

Title (en)
Low side lobe gregorian antenna.

Title (de)
Gregory Antenne mit unterdrückten Nebenkeulen.

Title (fr)
Antenne de type Gregory aux lobes secondaires faibles.

Publication
EP 0136817 A1 19850410 (EN)

Application
EP 84305894 A 19840829

Priority
• US 52937583 A 19830906
• US 53106983 A 19830912

Abstract (en)
A microwave antenna comprising the combination of a paraboloidal main reflector (10); a subreflector (13) located such that the paraboloidal main reflector (10) and the subreflector (13) have a common focal point (F) lying between the main reflector (10) and the subreflector (13); a feed horn (11,12) for transmitting microwave radiation (preferably symmetrically) to, and receiving microwave radiation from, said subreflector (13); and a shield (30) connected to the peripheral portion of the subreflector (13) and having an absorbing surface (31) which reduces side lobe levels both by capturing the feed horn spillover energy and by reducing the diffraction of microwave radiation from the edge of the subreflector (13). The shield (30) is preferably formed as a continuous axial projection extending from the periphery of the subreflector (13) toward the main reflector (10) substantially parallel to the axis of the feed horn (11,12). The reflective surface of the subreflector (13) is suitably a section of an approximate ellipse.

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H01Q 19/19

IPC 8 full level
H01Q 17/00 (2006.01); **H01Q 19/02** (2006.01); **H01Q 19/19** (2006.01)

CPC (source: EP)
H01Q 17/001 (2013.01); **H01Q 19/026** (2013.01); **H01Q 19/19** (2013.01)

Citation (search report)
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• [Y] DE 1010124 C
• [A] EP 0005487 A1 19791128 - CSELT CENTRO STUDI LAB TELECOM [IT]
• [A] US 3314071 A 19670411 - LADER LEON J, et al
• [A] THE MARCONI REVIEW, Second quarter 1980; A.D. MONK "The prediction and control of the wide-angle sidelobes of satellite earth station antennas", pages 74-95
• [A] PATENT ABSTRACTS OF JAPAN vol. 2, no. 75, 14th June 1978, page 3004 E78; & JP-A-53-41154 (MITSUBISHIDENKI) 14-04-1978

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