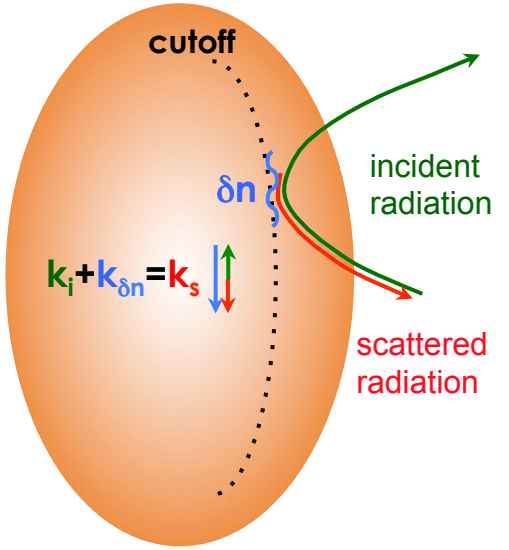
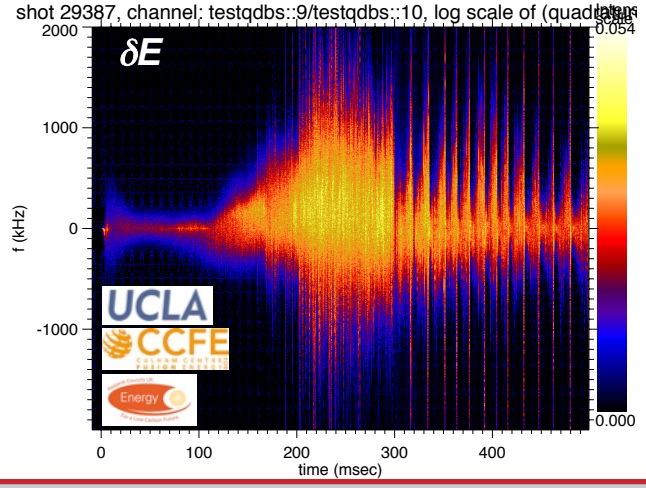
UCLA & MAST collaborating to implement Doppler Backscattering on MAST for M9 campaign

- DBS measures plasma flow (yielding E_r) and intermediate-k turbulence near cutoff
- Working with Dr. Jon Hillesheim at MAST
- Q-band and V-band systems shipped to MAST in April 2013
  - 16 channels, 30 – 75 GHz; cutoffs @1 – 7 x 10^{13} cm^{-3} in O-mode
  - can be configured for DBS or reflectometry
- Systems bench tested & installed June 2013
- Initial DBS data looks promising
  - TAEs observed via DBS (bottom) & Reflectometry





42.5 GHz backscattered microwave spectra:
***E* = *A*exp(*iϕ*)**