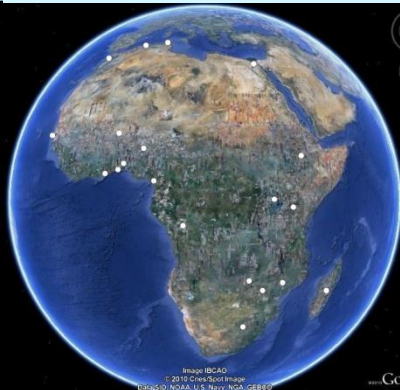
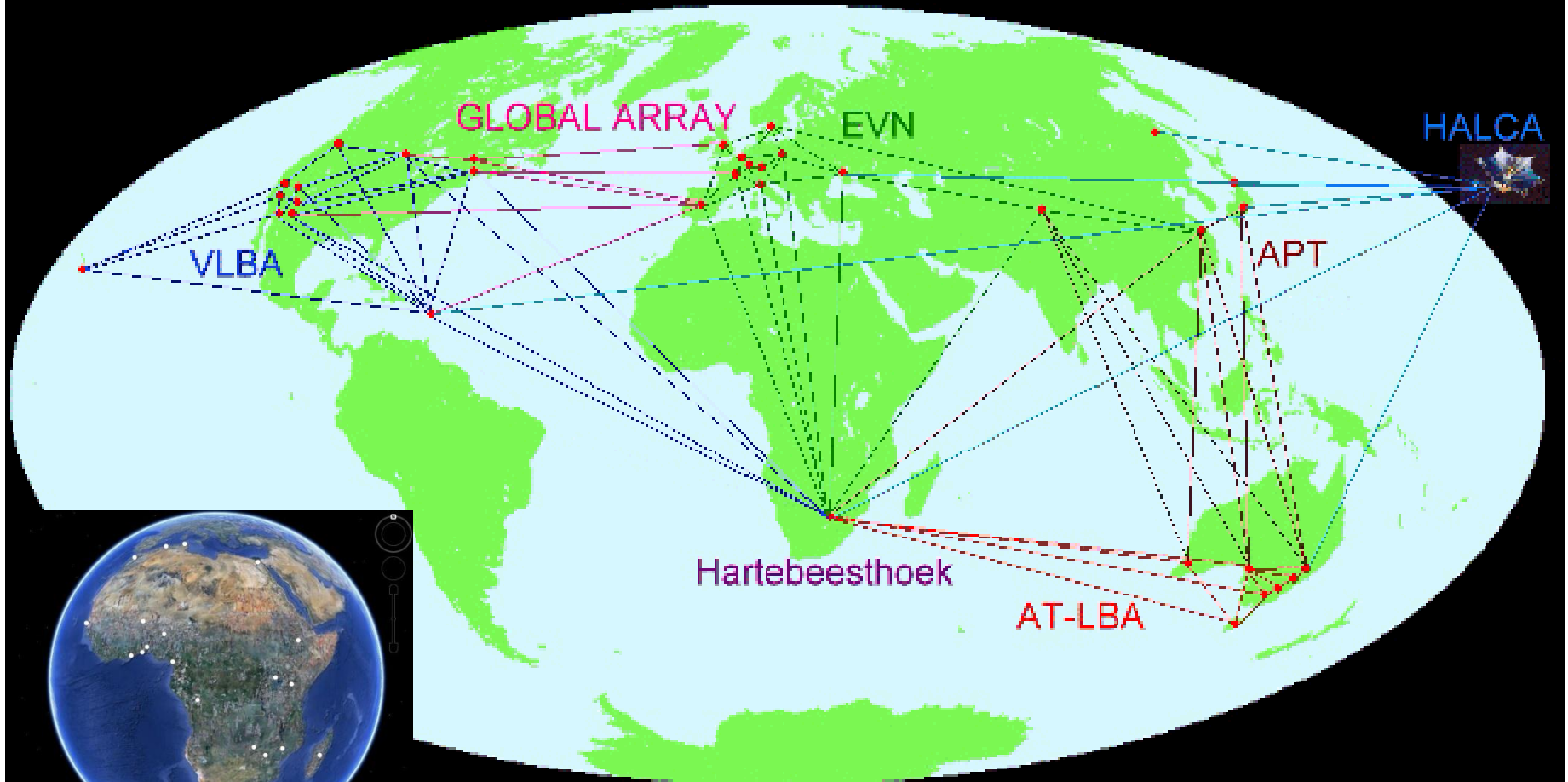


What can developing countries offer to global partnerships?

- Comparative advantage:
 - Geography-e.g.. "Southern Skies"
 - Resource-e.g.. biodiversity
 - Knowledge-e.g. deep mining in South Africa
 - "Misfortune"- e.g. diseases such as HIV-AIDS
- Global inclusiveness-needed to address global problems-e.g.. climate change
- Leveraging socio-economic impact of research infrastructures-advance fight against poverty-global sustainable development agenda

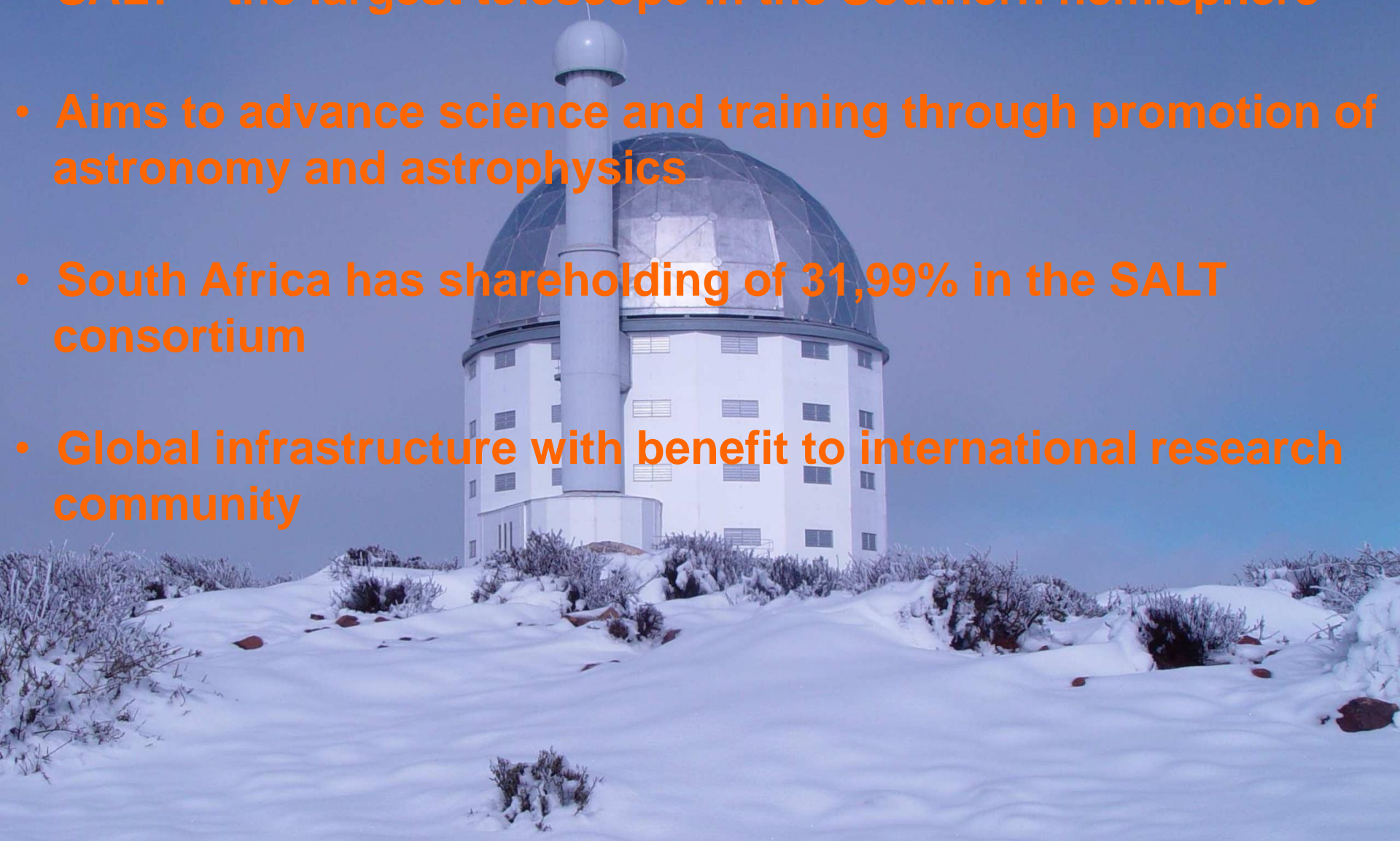
Global infrastructure with an African base

Radio Astronomy VLBI Arrays



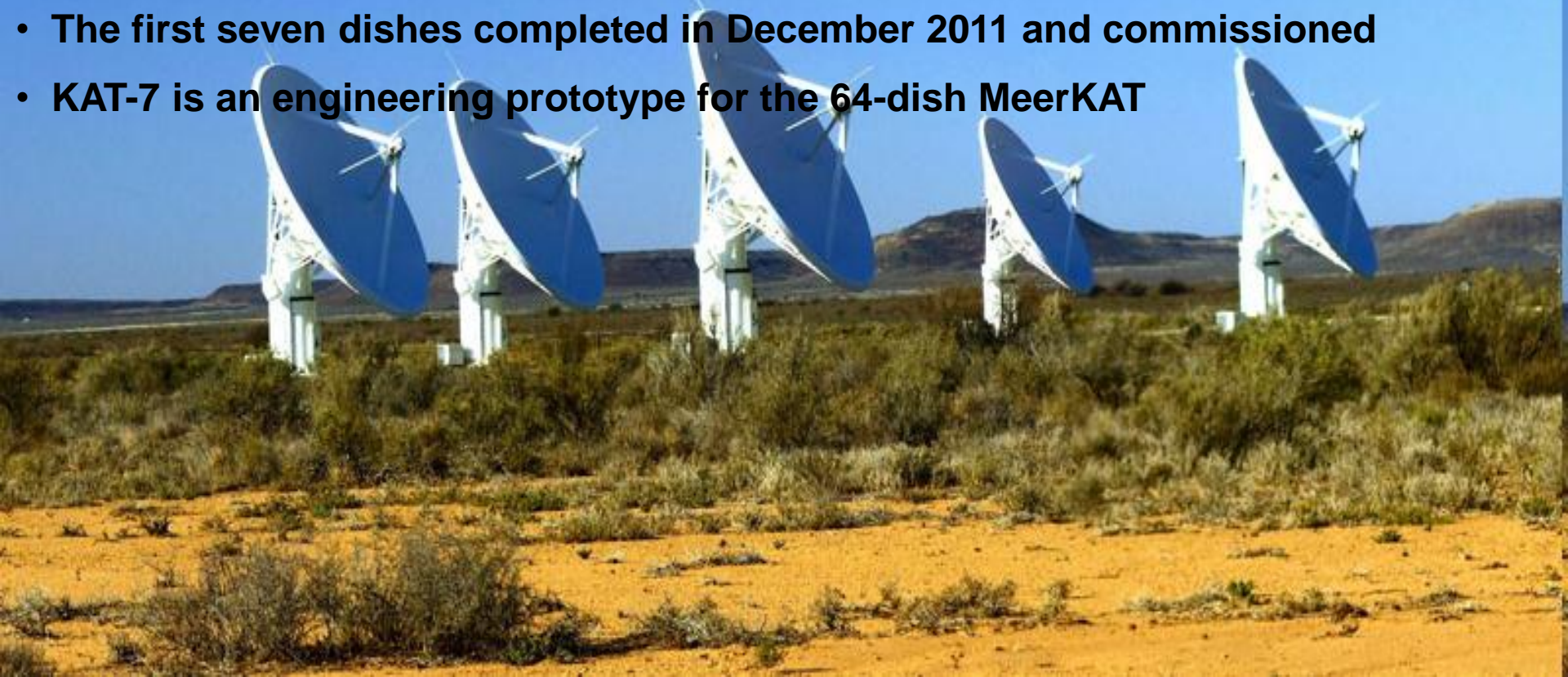
Exploiting Geographical Advantage: The SALT

- **SALT – the largest telescope in the Southern hemisphere**
- **Aims to advance science and training through promotion of astronomy and astrophysics**
- **South Africa has shareholding of 31,99% in the SALT consortium**
- **Global infrastructure with benefit to international research community**



MeerKAT/KAT-7

- **Geographic advantage made South Africa one of the premier reserves for radio astronomy R&D**
- **The development of demonstrators led to projects such C-BASS and PAPER**
- **South Africa is currently building the Karoo Array Telescope, or MeerKAT**
- **The first seven dishes completed in December 2011 and commissioned**
- **KAT-7 is an engineering prototype for the 64-dish MeerKAT**



Impact of Global Infrastructure: Human Capital Development in Astronomy

- 15 radio astronomers in Africa in 2003; today there are more than 60
- In excess of 300 PhD and MSc students – close to 10% of total PhD production
- Students from 12 other African countries supported
- African universities assisted in starting astronomy programmes at undergraduate levels
- 5 research chairs awarded
- Approximately 100 local engineers working on astronomy related projects