



**Theoretical and Physical Chemistry Institute
National Hellenic Research Foundation**

Vass. Constantinou 48, Athens

LECTURE

“Ultracold gases of strontium for quantum simulation”

Dr. Georgios Siviloglou

**Institute of Physics,
University of Amsterdam,
The Netherlands**

Thursday, December 21, 2017, 12:00

Seminar room, ground floor, NHRF

Ultracold gases of strontium for quantum simulation



UNIVERSITEIT VAN AMSTERDAM

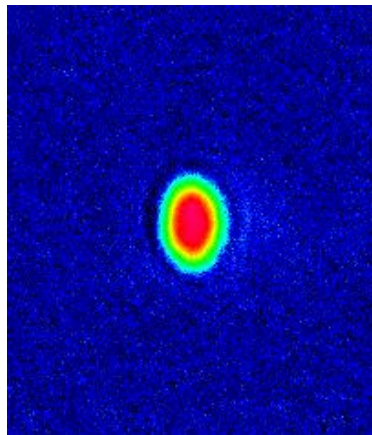
Georgios Siviloglou

Institute of Physics – University of Amsterdam



Strontium as an alkaline-earth element has two electrons in its outer shell and consequently it possesses a number of very broad, very narrow, and ultra-narrow optical transitions. These transitions make it ideal for extremely efficient laser cooling and the atom of choice in the world's most accurate clocks.

I will be presenting a new experiment in which we produce Bose-Einstein condensates and degenerate Fermi gases of strontium with the immediate goal to perform quantum simulation of strong magnetic fields and the prospect to realize a quantum gas microscope that can detect single-atoms with sub-micrometer resolution.



Bose-Einstein condensate of ^{84}Sr