



Contribution ID: 189

Type: **Oral presentation (in person)**

## Modeling and Design of the SLAC 75XP4 Klystron

*Wednesday, 10 July 2024 16:30 (30 minutes)*

The SLAC 75XP series klystron was developed in the late nineties / early 2000's as a 60% efficient, 75 MW permanent magnet-focused klystron at X-band for the Next Linear Collider (NLC). SLAC is pursuing the latest design iteration of the 75XP series –the 75XP4 - for potential deployment in future colliders facilities like Cool Copper Collider. Here, we discuss the history and lessons learned from the initial 75XP klystrons (75XP1 through 75XP3 series). Recent design modifications for the 75XP4 and simulation results will be discussed. Finally, a status update of SLAC's current efforts to build and test an improved 75XP4 version will be presented.

### Apply for poster award

**Primary authors:** HAASE, Andy; SY, Ann; WEATHERFORD, Brandon; GERENAN, Don; JONGEWAARD, Erik; MERRICK, Julian; OTHMAN, Mohamed; DOLGASHEV, Valery (SLAC National Accelerator Laboratory)

**Presenter:** WEATHERFORD, Brandon

**Session Classification:** Applications

**Track Classification:** Accelerator: Applications