

Characteristics of the H.E.S.S. II telescope

Mount	
Mount type	Alt-Az mount
Azimuth drive system	12 wheels in 6 bogies on 36 m diameter rail 4 wheels driven by main motors, plus backup motors peak positioning speed 200 degr./minute range \pm 280 degr. from park position
Height of elevation axis	24 m
Elevation drive system	Toothed ring on either side of the dish 2 drive units with 2 motors each, plus backup motors peak positioning speed 100 degr./minute range -125 degr. $+90$ degr. from vertical
Dish	
Dimensions	32.6 m by 24.3 m; equivalent to 28 m circular dish
Shape of reflector	Parabolic
Focal length	36 m
Total mirror area	614 m ²
Mirror facets	875 hexagonal facets of 90 cm (flat-to-flat) size quartz-coated aluminized glass weight per facet approx. 25 kg
Facet alignment	Each facet equipped with 2 actuators with 2 μ m positioning step size
Focal plane instrumentation (Camera)	
Photo sensors	2048 1-1/4' photo multipliers
Pixel size	42 mm (hexagonal, flat-to-flat), equivalent to 0.067 degr.
Sensitive area / field of view	approx. 200 cm \varnothing , equivalent to 3.2 degr. on the sky
Signal recording	1 GHz signal sampling 2 gain channels for each pixel for large dynamic range records signal amplitude, timing, and shape
Effective exposure time	16 nano-seconds
Image recording rate	3600 images/second
Power consumption	8 kW
Dimensions of camera body	227 cm wide x 240 cm high x 184 cm deep
Camera weight	2.8 tons
Camera support	Quadrupod
Weight of complete telescope	580 tons (incl. mirrors, camera)