

**Friday, November 3, 2017**

**4:10 – 5:00 PM**

**Optical cryocoolers: from physical principles to functional prototypes**

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**Abstract:**

Optical refrigeration is a technique for cooling a solid without any moving parts or fluids. Special crystals cool by absorbing laser light at one frequency and re-emitting light at higher average frequencies; this is known as anti-Stokes fluorescence. This talk will describe the physics of optical refrigeration, the material science issues in getting to cryogenic temperatures and the challenges in adapting this technology for functional, vibration-free cryocoolers.

**Host: Bennett Link**

**Sponsored by NASA EPSCoR**

*\* Refreshments served in the Barnard Alcove opposite Barnard 258 at 3:45 \**