ANTENAS

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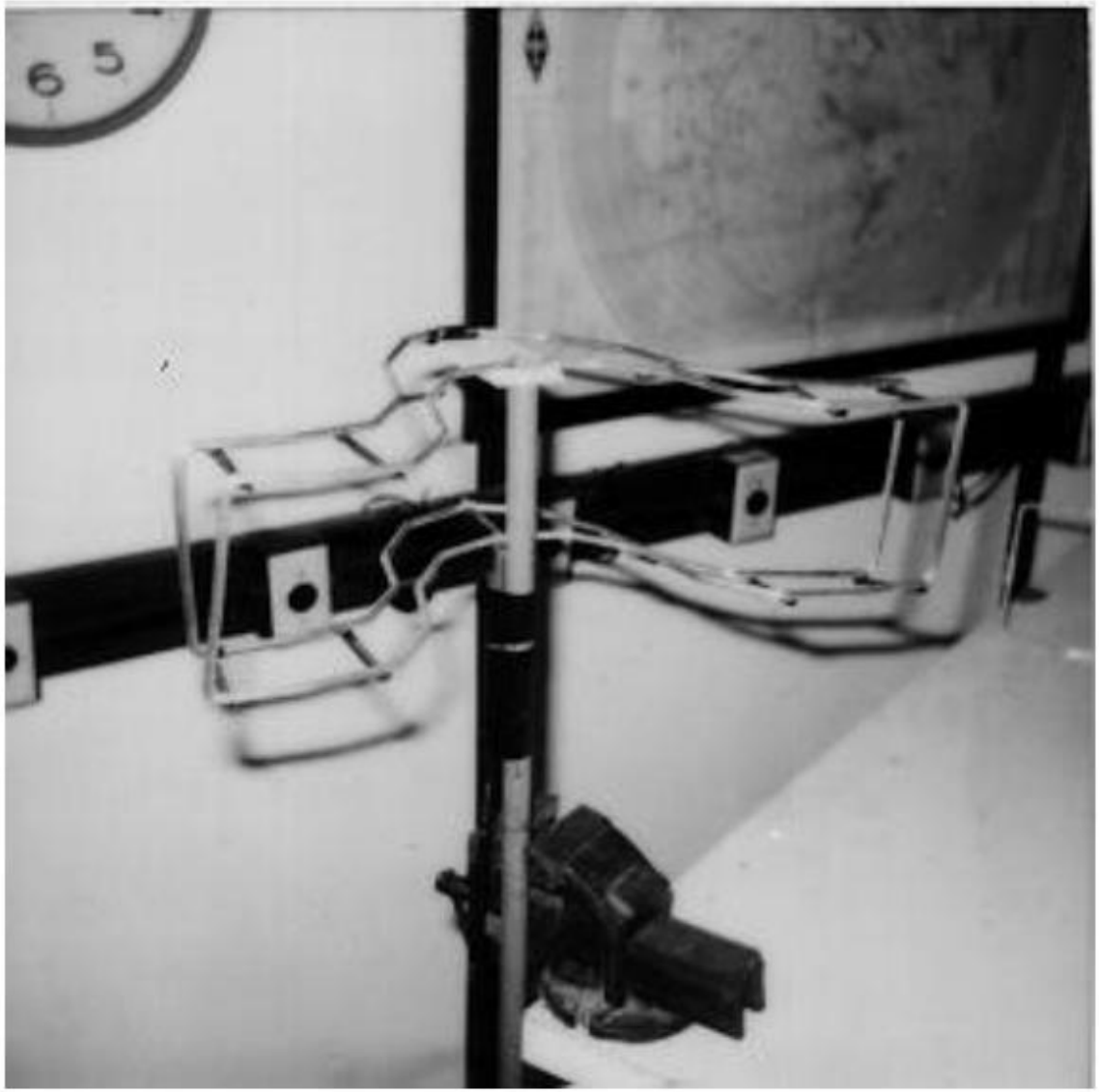
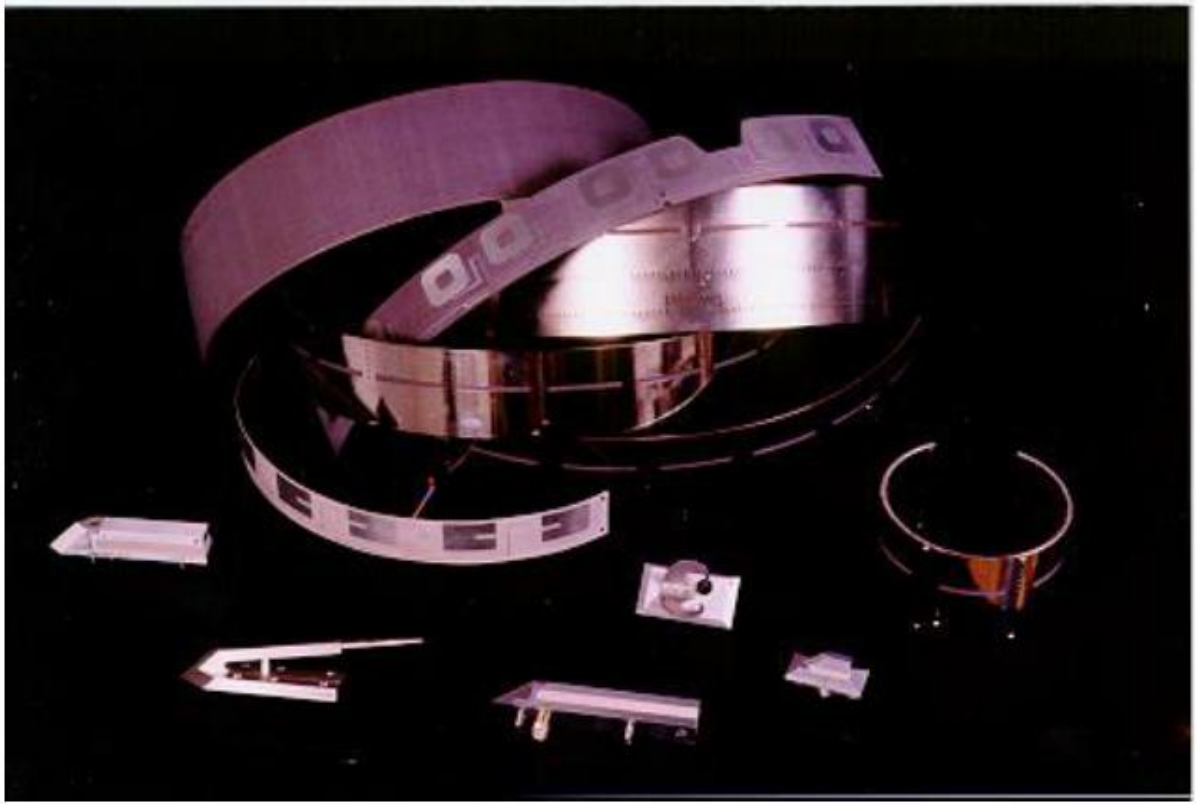
WIRE ANTENNAS:

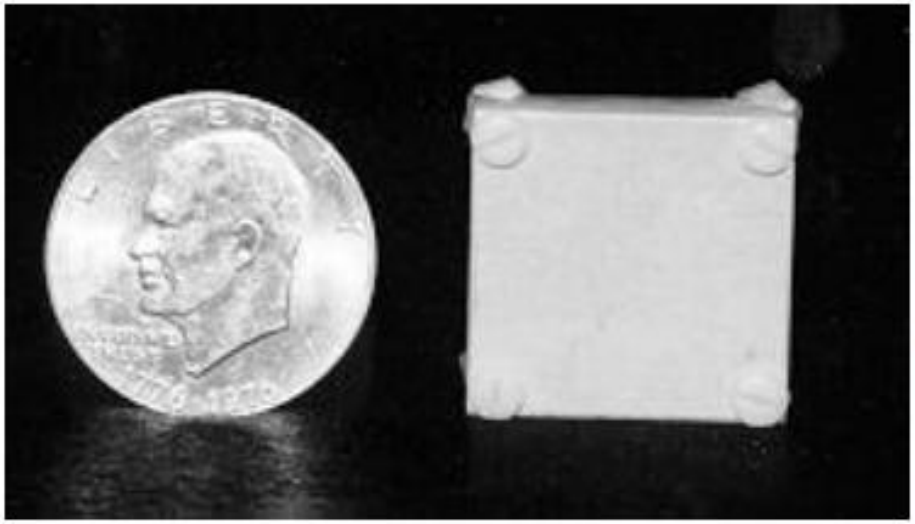


PATCH ANTENNAS:

CONFORMAL Sounding Rocket Applications (Courtesy PSL/Russ Jedlicka)



Individual X-band Patch



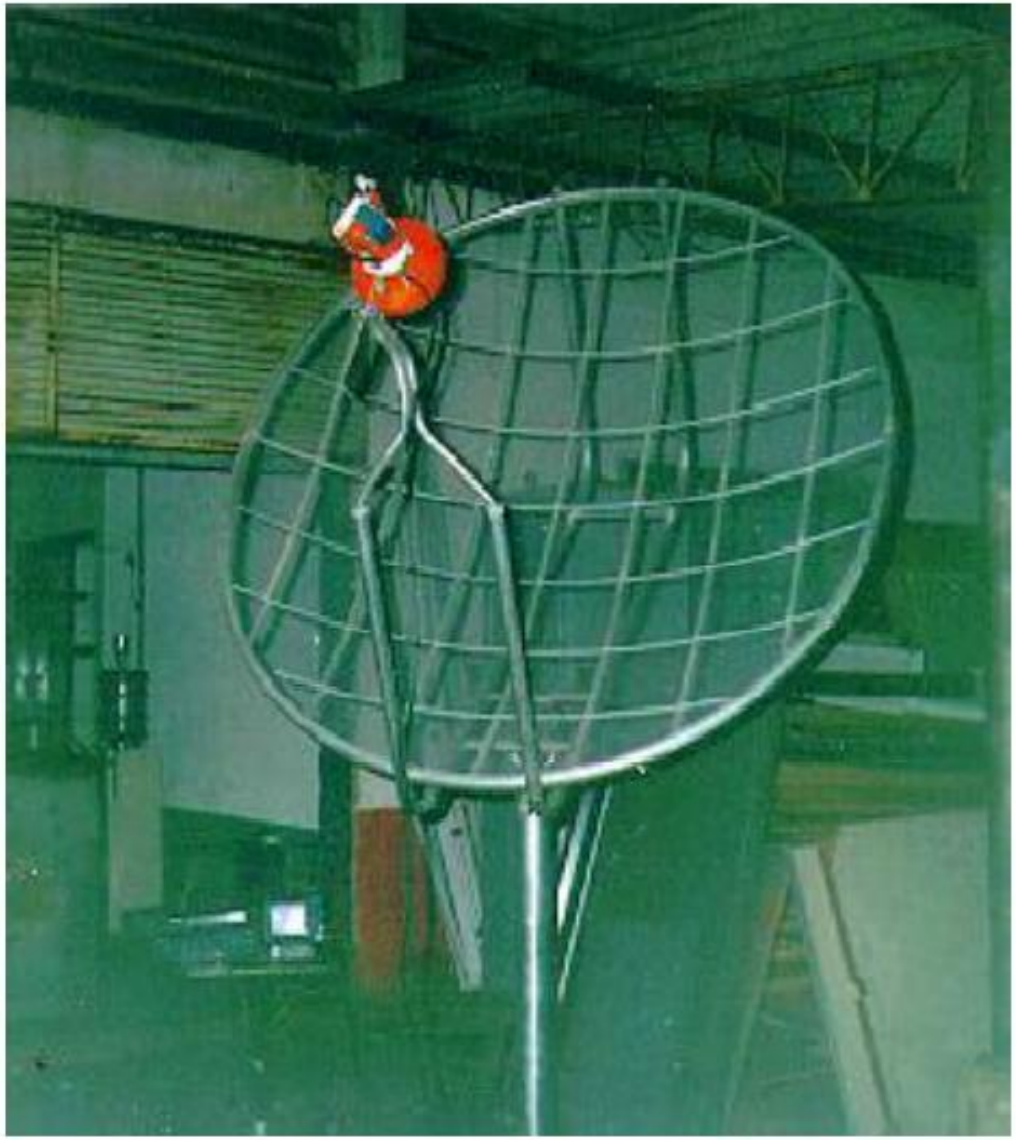
STARDUST

REFLECTOR AND HORN ANTENNAS:

The Very Large Array (VLA) is a radiotelescope consisting of 27 shaped 25-meter dual reflector antennas. (Courtesy of the National Radio Astronomy Observatory - NRAO / AUI / NSF). *Wiley Encyclopedia of RF and Microwaves Engineering* (in print).

The Green Bank Radio Telescope reflector antenna. The 100-m main reflector consists of 2000 solid panels. The structure can be pointed to view the entire sky down to a 5° elevation angle, and is the largest fully steerable radio telescope in the world. (Courtesy of the National Radio Astronomy Observatory - NRAO / AUI / NSF). *Wiley Encyclopedia of RF and Microwaves Engineering* (in print).

New deployment mechanism for reflector antenna (courtesy Nicholas Bludworth, James Moore and James Sullivan, New Mexico State University)



Offset parabolic reflector built and tested for satellite TV reception at C-band. Courtesy Carlos Muller (University of Brasilia, Brazil). *Wiley Encyclopedia of Electrical and Electronics Engineering*.

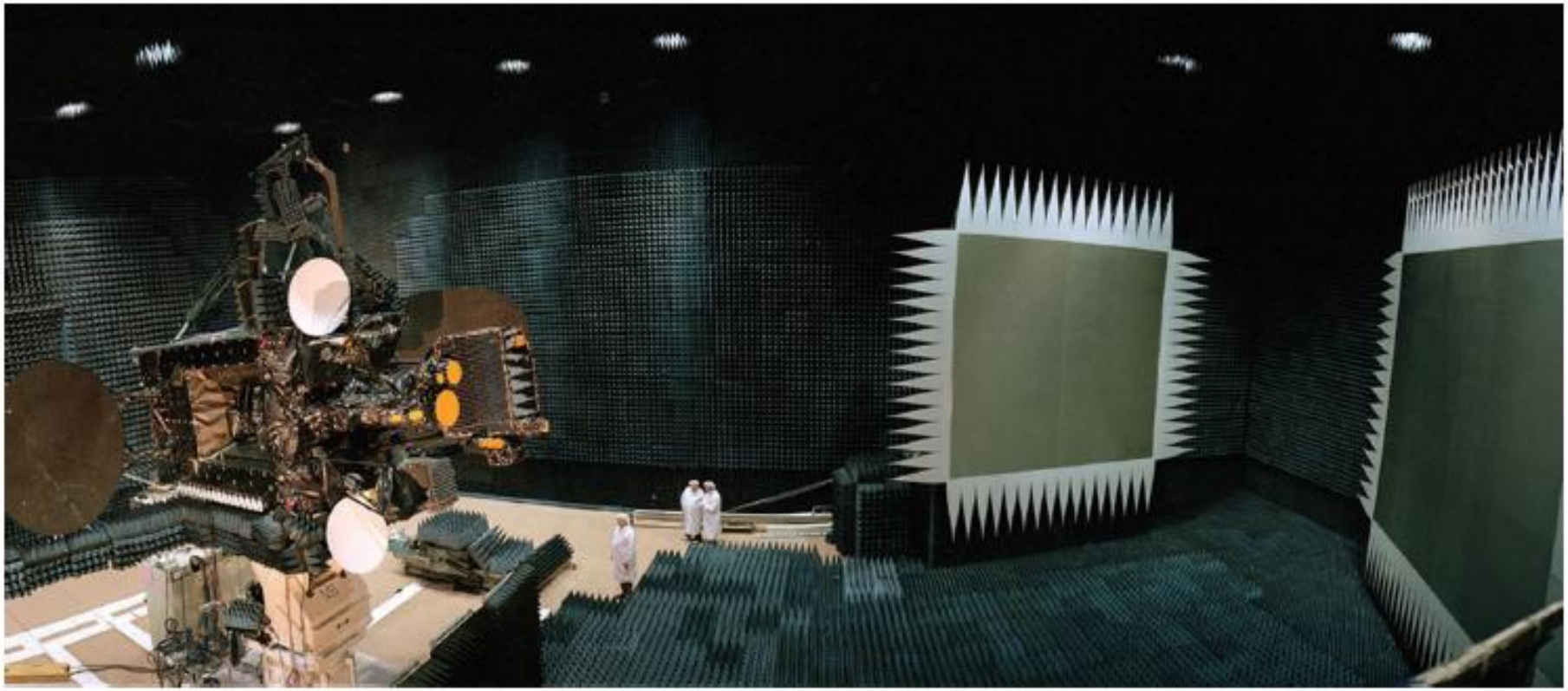


Fig. 2. Intelsat 9 satellite during system tests in the Compact Antenna Testing Range - CATR, an indoor antenna measurement range that directly measures the farfield patterns of an antenna either by itself or on the satellite. The satellite is shown without the solar panels and is one of the Intelsat 9 series of seven C-band and Ku-band satellites. The transmit feed array has more than one hundred feed horns and is located on the earth-deck tower, facing the largest reflector shown in the figure.

Courtesy of Space/Systems Loral and Intelsat. *Wiley Encyclopedia of RF and Microwaves Engineering* (in print).

Sumário de Aplicações e Projeto de Antenas

	FORMATO FÍSICO	POTÊNCIA MÁXIMA	FREQUÊNCIA	LARGURA DE BANDA	GANHO	CARACTERÍSTICA ÚNICA
Fios	Baixo/Alto	Alta (< C&R)	Baixa	Baixa (8 %)	Baixo	Fabricação de baixo custo
Cornetas[1]	Alto	Alta	Alta	Alta (50 %)	Alto (< Ref.)	Projeto preciso
Refletores	Alto	Alta	Alta	Alimentador(es) λ & superfície	Alto	Controle mecânico do(s) lóbulo(s)
Microfita impressa[2]	Baixo	Baixa	Alta	Baixa (2 %)	Baixo	Alta adaptabilidade à fuselagem
Conjuntos	Depende/ elementos	Depende/ elementos	Depende dos elementos	Depende dos elementos	Depende elemento	Controle eletrônico do(s) lóbulo(s)

[1] Apresenta baixa largura de banda e potência quando usada com lentes.

[2] Espirais e log-periódicas impressas possuem alta largura de banda.

Limites entre Alto e Baixo (± 50 %):

- ✓ Potência: ≈ 20 w
- ✓ Frequência: ≈ 2 GHz
- ✓ Ganho: ≈ 15 dBi