Abstract Submitted
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Discovering strong-field quantum physics using the CoReLS 4 PW laser[1] BJOERN MANUEL HEGELICH[2], University of Texas, Austin, HYUNG TAEK KIM, Center for Relativistic Laser Science, Institute of Basic Science, South Korea, LANCE LABUN, OU ZHANG LABUN, University of Texas, Austin, SEONG KU LEE, CHANG HEE NAM, Center for Relativistic Laser Science, Institute of Basic Science, South Korea — At the Center for Relativistic Laser Science we have commissioned the worlds most intense laser, with a 4 PW and 1.5 PW beam. It has demonstrated an intensity of $I¿10^{23}W/cm^2, the highest intensity to date. At those intensities any interaction with matter involves physics at$
$field effects that motivate fundamental research with high$ –
$intensity lasers. We plan to experimentally validate the theory as the first laboratory probe of quantum effects$

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