

ASTRA 1F - 19.2° EAST



PUBLISHED | FEBRUARY 2003



Direct-to-Home services

The ASTRA 1F 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: 08.04.1996
 Launch vehicle: Proton D1-e
 Launch site: Baikonur, Kazakhstan
 Launch mass: 3010 kg

Satellite orbital information

Satellite manufacturer: Hughes
 Orbital location: 19.2° East
 Stabilization system: 3 axis type
 Expected lifetime: 15 years
 Total power consumption: 4400 Watts

Satellite transponder information

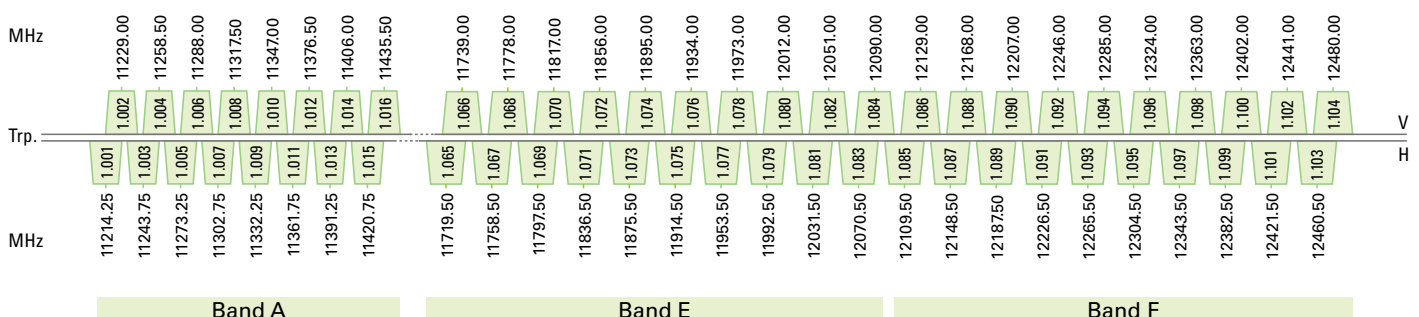
Transponder capacity: 20
 TWTA output power: 82 Watts
 EIRP: 51 dBW
 All transponders are eclipse protected
 Transponder bandwidth: 26 MHz in FSS
 33 MHz in BSS

CHANNEL CAPACITY

Total: 56 channels

11.20 - 11.45 GHz: 16 channels (Band A) • 11.70 - 12.10 GHz: 20 channels (Band E) • 12.10 - 12.50 GHz: 20 channels (Band F)

Channel Number Allocation and Downlink Centre Frequencies



ASTRA 1F BSS FOOTPRINTS



Typical dish sizes:

50 cm

60 cm

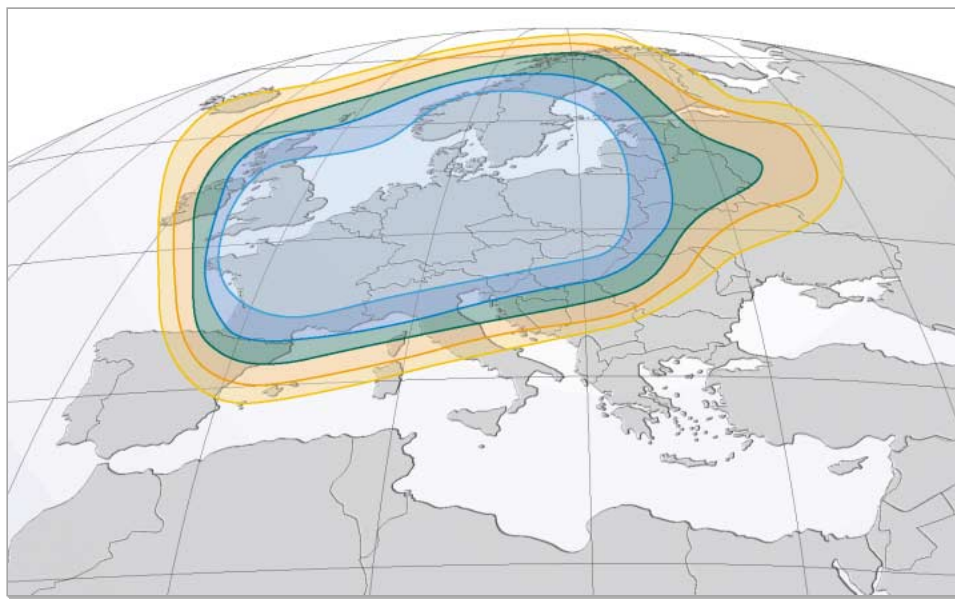
75 cm

90 cm

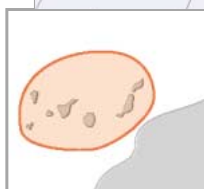
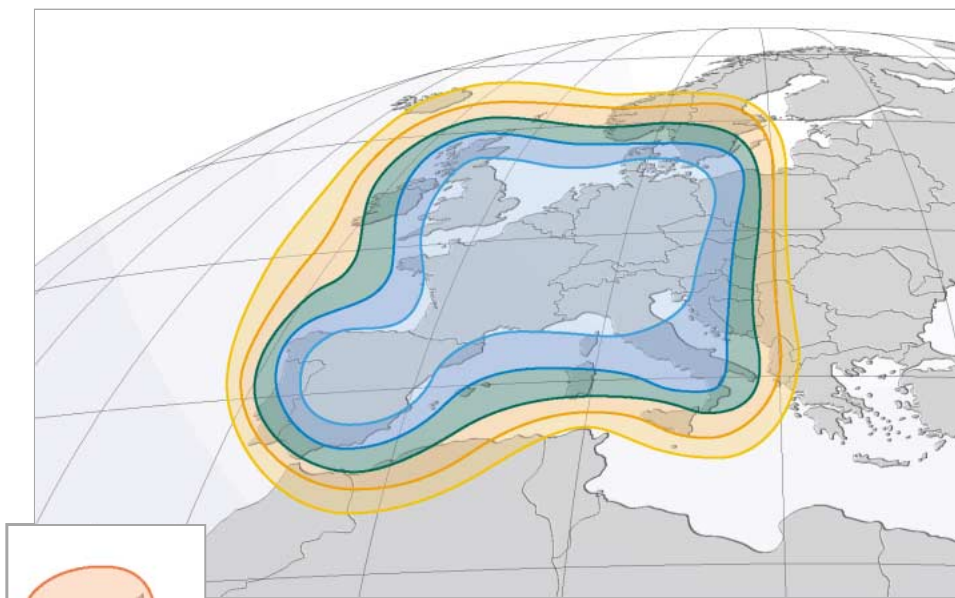
100 cm

120 cm

Horizontal Polarization
Mode positive



Vertical Polarization
Mode positive



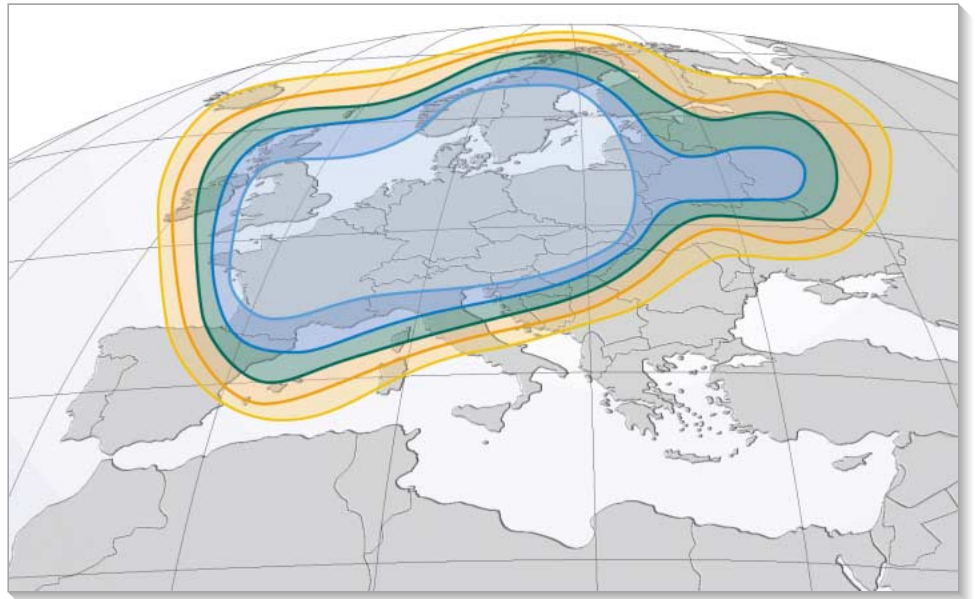
Canary Islands Beam

ASTRA 1F BSS FOOTPRINTS

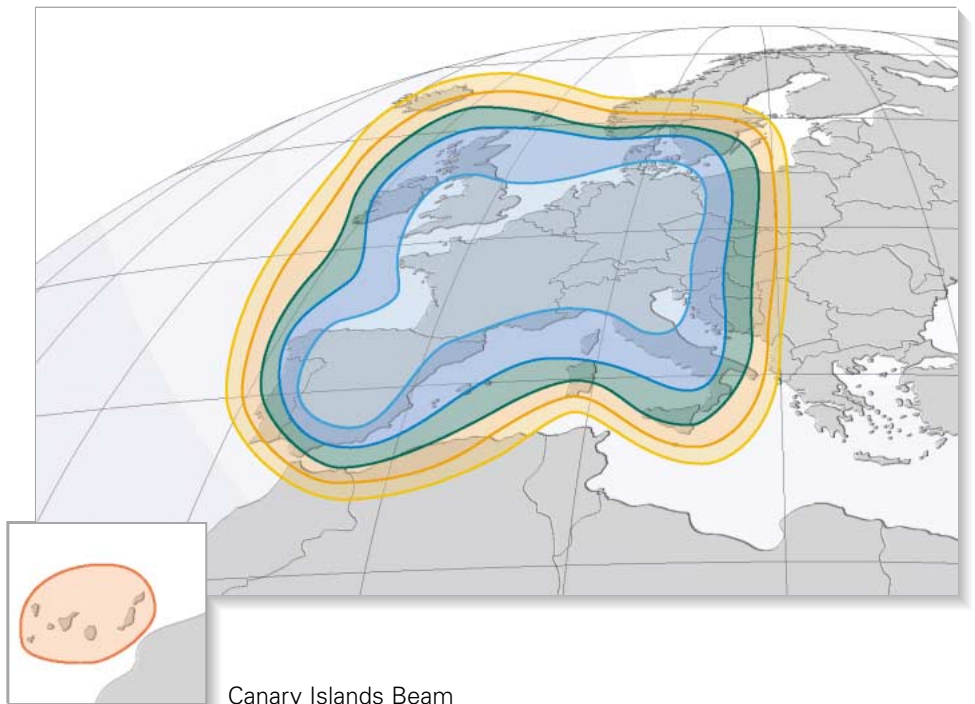


The size of the satellite dish required to receive transmissions from the ASTRA satellites depends on the transponder polarization and the mode (positive or negative) as well as on the geographical location of the dish. The ASTRA 1F satellite uses various antenna modes and two polarizations, resulting in a number of footprints for each satellite.

Horizontal Polarization
Mode negative



Vertical Polarization
Mode negative



Canary Islands Beam

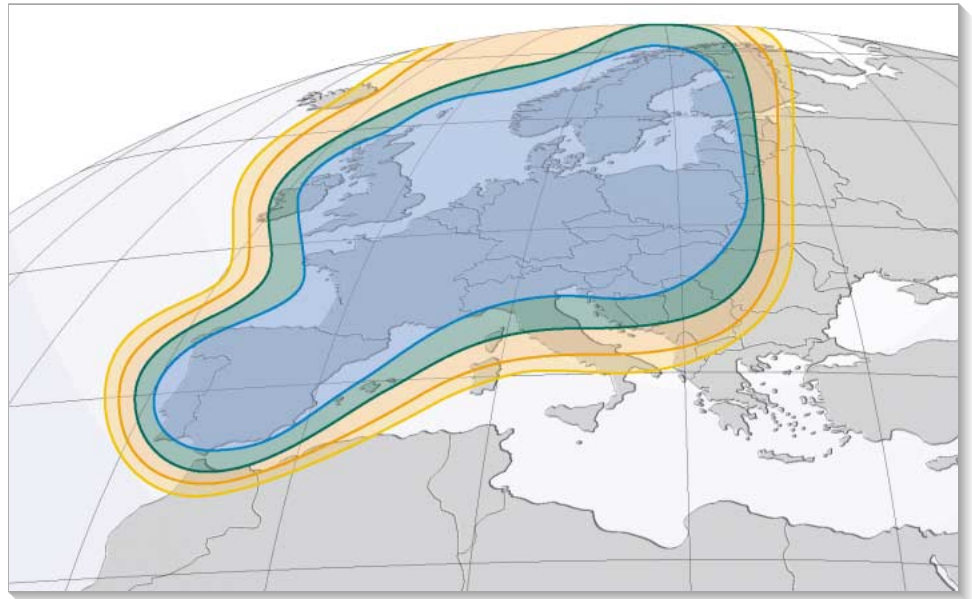
ASTRA 1F FSS FOOTPRINTS



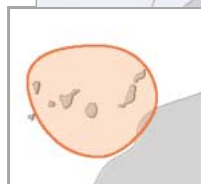
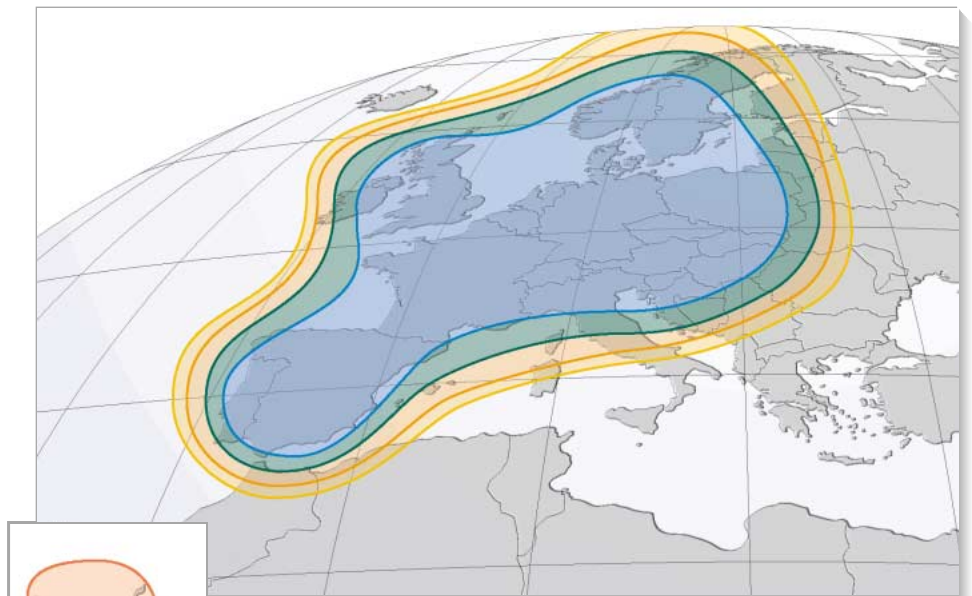
FSS (Fixed Satellite Service): 10.7 - 11.7 GHz and 12.5 - 12.75 GHz, 26 MHz per channel

BSS (Broadcast Satellite Service): 11.7 - 12.5 GHz, 33 MHz per channel

Horizontal Polarization
Mode positive



Vertical Polarization
Mode positive

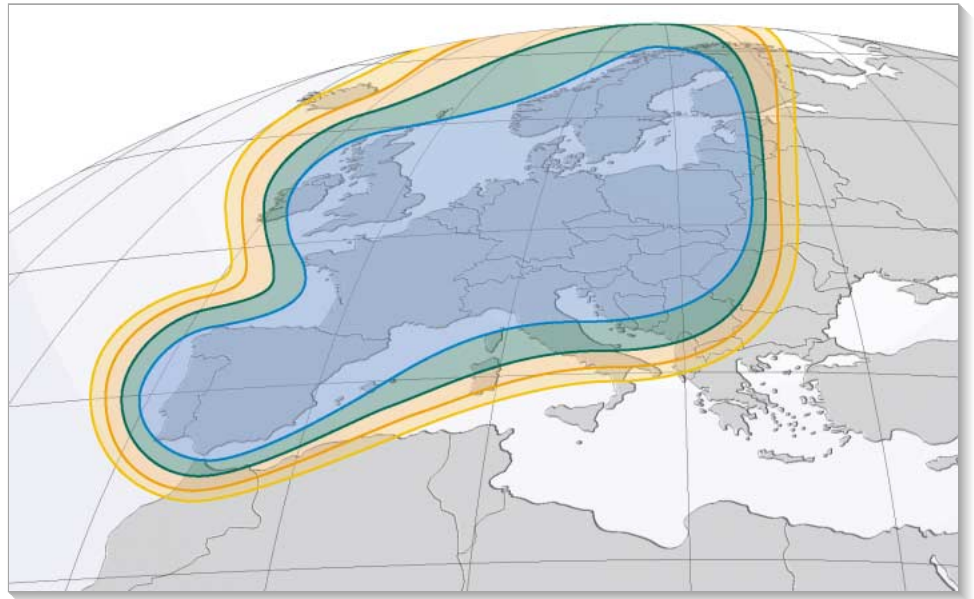


Canary Islands Beam

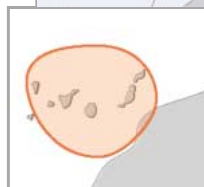
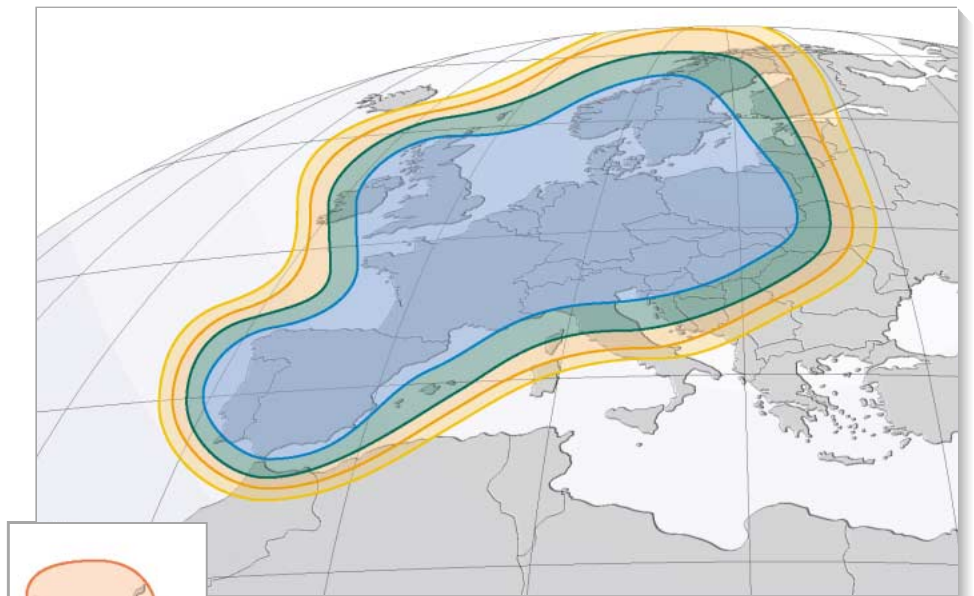
ASTRA 1F FSS FOOTPRINTS



Horizontal Polarization
Mode negative



Vertical Polarization
Mode negative



Canary Islands Beam

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)		

Updates of footprints, transponder lists and frequency plans, the complete ASTRA channel line-up and more information about SES ASTRA, the ASTRA Satellite System and ASTRA products and services can be found on www.ses-astra.com or contact us:

SES ASTRA S.A.

L-6815 Château de Betzdorf, Luxembourg
Tel. +352 710 725 650
Fax +352 710 725 433
sales@ses-astra.com

ASTRA Marketing GmbH

Mergenthalerallee 79-81
D-65760 Eschborn, Germany
Tel. + 49 6196 470 625
Fax + 49 6196 470 629

ASTRA Marketing Ltd.

Wellington House, 7th floor
125 Strand, London WC2R 0AP, UK
Tel. + 44 20 7420 3600
Fax + 44 20 7836 9194

ASTRA Marketing France

157, Avenue Charles de Gaulle
F-92521 Neuilly sur Seine Cédex, France
Tel. + 33 1 41 43 06 60
Fax + 33 1 41 43 06 70

ASTRA Marketing Iberica

Paseo de la Castellana 52, 7A
E-28046 Madrid, Spain
Tel. + 34 91 41 11 746
Fax + 34 91 56 15 776

ASTRA Marketing Polska

ul. Podchorznych 39
00-722 Warszawa, Poland
Tel. + 48 22 840 10 58
Fax + 48 22 840 07 24