

**Input:** time series  $X$ , signal estimate  $\tilde{S} = 0$ ,  
 $\Omega^* = \{\}$

**Parameters:**  $L_1, L_2 \in (1, N)$ ,  
 $T_0 \in [0, 1]$ ,  $\delta > 0$

Testing hypothesis of signal absense in  $X - \tilde{S}$   
using MC-SSA( $L_1$ )

$H_0$  is not rejected

**Output:** signal  
estimate  $\tilde{S}$

$H_0$  is rejected

Determining the maximum significant  
frequency  $\omega^*$ ,  $\Omega^* \leftarrow \Omega^* \cup \{\omega^*\}$

New signal estimate  $\tilde{S}$  using SSA( $L_2$ ) applied  
to series  $X$ : leading components with

$T(\cdot; \omega - \delta, \omega + \delta) > T_0, \omega \in \Omega^*$

