



Bild: Peter Müller, MPIfR



Due to a special support structure the dishes surface keeps its parabolic form for all elevation positions but changes its focal length

Bild: Norbert Junkes (03.06.17)

The support structure

The dish has a surface of
9058 m².

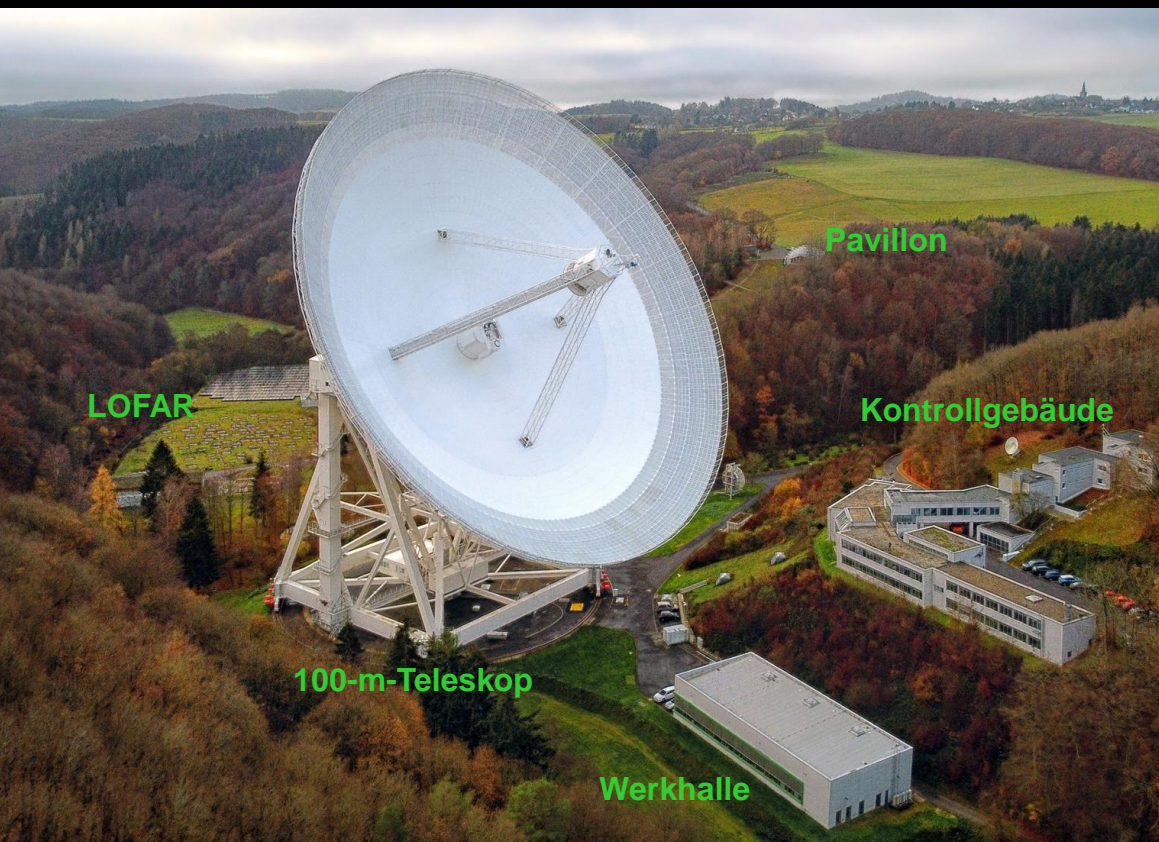
The outer area is
transparent for short
wavelengths

Receivers work down to a
wavelength of 3mm



Bilder: esys.org; njn (12.04.14)

The surface



The basement must carry
3200 tonns

The valley shields man
made radio radiation
Valley open to the south
To view the galactic center

Bild: Norbert Tacke/MPIfR

The location

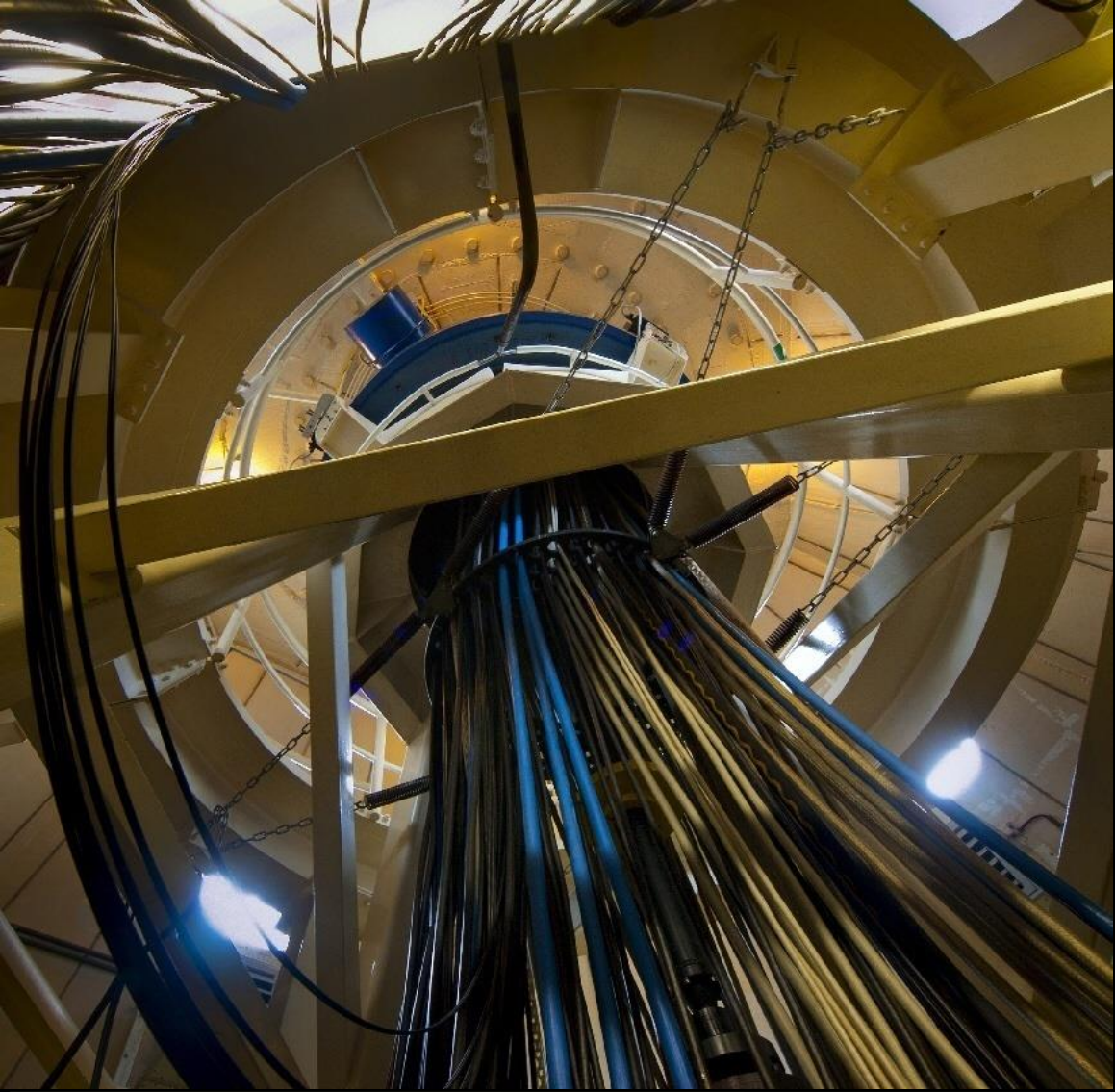


The telescope runs on a Track, diameter 64 m. Centered by a vertical cylinder roller bearing

16 motors for azimuth, 2 in Elevation, each motor 17 KW

Bilder: MPIfR

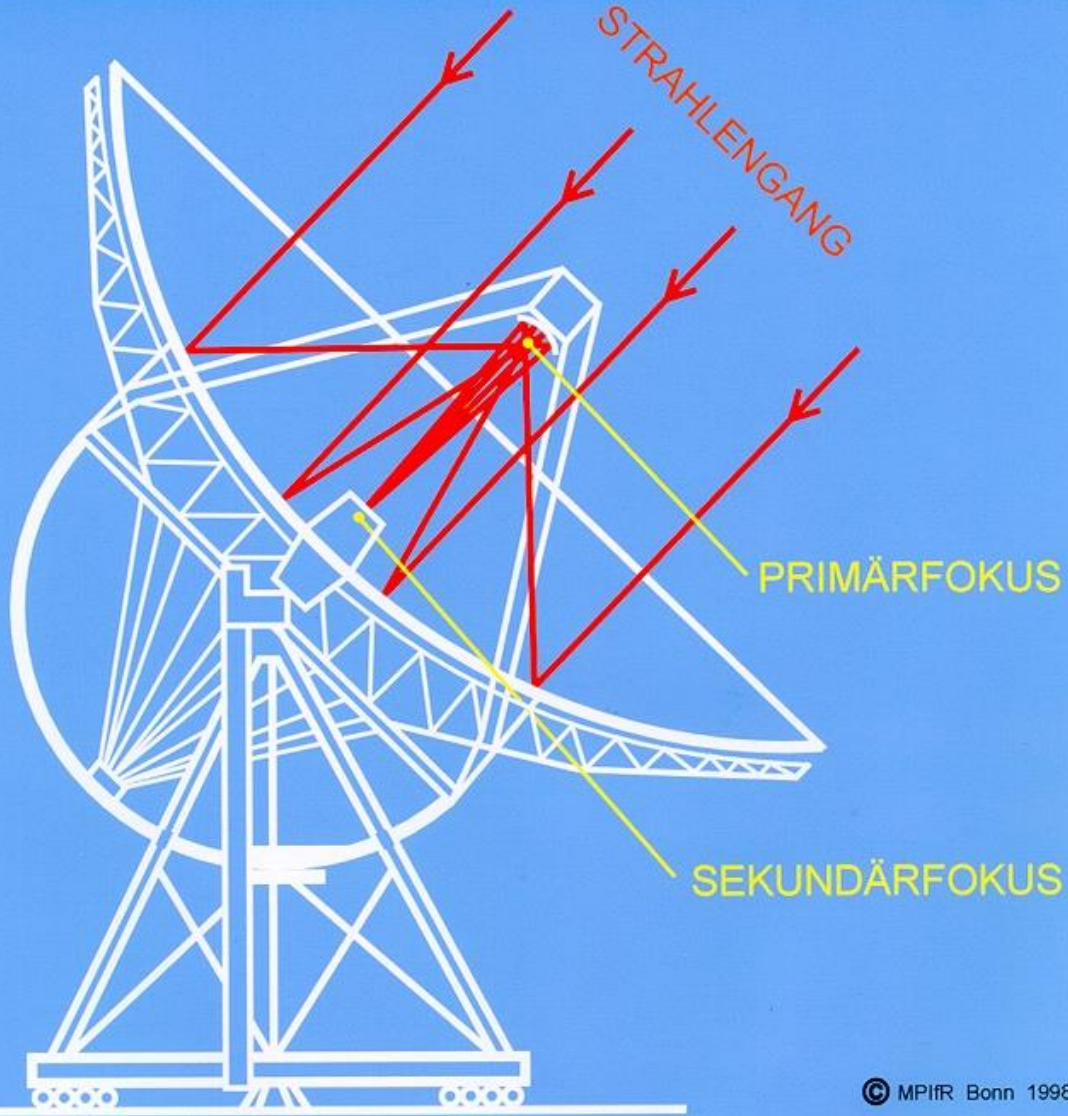
The drive



The cable twist with position encoders

Bild: Norbert Tacken/MPIfR

The basement



Primary focus 30 m above
dish surface

Secondary mirror's
diameter 6,5 m

Bild: MPIfR 1998

Beam path

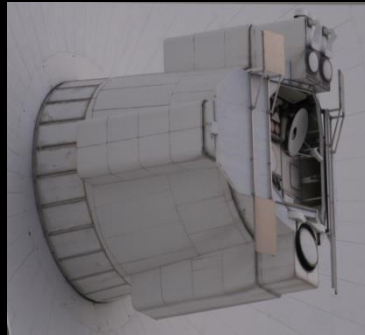


The primary focus receiver remote controlled motor driven forth and back to focus.

Retrack and close flaps for secondary foccus setup

Bilder: N. Tacken, K. Grypstra (MPIfR)

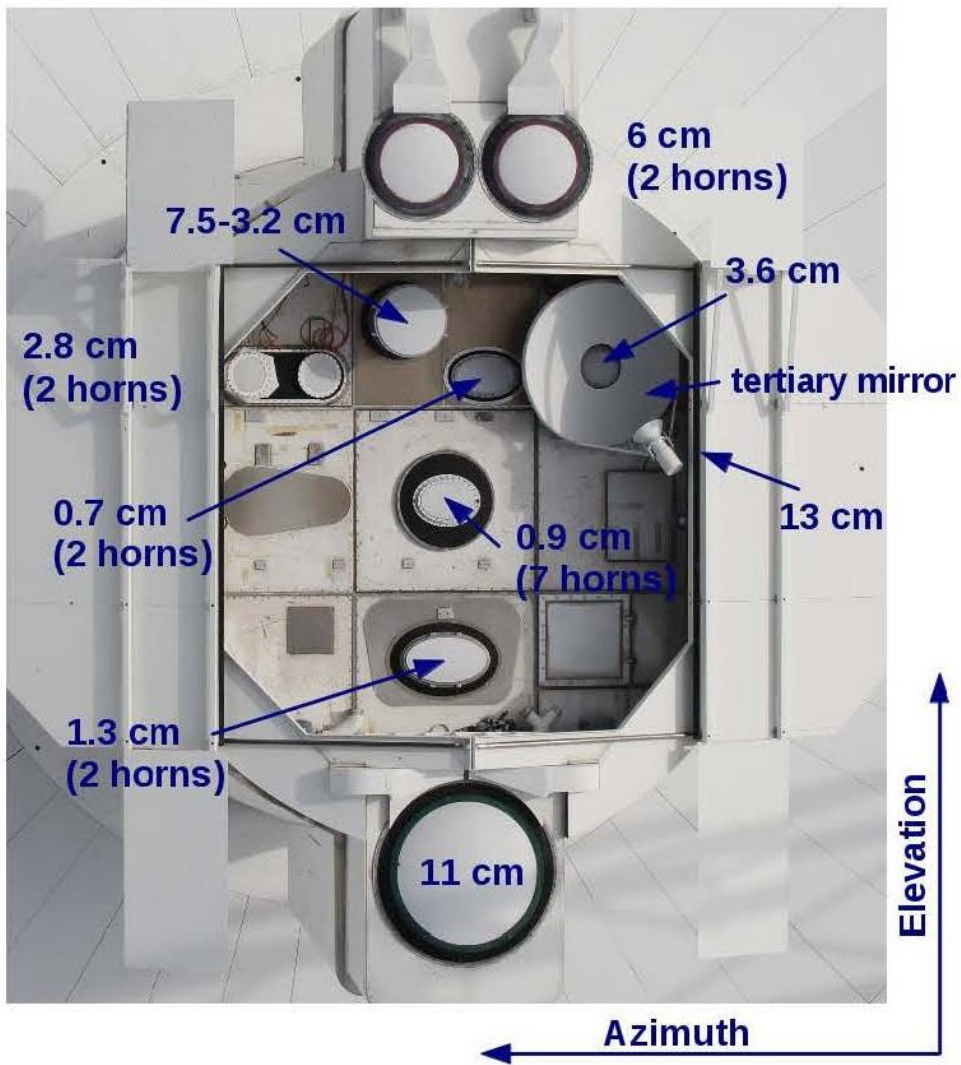
Primary focus setup



Bilder: njn (16.06.07)

Secondary focus setup

Apex receivers



Receivers range from 7 mm (Q-band: 33-50 GHz, since 03/2018) to 11 cm.

The horn size depends on the wavelength – the 11-cm-receiver horn's diameter is approx. 1 m .

Bild: MPIfR (09/2018)

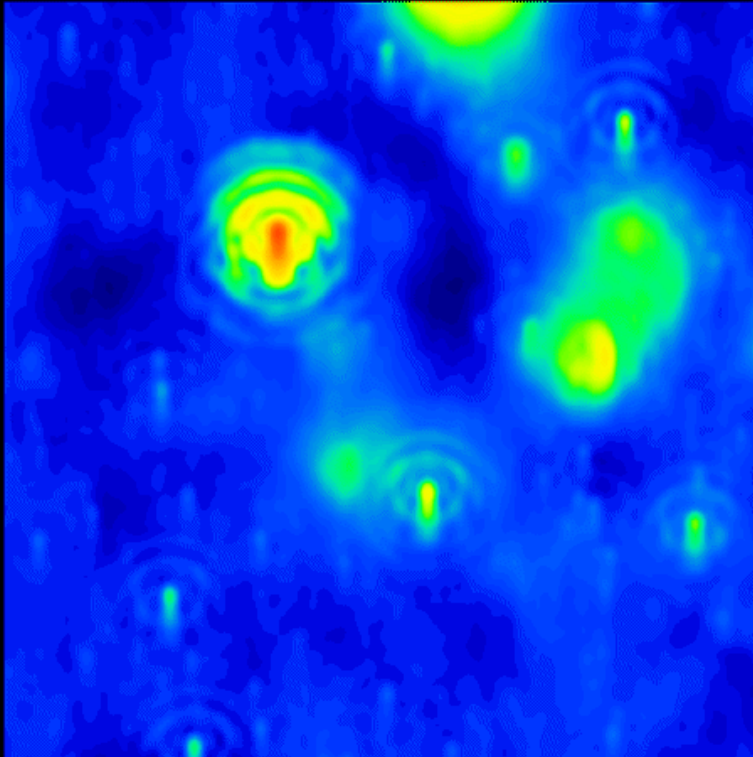
Secondary focus



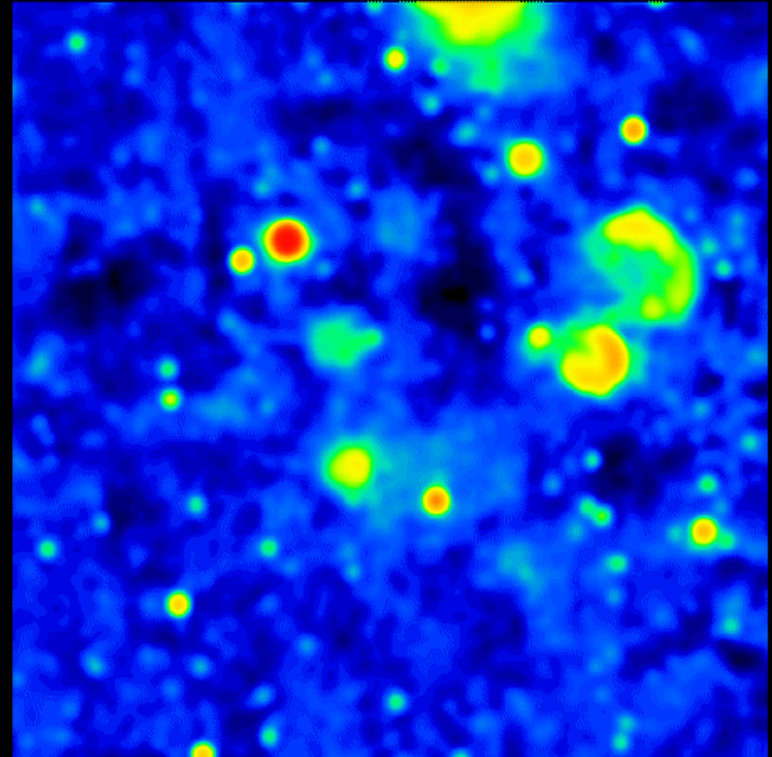


Bilder: njn (05.10.06)

The effect of active optics



before



afterwards