

ASTRA 2C - 19.2° EAST



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Direct-to-Home services

The ASTRA 2C 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: 16.06.2001
 Launch vehicle: Proton
 Launch site: Baikonur, Kazakhstan
 Launch mass: 3643 kg

Satellite orbital information

Satellite manufacturer: Boeing
 Satellite Systems
 Orbital location: 19.2° East
 Stabilization system: 3 axis type
 Expected lifetime: 15 years
 Total power consumption: 7000 Watts

Satellite transponder information

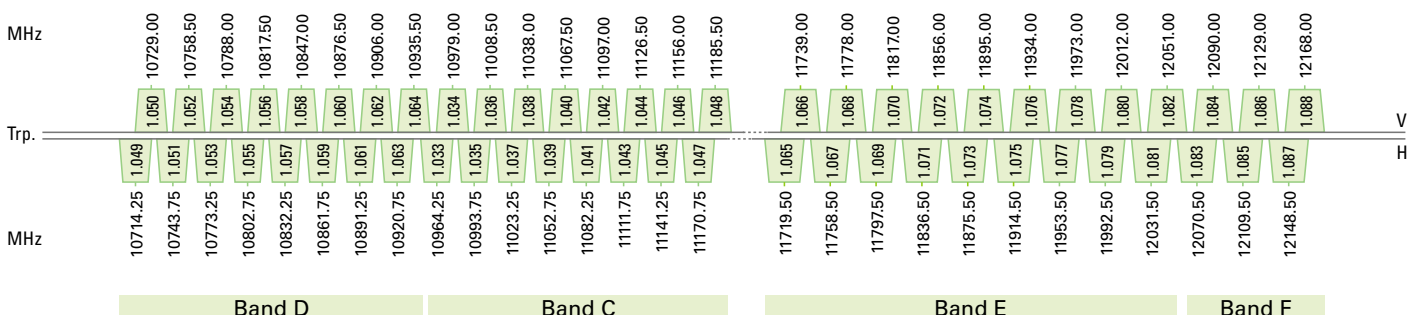
Transponder capacity: 32 / 28
 TWTA output power: 105 Watts
 EIRP: 51 dBW
 All transponders are eclipse protected
 Transponder bandwidth: 26 MHz in FSS
 33 MHz in BSS

CHANNEL CAPACITY

Total: 56 channels

10.70 - 11.20 GHz: 32 channels (Band C / Band D) • 11.70 - 12.20 GHz: 24 channels (Band E / Band F)

Channel Number Allocation and Downlink Centre Frequencies



ASTRA 2C FOOTPRINT



Typical dish sizes:

60 cm

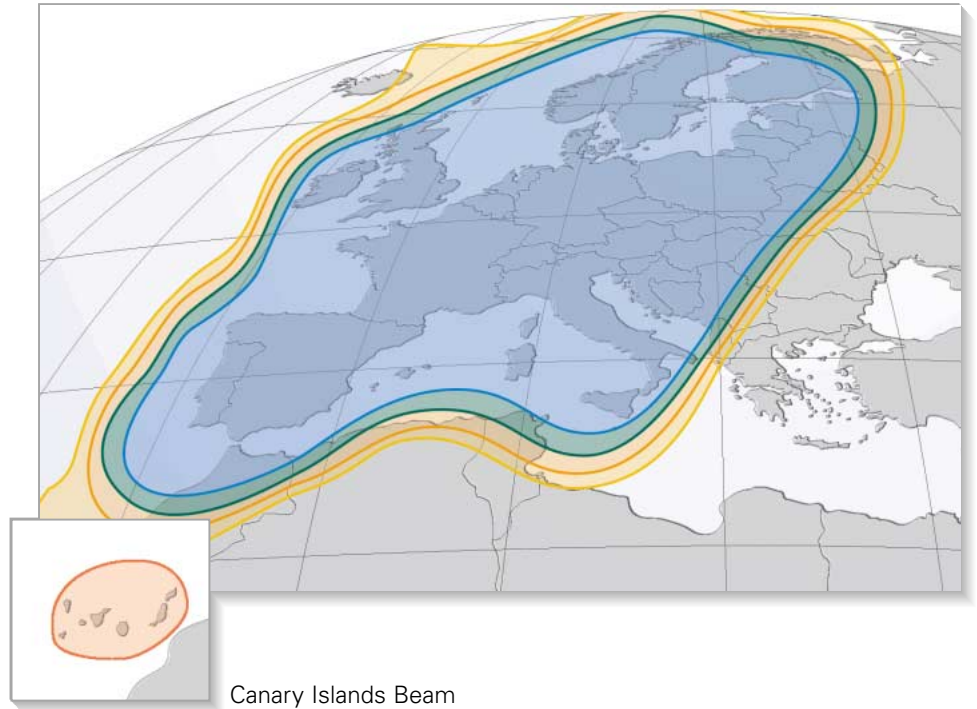
75 cm

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) | |