CCDs vs Blue QE

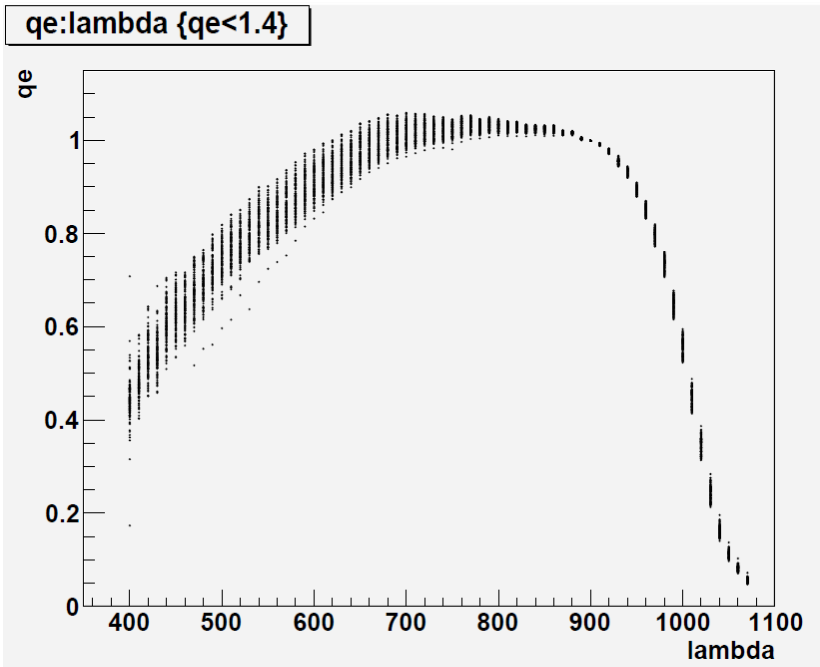
- Donna Kubik asked me to identify the CCDs that have the best QE in the blue. I think she wants to study one in the lab at FNAL.
- I have a root-tuple of the QE vs λ for science grade CCDs that Wyatt and I made a couple of years ago.
  - DES cluster /home/s1/diehl/DES/ccd_index/qetuple
  - See docdb 5410
- I opened it and did some simple things to identify CCDs with good QE in the blue.

HTD

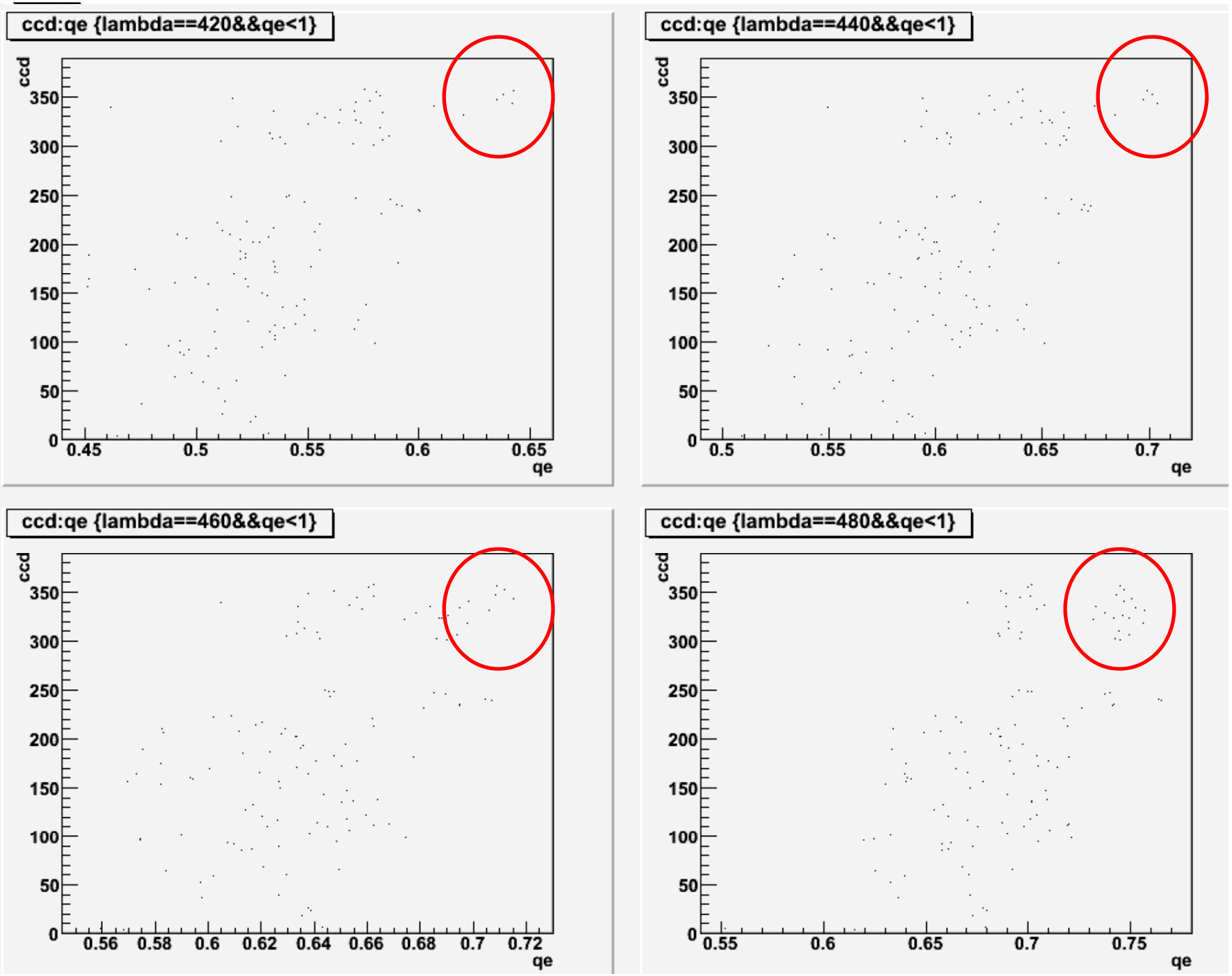
February 10, 2013

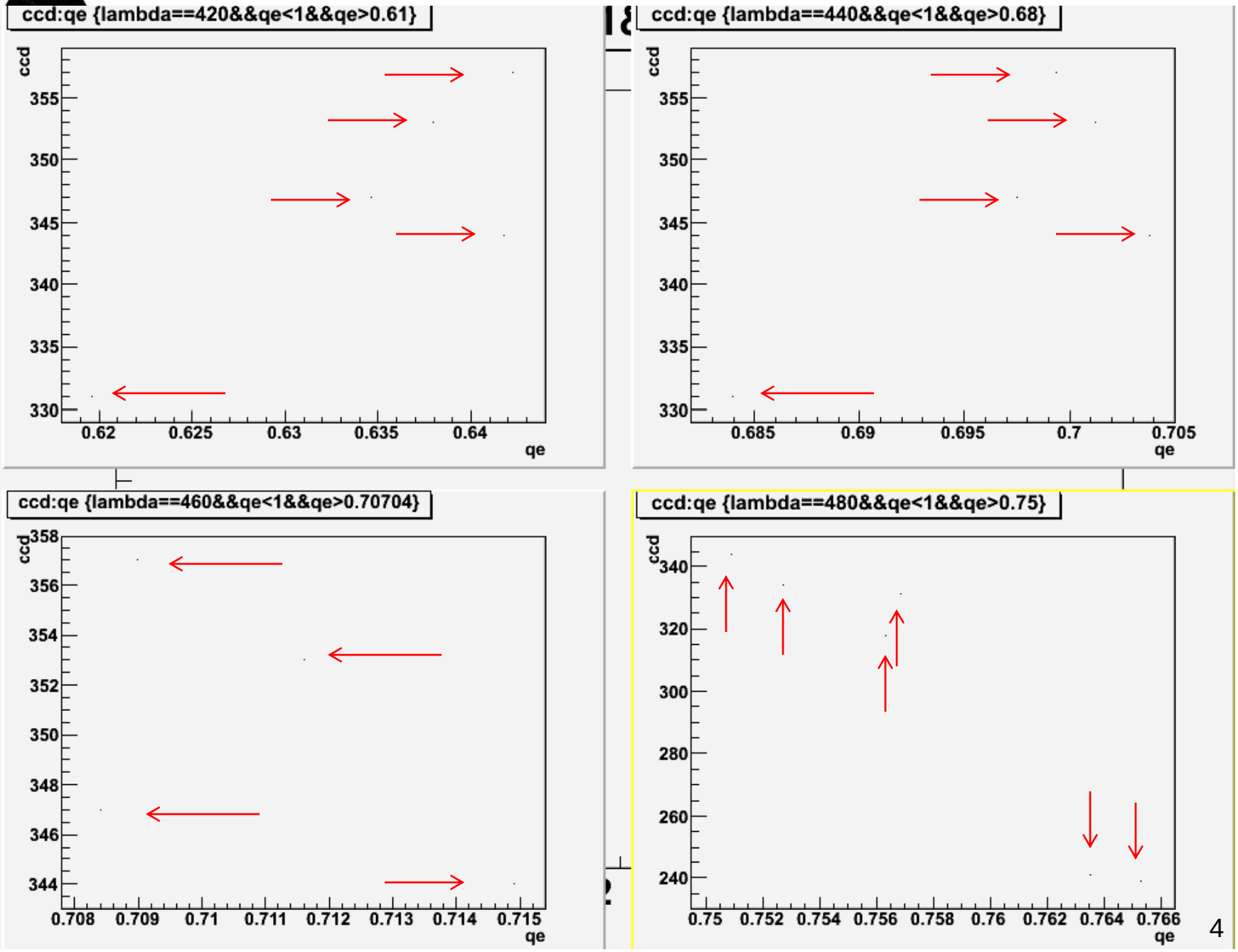
CCDs vs Blue QE

- Caveats about the data
  - see docdb 5410.
  - The main thing to understand is that all the data for an individual CCD is set to 1 at 900 nm. The rest of the info for each CCD is relative to that.
- Procedure
  - Open the root-tuple and identify the CCDs with the best QE at a few low wavelengths
    - Ignore the endpoint, 400 nm
  - See next slides



123/124 CCDs


ccd:qe {lambda==420&&qe<1}
ccd
qe
ccd:qe {lambda==440&&qe<1}
ccd
qe
ccd:qe {lambda==460&&qe<1}
ccd
qe
ccd:qe {lambda==480&&qe<1}
ccd
qe



I apologize that you have to squint to find the small dots

CCDs vs Blue QE

- It appears that CCDs produced and measured near the end of the process reported higher QE in the blue.
- They repeat as highest QE in more detailed plots 1:4 on slide 4
- CCDs (S3-*)
  - 420 nm: 331, 344, 347, 353, 357
  - 440 nm: same
  - 460 nm: 344, 347, 353, 357
  - 480 nm: different ones from above
- Donna: Pick S3-331, 344, 347, 353, or 357
- Caveat Emptor