

FALAPHEL Silicon Photonics WP: Status + Roadmap

- **X-rays irradiation campaigns** performed in Padova between end of April to mid June 2023
 - Tested devices up to 1.2 Grad(SiO₂) TID:
 1. 4x shallow-etch Mach-Zehnder modulators (different doping patterns)
 2. 1x SiGe EAM (imec), 1x RM (imec), 1x folded Mach-Zehnder
 - Extensive results will be presented at next FALAPHEL general meeting (27 June 2023)
- X-rays irradiation for **EO RF bandwidth characterization** initially planned for the end of June 2023
 - Packaged MZMs to be irradiated are still being characterized and setup non completely ready yet
 - Campaign might undergo a *re-scheduling*
- 2024 goal: final FALAPHEL demonstrator submission: **PICv3** (half-block). Tentative timeline:
 1. [Day0] PICv2 (design submitted in Nov 2022) delivery
 2. [Day0 + 3 months] PICv2 testing for test structures characterization
 3. [Day0 + 6 months] PICv3 tape-out (only structures for RM-based 4-WDM)