Algorithm 1: : Self-Corrected EML-MAP

1 **for** $i : 1\ to\ I_{max}$ **do**
2   Décodage SISO_1 EML-MAP
3   **if** $j>4$ **then**
4   **foreach** $k \in K$ **do**
5   **if** $sgn\left(\mathbf{L_{12}^{e}}^{(j)}(k)\right) \neq sgn\left(\mathbf{L_{12}^{e}}^{(j-1)}(k)\right)$ **then**
6 $\mathbf{L_{12}^{e}}^{(j)}(k) \leftarrow 0$
7   Décodage SISO_2 EML-MAP
8   **if** $j>4$ **then**
9   **foreach** $k \in K$ **do**
10   **if** $sgn\left(\mathbf{L_{21}^{e}}^{(j)}(k)\right) \neq sgn\left(\mathbf{L_{21}^{e}}^{(j-1)}(k)\right)$ **then**
11 $\mathbf{L_{21}^{e}}^{(j)}(k) \leftarrow 0$

Algorithm 2: : Correction Impulse Method (CIM)

1 $(\mathbf{L}, \hat{\mathbf{d}}) \leftarrow$ Turbo Décodage EML-MAP($\mathbf{y^s}$, $\mathbf{y^p}$, $\mathbf{y'^p}$)
2 $\mathbf{idx} \leftarrow$ Trie selon valeurs croissantes($\mathbf{L}$)
3 Sauvegarde($\mathbf{y^s}$)
4 $j \leftarrow 0$
5 **while** $j < L\ et\ \texttt{CRCheck}(\hat{\mathbf{d}}')\ ==false$ **do**
6   Restauration($\mathbf{y^s}$)
7 $\mathbf{y^s}[\mathbf{idx}[j]] \leftarrow (-1)^{\hat{d}} \times d_{min}$
8 $\hat{\mathbf{d}}' \leftarrow$ Turbo Décodage EML-MAP($\mathbf{y^s}$, $\mathbf{y^p}$, $\mathbf{y'^p}$)
9 $j \leftarrow j + 1$

Algorithm 3: : Forced Symbol Method, identification sur oscillation (OFSM)

1 $(\mathbf{L}, \hat{\mathbf{d}}, \mathbf{osc}) \leftarrow$ Turbo Décodage EML-MAP($\mathbf{y^s}$, $\mathbf{y^p}$, $\mathbf{y'^p}$)
2 $\mathbf{idx} \leftarrow$ Trie selon valeurs decroissantes($\mathbf{osc}$)
3 Sauvegarde($\mathbf{y^s}$)
4 $j \leftarrow 0$
5 **while** $j < 2 \times L\ et\ \texttt{CRCheck}(\hat{\mathbf{d}}')\ ==false$ **do**
6   Restauration($\mathbf{y^s}$)
7 $\mathbf{y^s}[\mathbf{idx}[j]] \leftarrow (-1)^{j\ mod\ 2} \times d_{min}$
8 $\hat{\mathbf{d}}' \leftarrow$ Turbo Décodage EML-MAP($\mathbf{y^s}$, $\mathbf{y^p}$, $\mathbf{y'^p}$)
9 $j \leftarrow j + 1$