

# Joint CQSE and CASTS Seminar

Weekly Seminar  
Mar. 20, 2015 (Friday)

TIME Mar. 20, 2015, 14:30 ~ 15:30  
TITLE Journey of exploring the 8s state of atomic cesium: quantum interference, direct comb laser spectroscopy and application  
SPEAKER Prof. Wang-Yau Cheng  
Department of Physics, National Central University  
PLACE Rm716, CCMS & New Physics Building, NTU

## Abstract

Absolute frequencies of the cesium atom 6S-8S Doppler-free transitions offer an excellent basis for testing fundamental principles in physics, such as the parity non-conservation calculation and possible quark mass variation using the feature of heavy cesium nucleus. In my talk, I will present our contributions on the energy of 8s state by several approaches, including a novel two-photon interference scheme, the narrowest - linewidth direct comb laser spectroscopy, and so on. Our works also have drawn the attention of metrology people, hence were highlighted at the bulletin of Optical Society of America, (Spotlight on Optics, 2013).

