RESEARCH & DEVELOPMENT TELECOMMUNICATION'S INSTITUTE

Problematic Situation of TV signal reception in CUBA

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Havana, November 2017

Topics

1. TVD signal reception Overview
2. Current Situation about receiver antennas
3. Conclusions

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2. Current Situation about receiver antennas
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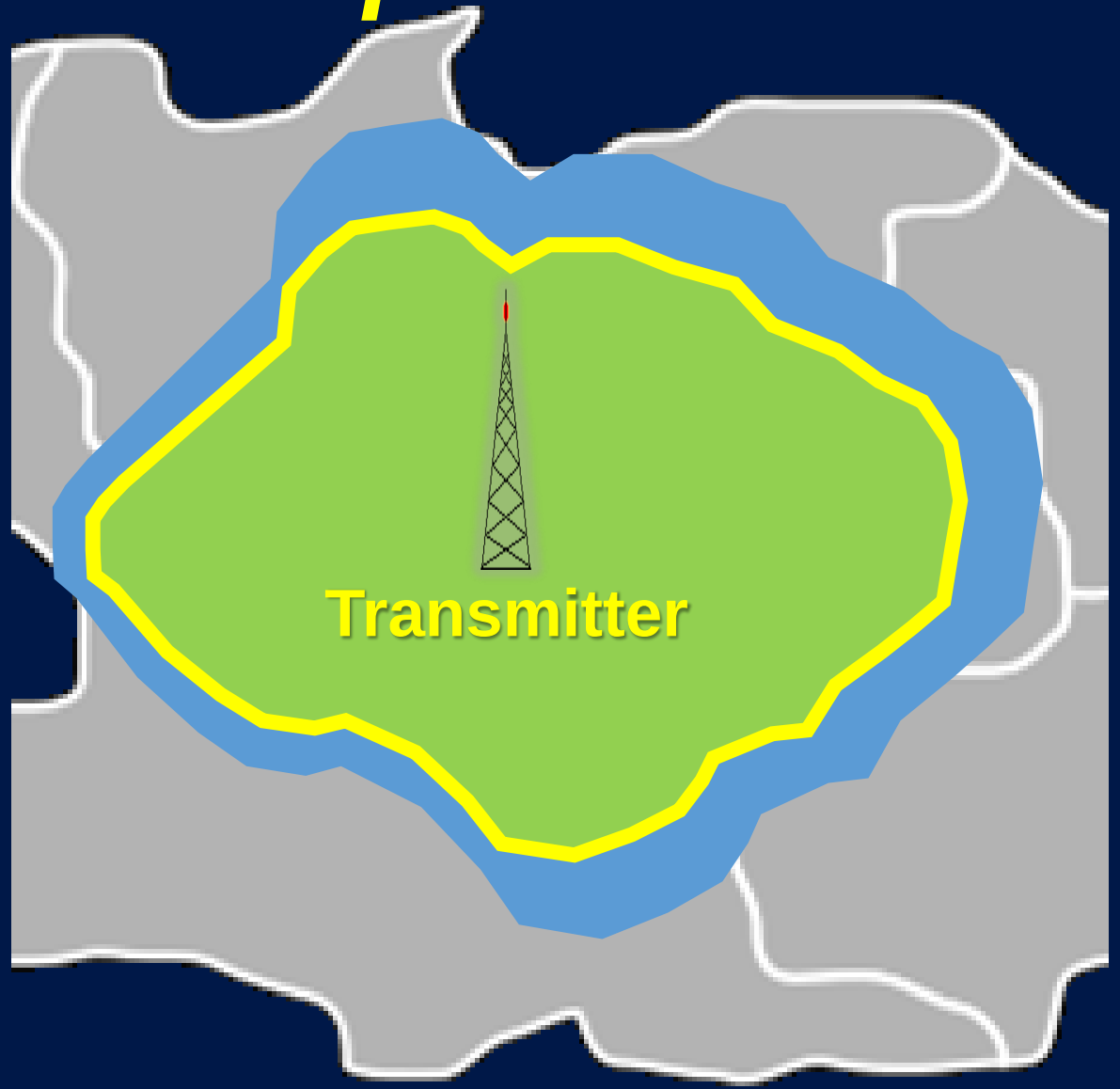
TVD signal Reception Overview (1/3)



Covered Area

-78dBm

6dBm

-84dBm

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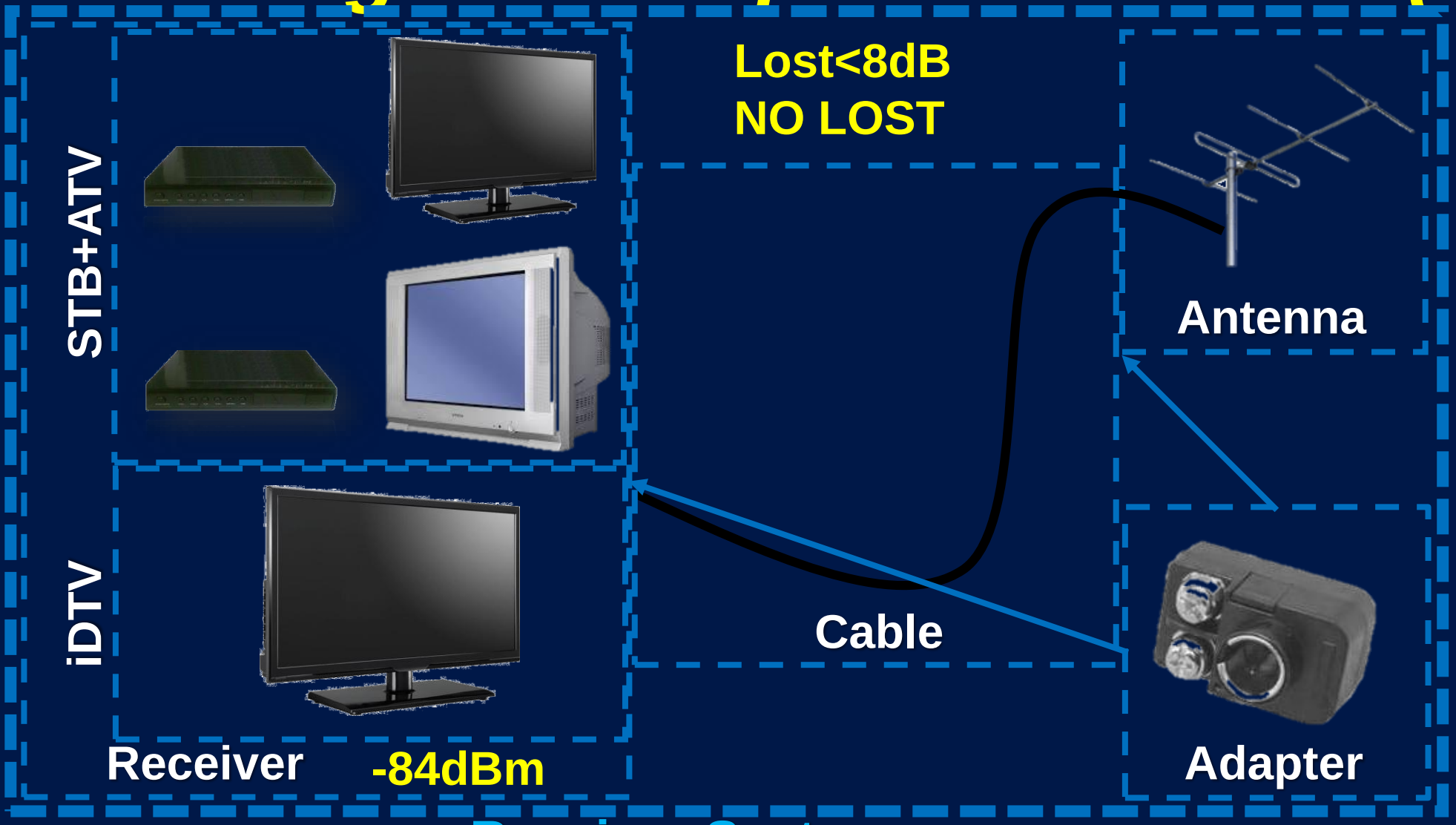
TVD signal Reception Overview (2/3)



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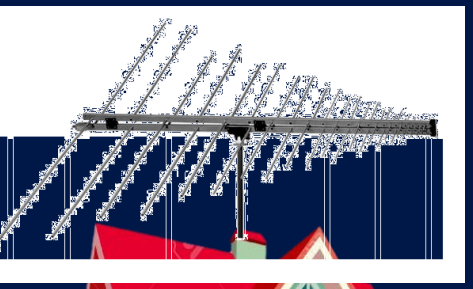
TVD signal Reception Overview (3/3)

Why?

-84dBm



OUT of Covered Area

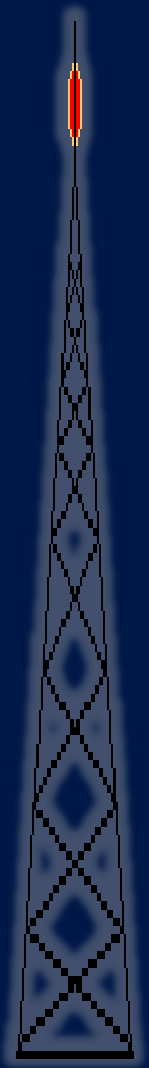
-78dBm

Edge of Covered Area

-53dBm

-28dBm

Near to Transmitter



Transmitter

Topics

1 Problematic Situation of TV reception in Cuba

2 **Current Situation about receiver antennas**

3 Conclusions

Evaluated Antennas

What antenna do you buy?

I must buy the cheaper one.

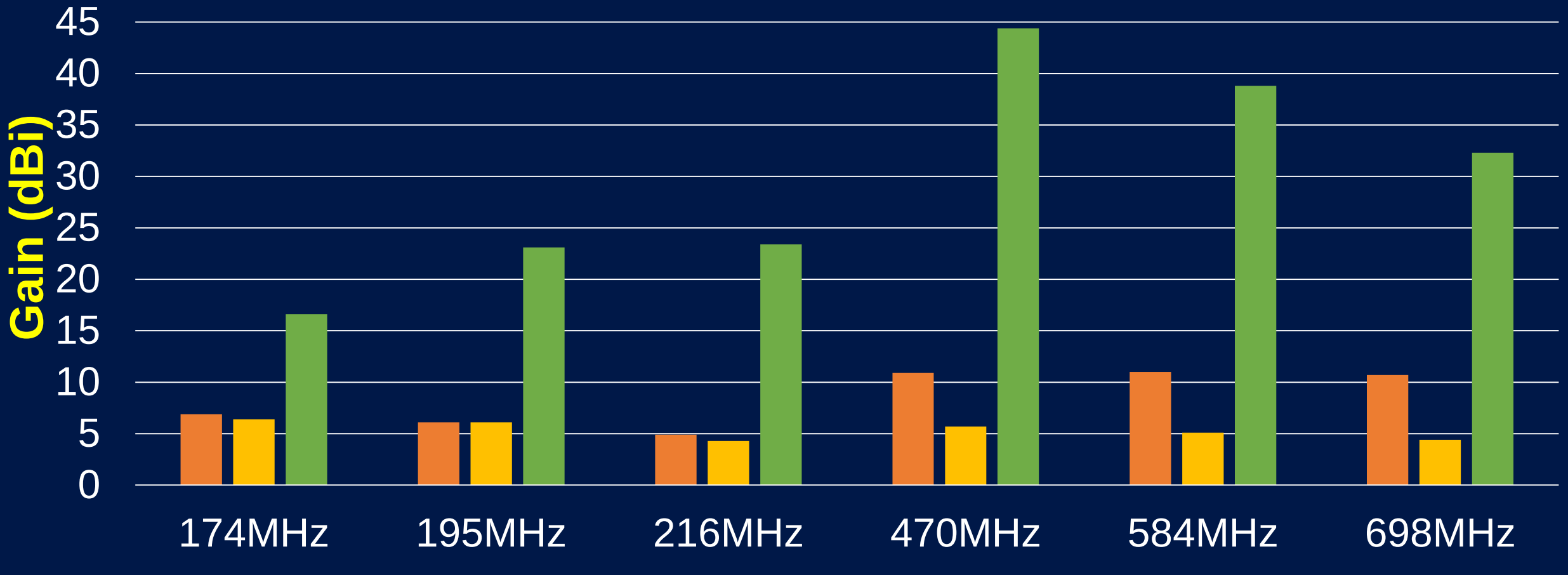
The cheaper option turns out more expensive

LPV345HV
Italian Brand
FRACARRO
$12,95

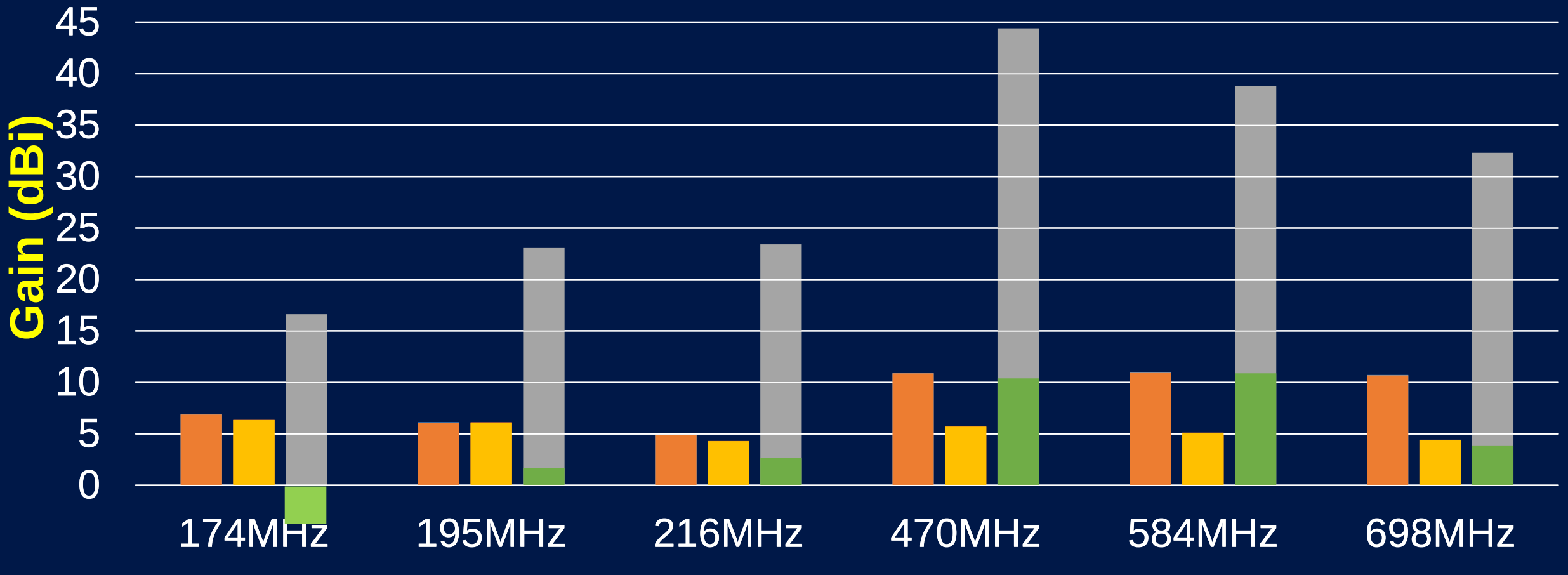
DTVANT2100UV10
Chinese Brand
RUNCH
$18,35

LPD ADM 009
Cuba's Antenas Villa Clara Factory
UNKNOW PRICE

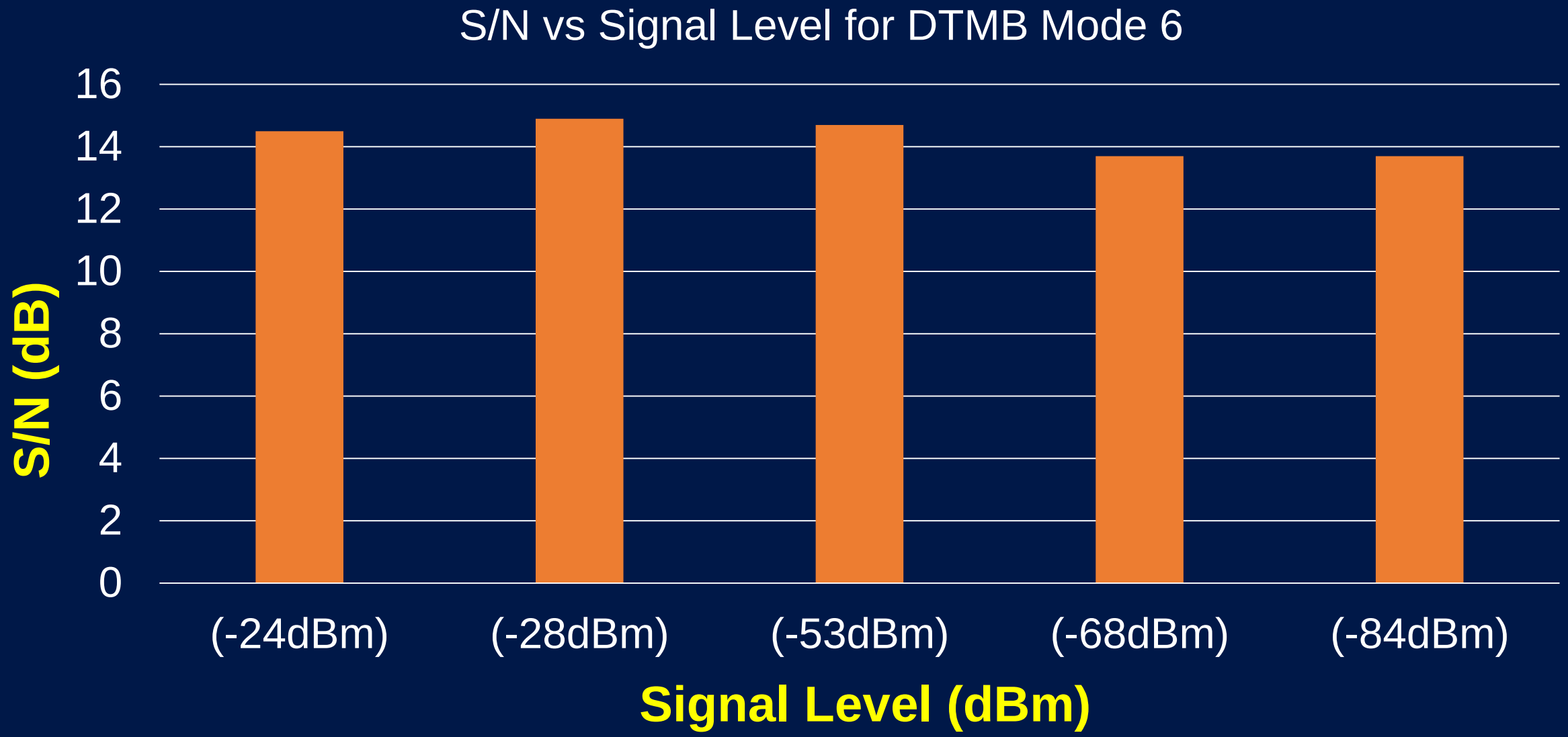
Evaluated Antennas. Gain (1/2)



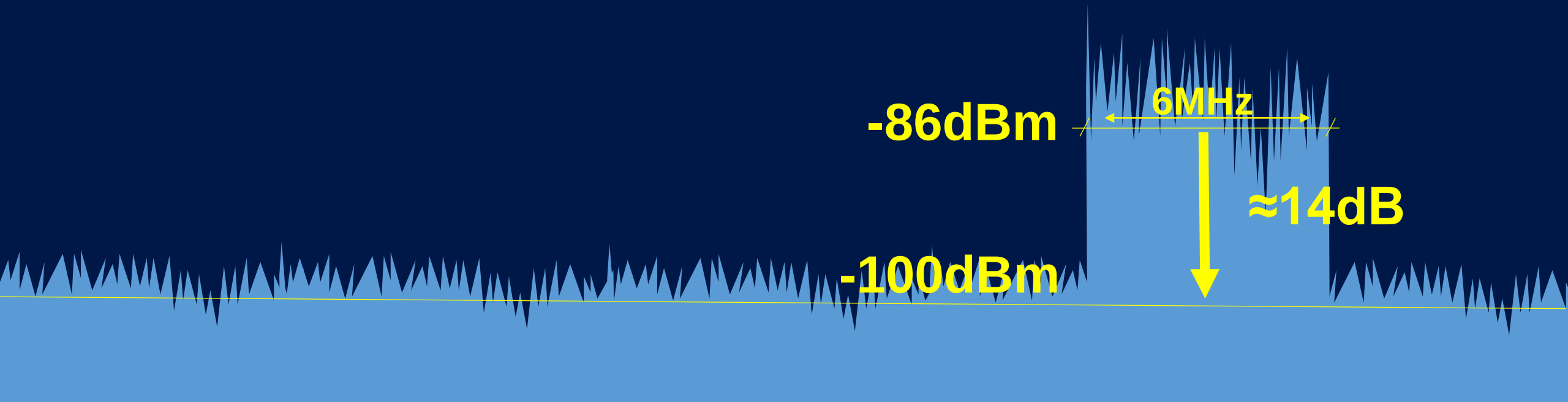
Evaluated Antennas. Gain (2/2)



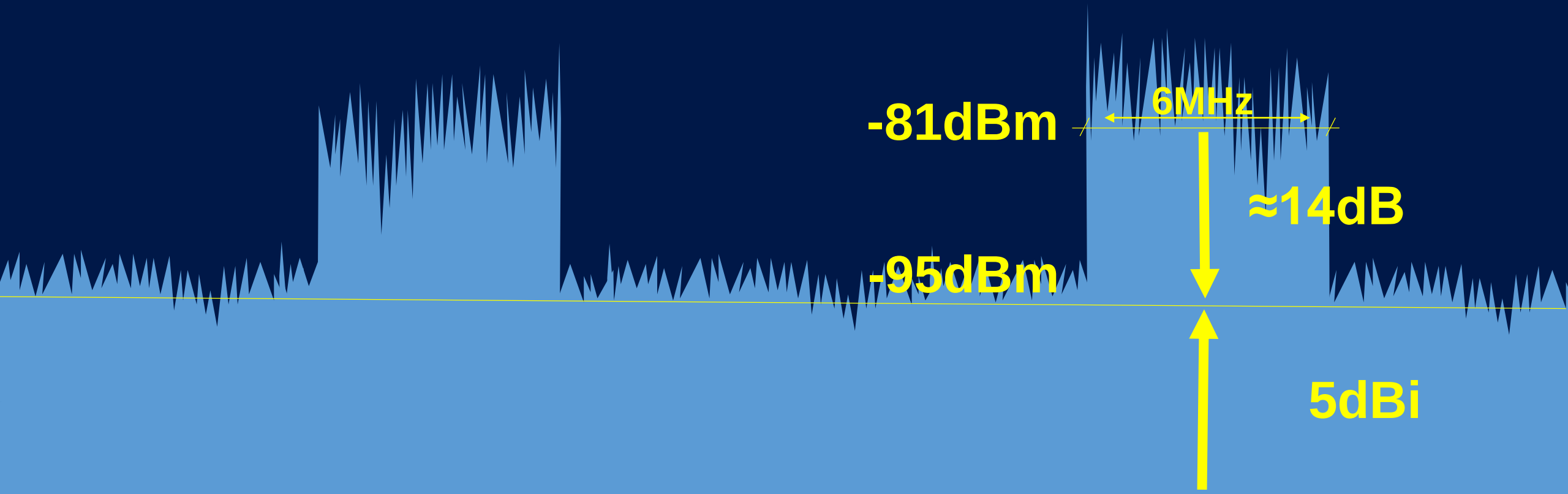
Signal To Noise Ratio [S/N] in DTMB



S/N in DTMB signal with Rayleigh



Gain of Antennas

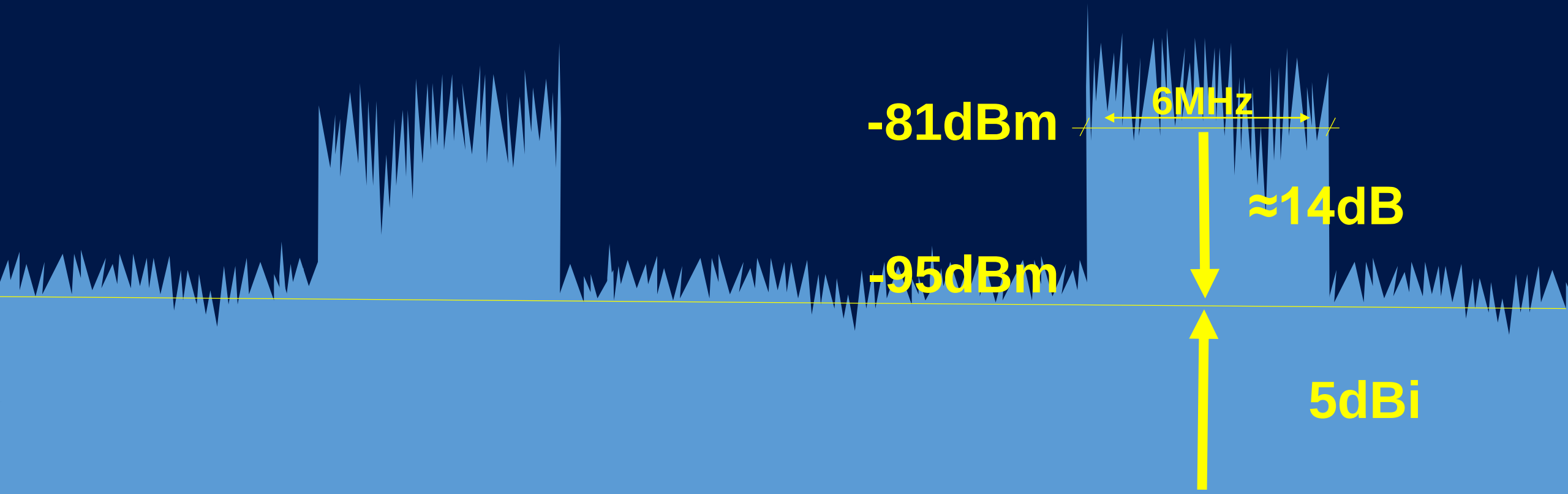


Noise Factor (1/2)

- Are measures of degradation of the signal-to-noise ratio (SNR), caused by components in a radio-frequency (RF) signal chain. It is a number by which the performance of an amplifier or a radio receiver can be specified, with lower values indicating better performance

> 3dB

Noise Factor (2/2)



Noise Factor (2/2)

Topics

1 Problematic Situation of TV reception in Cuba

2 Actual Situation about receiver antennas

3 Conclusions

Conclusions

- The LPV345HV antenna has the better technical characteristics in the market.
- Cuba users need a practical antenna design to receive a DTV signal with good signal quality, but the booster isn't the solution.

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Problematic Situation of TV signal in CUBA. Future work proposal

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