

# ASTRA 1H - 19.2° EAST



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## Direct-to-Home services

The ASTRA 1H satellite is located at 19.2° East, ASTRA's prime orbital position for Direct-to-Home services, providing capacity mainly for the transmission of broadcast and broadband multimedia services to consumer audiences in continental Europe.

### SATELLITE INFORMATION

#### Satellite launch information

Launch date: 18.06.1999  
 Launch vehicle: Proton D1-e  
 Launch site: Baikonur, Kazakhstan  
 Launch mass: 3700 kg

#### Satellite orbital information

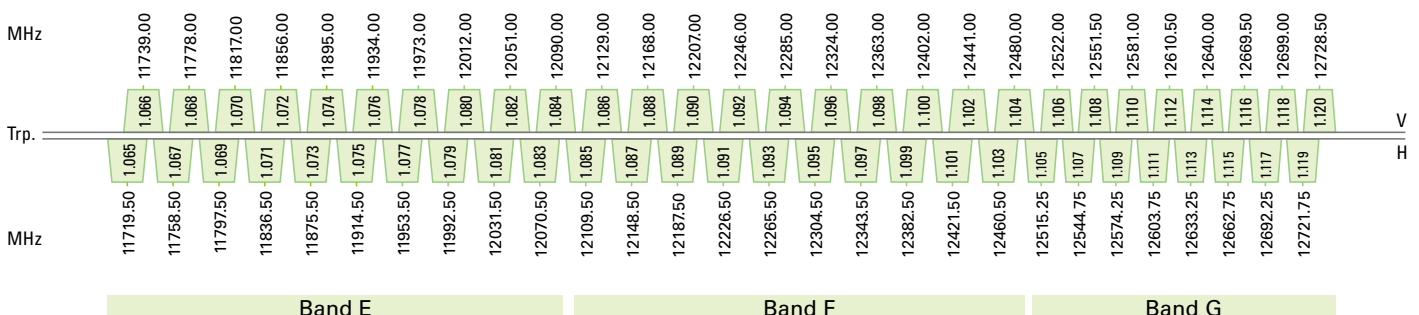
Satellite manufacturer: Hughes  
 Orbital location: 19.2° East  
 Stabilization system: 3 axis type  
 Expected lifetime: 15 years  
 Total power consumption: 6600 Watts

#### Satellite transponder information

Transponder capacity: 32 / 28  
 TWTA output power: 98 Watts  
 EIRP: 51 dBW  
 All transponders are eclipse protected  
 Transponder bandwidth: 26 MHz in FSS  
 33 MHz in BSS  
 500 MHz in Ka-band

### CHANNEL CAPACITY

Total: 56 channels • 11.70 - 12.10 GHz: 20 channels (Band E) • 12.10 - 12.50 GHz: 20 channels (Band F)  
 12.50 - 12.75 GHz: 16 channels (Band G) • 29.50 - 30.00 GHz: 2 Ka-band channels with 8 spot beams for satellite return path.  
 Channel Number Allocation and Downlink Centre Frequencies

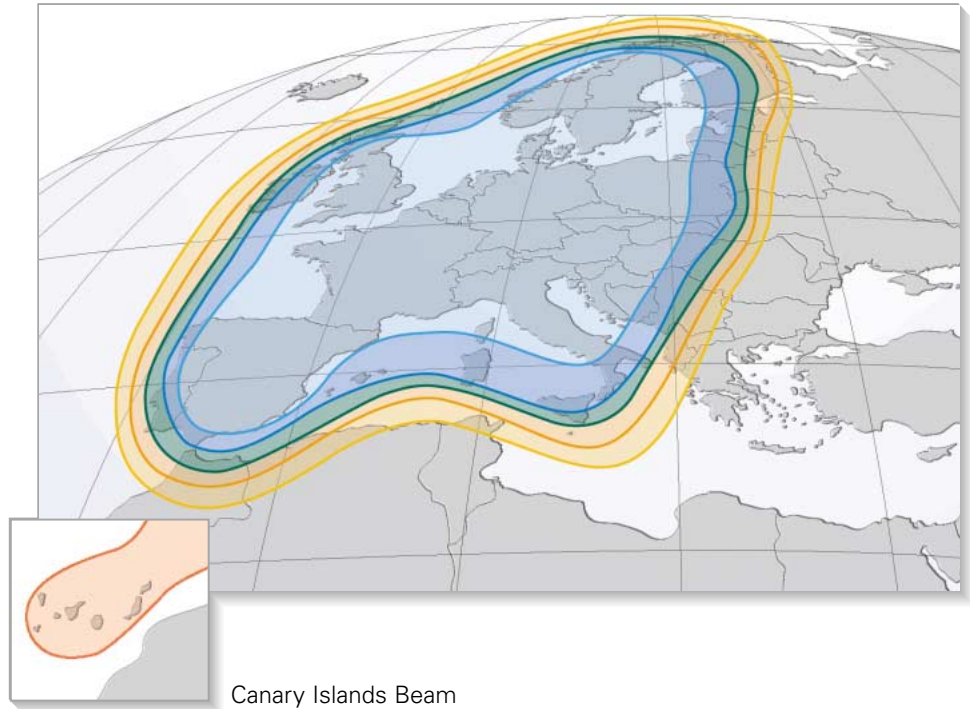


# ASTRA 1H FOOTPRINT



Typical dish sizes: 50 cm 60 cm 75 cm 90 cm 100 cm 120 cm

## Horizontal and Vertical Polarization



## ASTRA ORBITAL POSITIONS AND BACK-UP – SAFEGUARDING REVENUE

By co-locating satellites at one orbital position, ASTRA can offer easy ways of expanding service ranges and highest transmission security. The key advantage is that audiences can use the same direct-to-home reception equipment when broadcasters and broadband

service providers extend their services at the same orbital position. The ASTRA satellite system through its co-located satellites at prime orbital positions also has the strength to provide a unique form of in-orbit back-up. If for any reason, a transponder is switched off, a back-up

transponder on the same satellite or a co-located satellite can be immediately activated. The back-up system can therefore guarantee high operational security and continuity of service for both our customers and the end consumer.

Freq. (GHz)	10.70	10.95	11.20	11.45	11.70	12.10	12.50	12.75	29.50	30.00
	Band D	Band C	Band A	Band B	Band E	Band F	Band G		Ka Band	
ASTRA 1B				✓						
ASTRA 1C		✓	✓							
ASTRA 1E	✓	✓		✓	✓					
ASTRA 1F			✓		✓	✓				
ASTRA 1G					✓	✓	✓			
ASTRA 1H					✓	✓	✓			✓
ASTRA 2C	✓	✓			✓	✓				✓
	Low Band (64 transponders)				High Band (56 transponders)			Ka Band (2 transponders)		