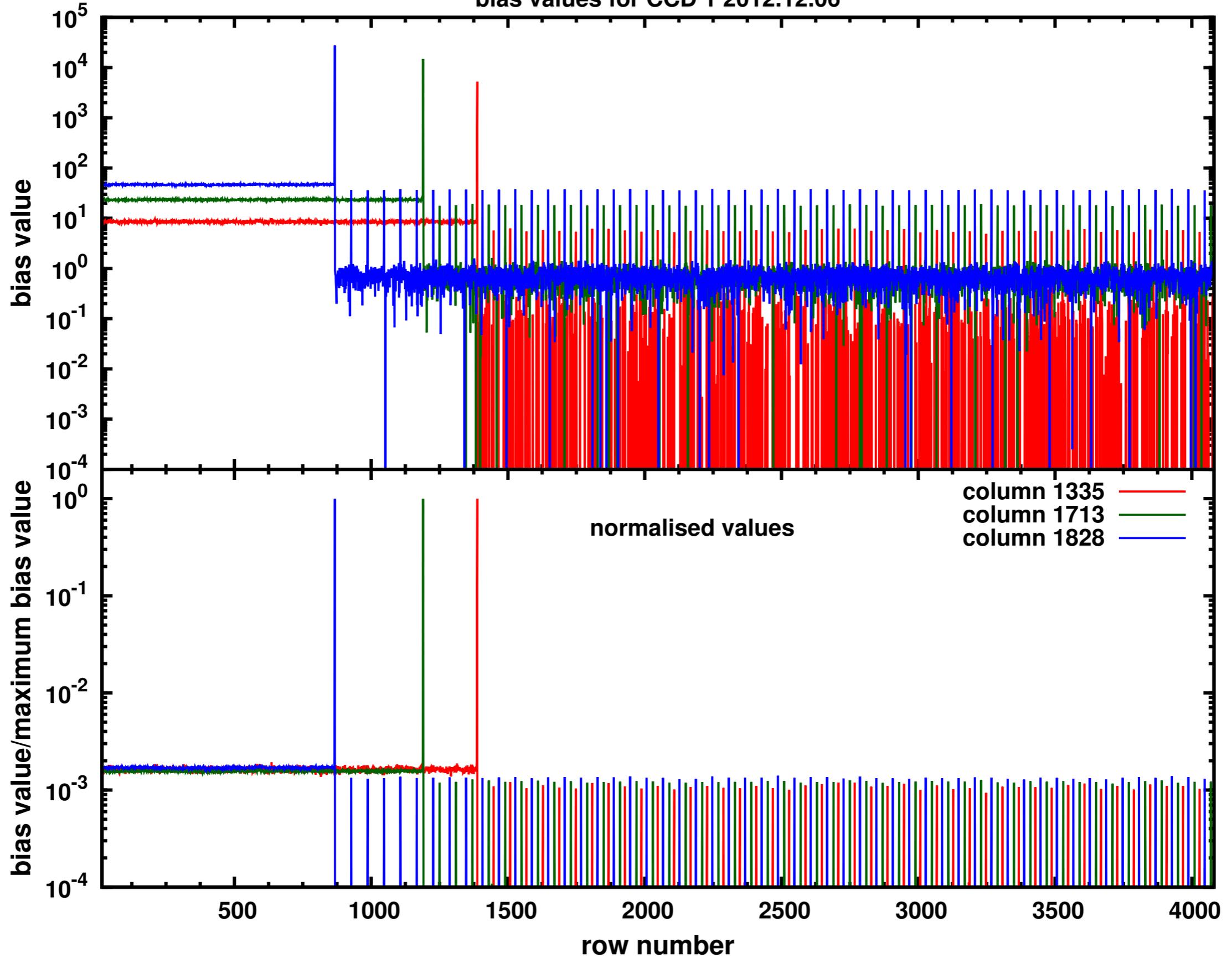


## Bad pixel mask

- Bad columns observed in reduced images are sharp, mostly one-columned white or black line. It can be visible along the whole length of the CCD or just part of it. They all seem to be caused by pixels with very high counts in the bias image.
  - Column containing a “bad” pixel in the bias image shows:
    - the bad pixel has a very high value (100s - 10000s), can be located anywhere;
    - the rows preceding the bad pixel show a value 0.1% of the bad pixel every 60th row (cross talk?);
    - the rows succeeding the bad pixel constantly shows a value 0.1% of the bad pixel.
- > make a bad pixel mask based on the bias

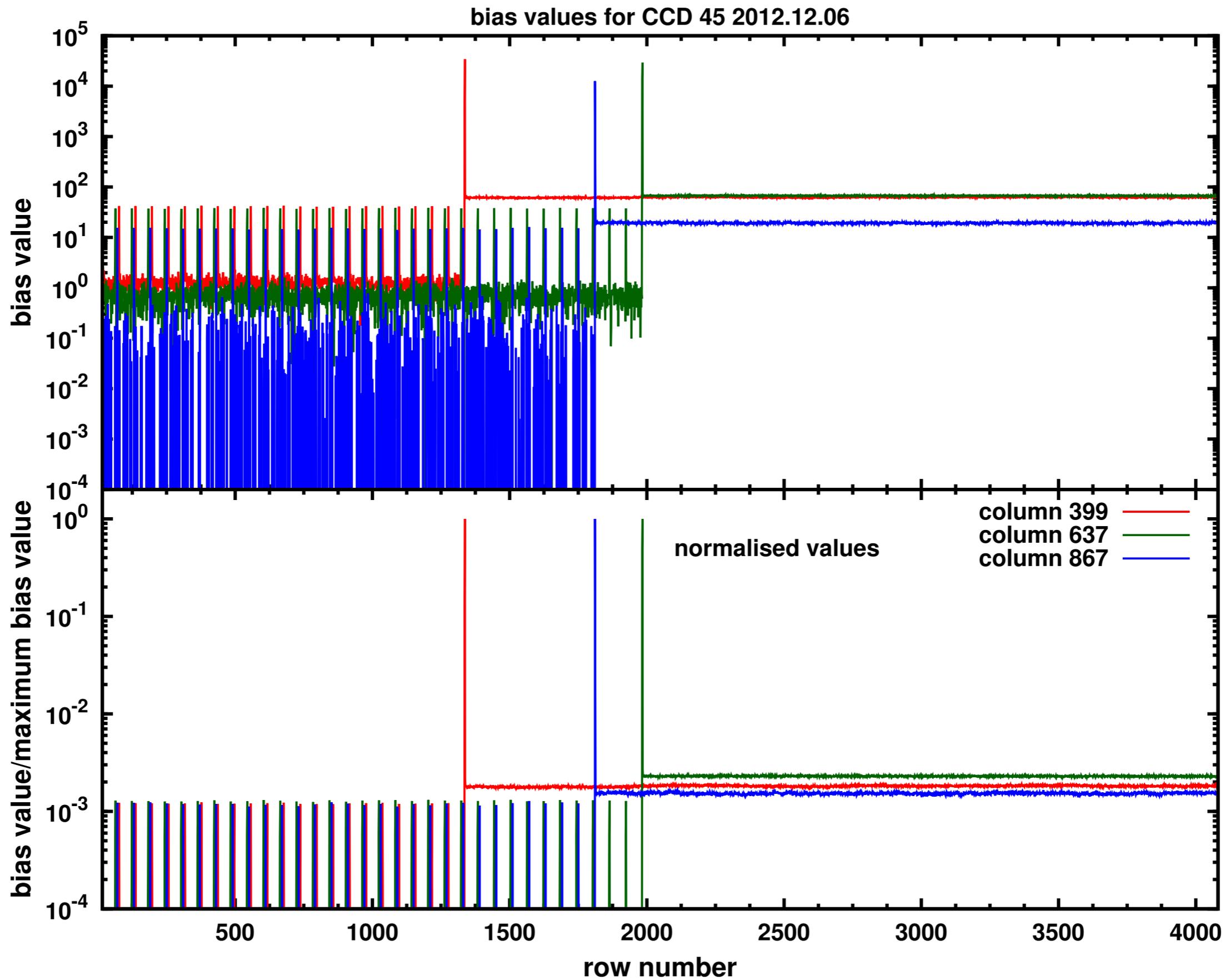
bias values for CCD 1 2012.12.06



readout ends

← readout direction

readout starts



In making a bad pixel mask, we use the corrected bias & flats and implemented the following:

- mask the entire column which contains hot pixel(s) in the bias.
- majority logic: stack up 10 or 20 nights of corrected bias & flats and require "N" instances of a pixel being out of tolerance before we add it to the bad pixel mask.
- parameters used:
  1. flatmin = 0.5; pixels with less than 50% response are bad - very rare.
  2. flatmax = 1.5; pixels with more than 150% response are bad - very rare if the edges are masked.
  3. biasmax = 500; level for flagging bad columns.
  4. edgesize = 15; mask 15 pixels.