TABLE I. Average execution time (in seconds) over 5 runs for scalar and vectorial field propagation using Rayleigh-Sommerfeld (RS, VRS) and Chirped z-transform (CZT, VCZT) in *Diffractio* and *our approach*. GPU times reflect the second run with pre-compiled jitted functions.

| | CPU | | | |
|---|---|---|---|---|
| | RS | CZT | VRS | VCZT |
| *Diffractio* | 4.14 | 1.91 | 12.33 | 6.17 |
| *Our approach* | **2.39** | **1.39** | **5.22** | **4.04** |

| | GPU | | | |
|---|---|---|---|---|
| | RS | CZT | VRS | VCZT |
| *Diffractio* | / | / | / | / |
| *Our approach* | **0.006** | **0.027** | **0.151** | **0.075** |