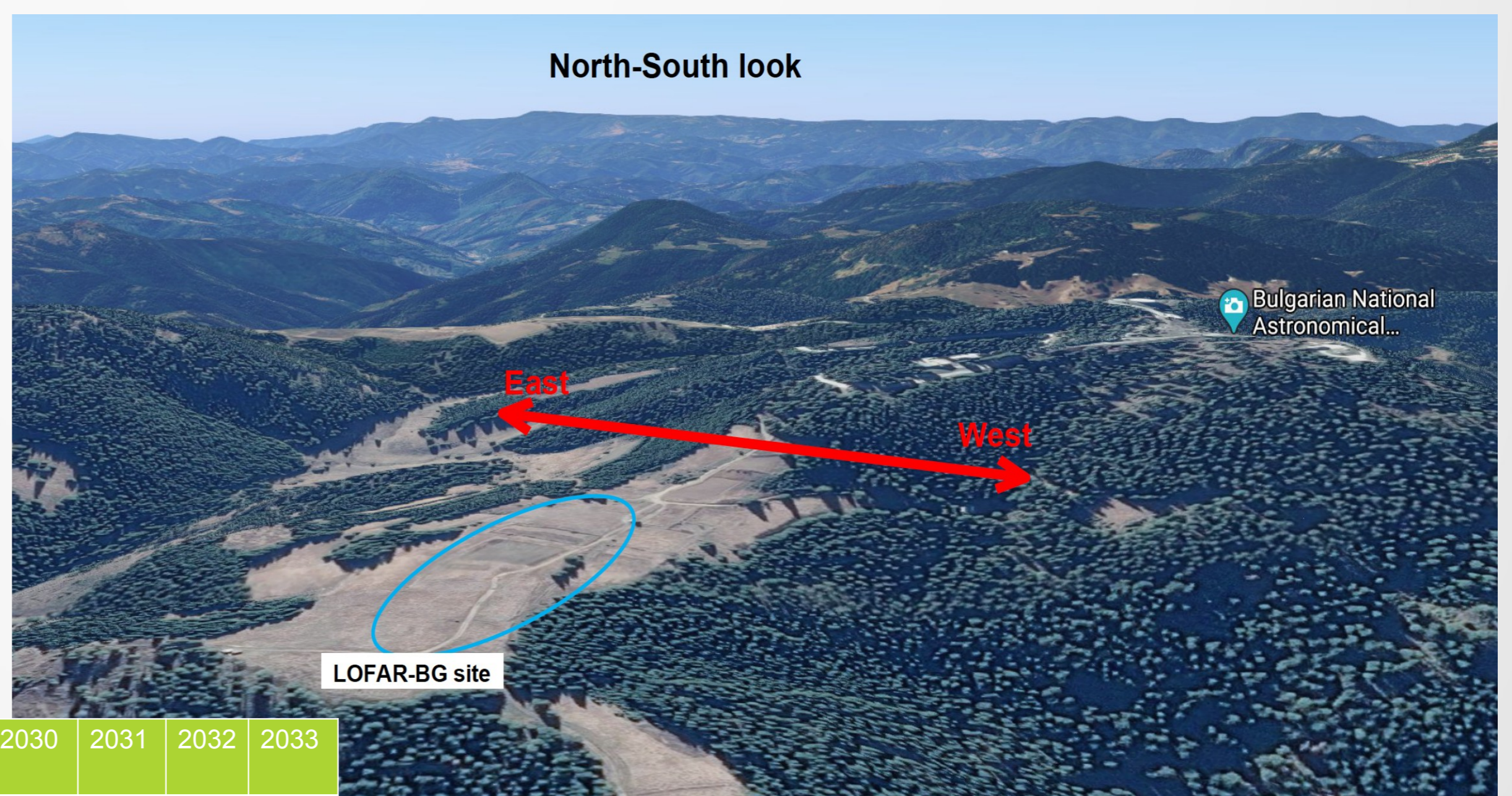
LOFAR-BG – part of The National Roadmap for Research Infrastructure 2020-2027

In May 2020, the infrastructure project LOFAR-BG, coordinated by the Institute of Astronomy and National Astronomical Observatory (IANAO), was approved for inclusion in the updated National Roadmap for Scientific Infrastructure 2020-2027 (NRSI), created and supported by Bulgaria's Ministry of Education and Science. Currently, members of the national consortium for managing the project also include the Dept. of Astronomy of Sofia University, the Dept. of Astronomy of Shumen University, as well as the Dept. of Radio Communication and Video Technologies of the Technical University-Sofia. In the future, we will be adding new partners to the consortium.

Current State

We are currently working on preparing for the station (near NAO Rozhen):

- Buying remaining plots of land; later comassing and changing its status;
- Building power and communications infrastructure;
- Planning changes to the general municipal layout plan;
- Planning land works for flattening the terrain (2023-2024)



Schedule for LOFAR-BG

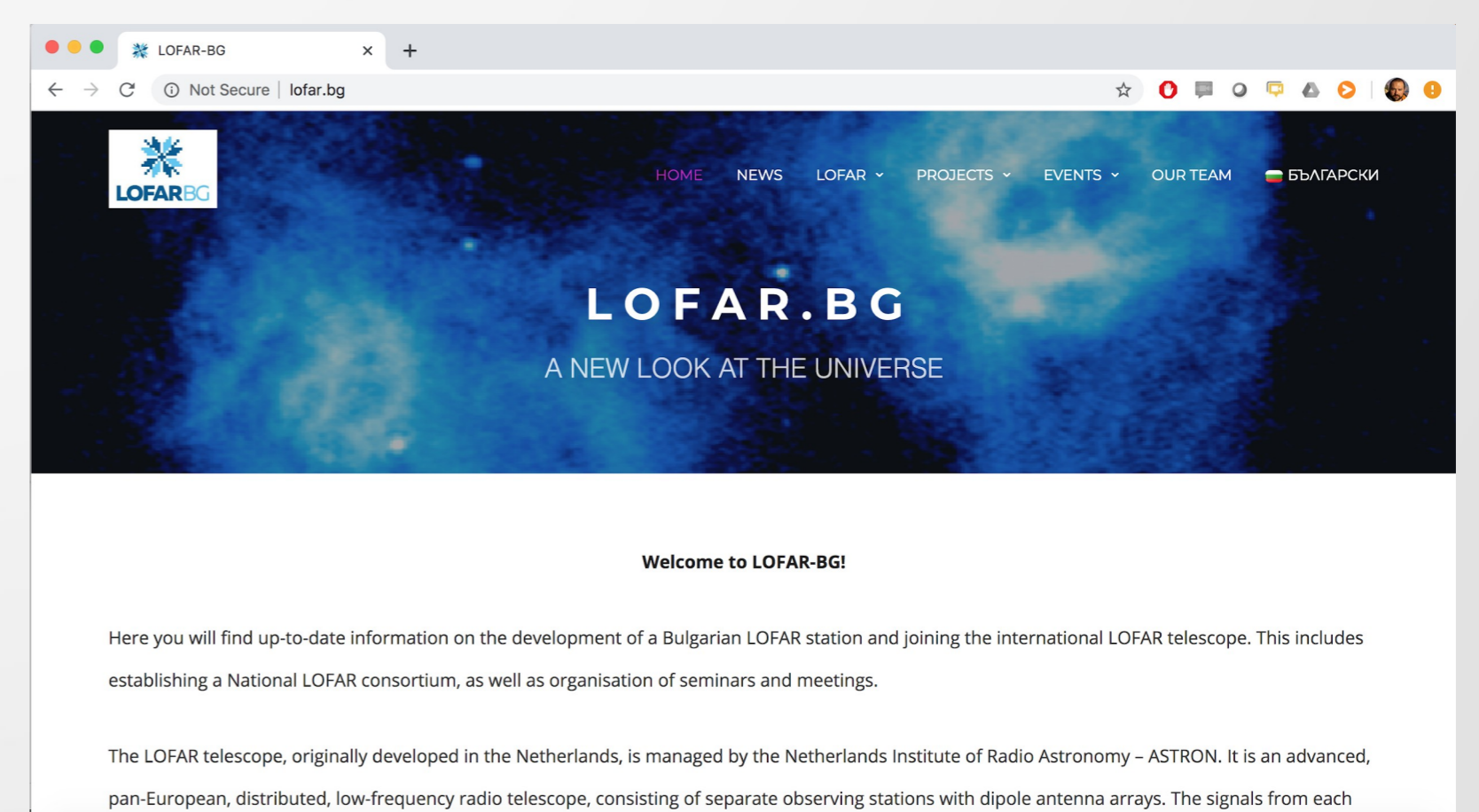
Phase/Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Design / preparatory	Yellow	Yellow	Yellow	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green
Building	Light Green	Light Green	Blue	Blue	Blue	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green
Operations	Light Green	Light Green	Light Green	Light Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
ILT Participation	Light Green	Light Green	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange

More information on the web site: <https://lofar.bg>

Closely related project to the LOFAR-BG:
STELLAR-h2020

Scientific and Technological Excellence by Leveraging LOFAR Advancements in Radio Astronomy

<https://stellar-h2020.eu>



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