PHOTONIC NETWORKS LABORATORY
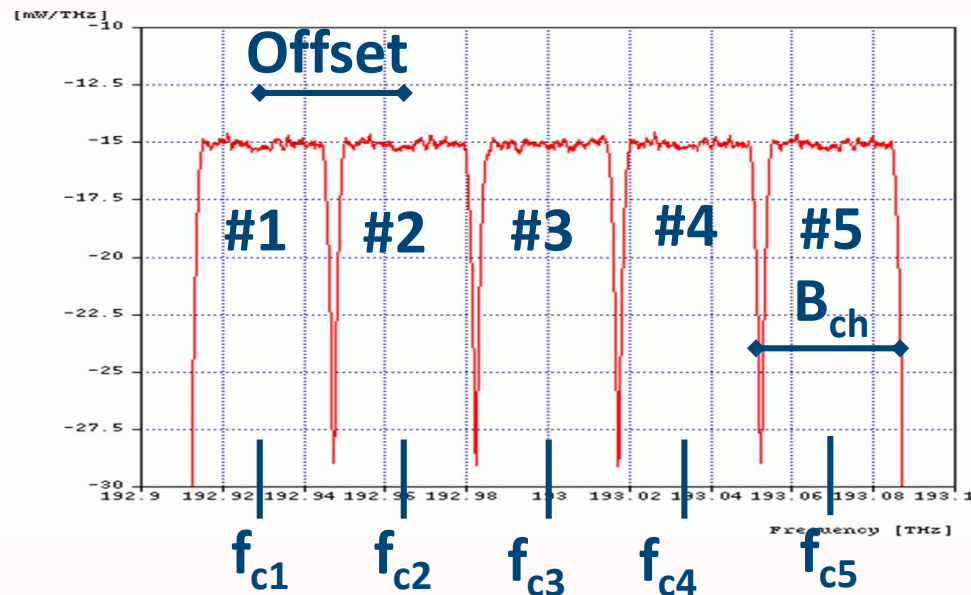
SPECTRAL INFORMATION AND CARRIERS

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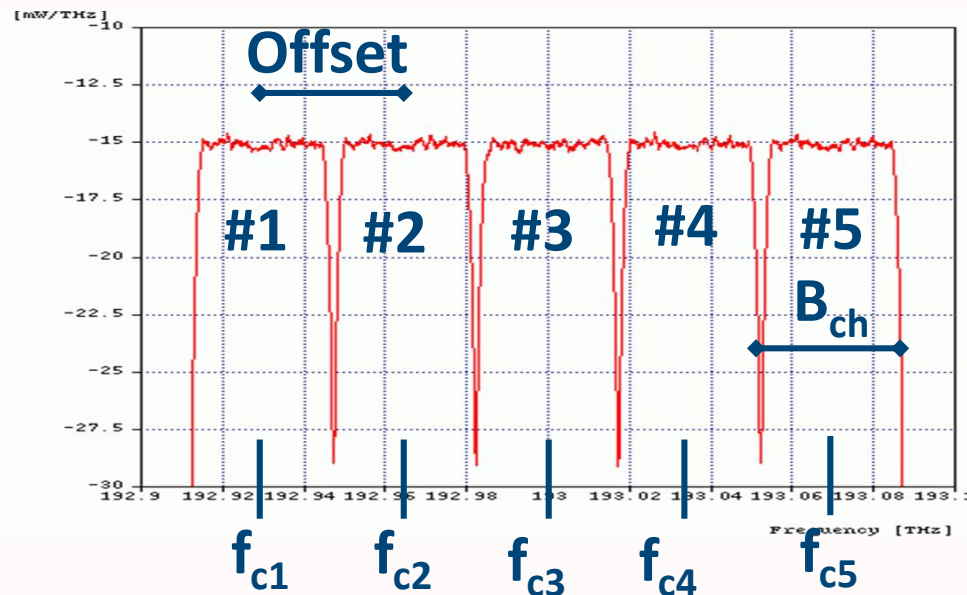
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OPTCOM

A wavelength division multiplexed (WDM) comb is a combination of all the transmitted channels sharing the same medium frequency multiplexed.

SPECTRAL INFORMATION AS WDM COMB

Spectral information: the WDM comb containing an attribute 'carriers' that is a list of objects called 'carrier'.

Carrier: the signal channel composing the comb

Carrier **attributes**:

- number: an integer identifying the n-th channel
- frequency: the central frequency of the channel
- bandwidth: the -3 dB bandwidth of the channel
- power: an object with the following attributes:
    - signal: the power of the signal
    - ase: the amplified spontaneous emission (ASE) noise power generated by amplifiers within the band of the signal
    - nli: the nonlinear interference (NLI) power caused by signal propagation in fibers