

## FIRST OBSERVATION OF THE 61.5 NM SEEDED FEL AT THE SCSS TEST ACCELERATOR

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### *Abstract*

A seeded FEL is the most promised way to generate fully coherent radiation in a short-wavelength region. After the improvement of the laser and HHG system at the SCSS test accelerator, we have succeeded the amplification of the seed, for the first time, in the plateau region. The wavelength of the seed is 61.5 nm, which is the 13th harmonic of a Ti:Sa laser, and clear intensity increase and spectral narrowing by the FEL was observed. Although there still remains room for optimization of the transverse matching and synchronization of the seed, this result leads to realization of a fully coherent light source to users in VUV and soft x-ray regions.

**CONTRIBUTION NOT  
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