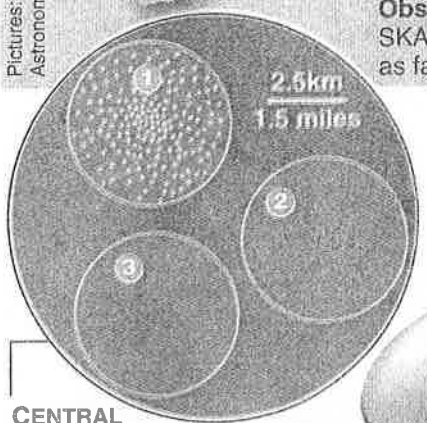
The Hindu, Pune, May 31, 2012. Pp.18

World's biggest radio telescope

Australia and South Africa will host the Square Kilometre Array (SKA), a huge $2.5bn radio telescope which will be 50 times more sensitive and 10,000 times faster than any other telescope on the planet

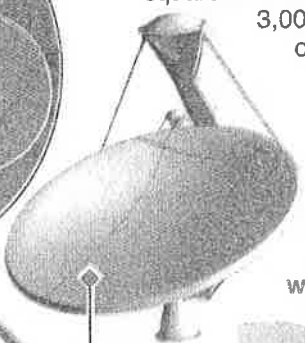


Pictures: SPDO/Swinburne Astronomy Productions

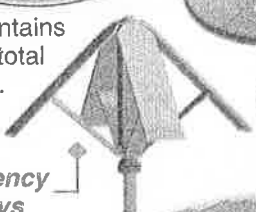


Combined collecting area totals one square kilometre, but is made up of 3,000 receptors spiralling out from concentrated central core over distance of 5,000km

Radio frequency signals detected in deep space will be processed by supercomputer with power of around 1bn personal computers



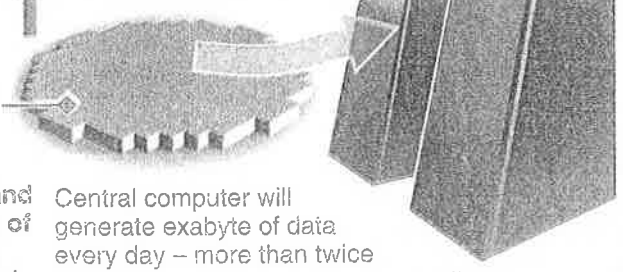
CENTRAL LOCATION: Contains around half of total collecting area. Three types of antenna used



1 ***Low frequency aperture arrays*** *70-200MHz*

2 ***High frequency arrays:*** *500MHz-10GHz*

3 ***Medium frequency aperture arrays*** *200-500MHz*



SKA expected to expand research on evolution of galaxies, dark energy, extra-terrestrial life and formation of black holes

Central computer will generate exabyte of data every day – more than twice information sent around internet daily

Source: Square Kilometre Array consortium © GRAPHIC NEWS