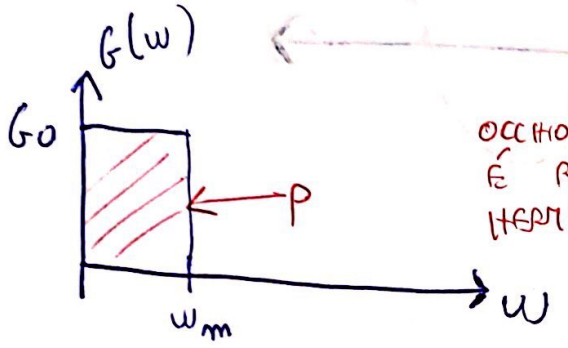
# ES 4 (POTENZA FINITA 2)

INVERSO ALL'ES. 3 → DA $G(w)$ A $\varphi_x(\tau)$

↑ MONOLATERA!



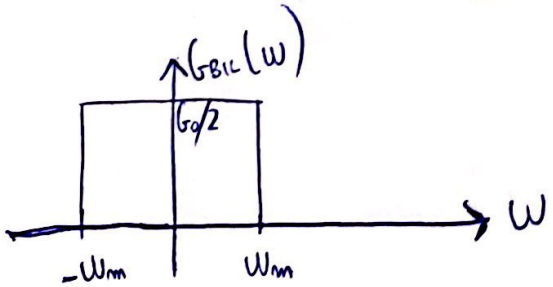

OCCHIO! PER $w<0$ ESISTE ED È RIPRODUCIBILE PER SIMMETRIA HERMITIANA

$$G(w)=\begin{cases} G_0 & 0\le w\le w_m \\ 0 & w>w_m \end{cases}$$

AWGN = ADDITIVE WHITE GAUSSIAN NOISE

- CONVIENE RIPORTARSI AD UNO SPETTRO BILATERO

$$G_{BIL}(w)=\begin{cases} G_0/2 & 0\le |w|\le w_m \\ 0 & |w|>w_m \end{cases}$$

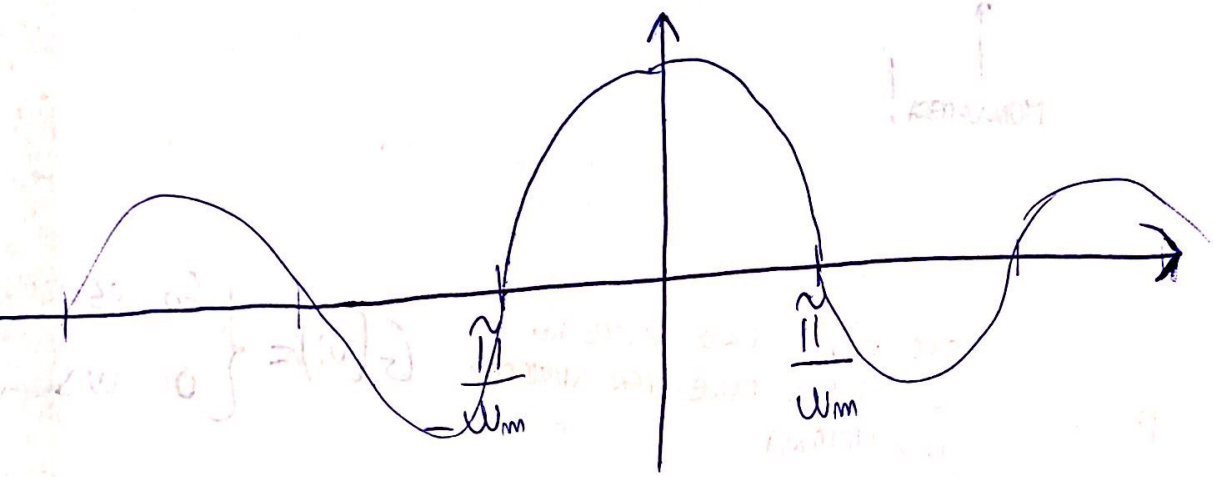



$$\varphi_x(\tau)=F^{-1}\left[2\pi G_{BIL}(w)\right]=2\pi\,\frac{G_0 w_m}{2\pi}\,\frac{\sin w_m\tau}{w_m\tau}$$

P AREA SOTTESA!

$\rightarrow \varphi_x(\tau) = P \dfrac{\operatorname{sen} \omega_m \tau}{\omega_m \tau}$

(CON $\omega_m$ GRANDE SI STRINGE FINO A DIVENTARE UNO SPILLO)




oss. $|\varphi_x(\tau)| \leq \varphi_x(0) = P$