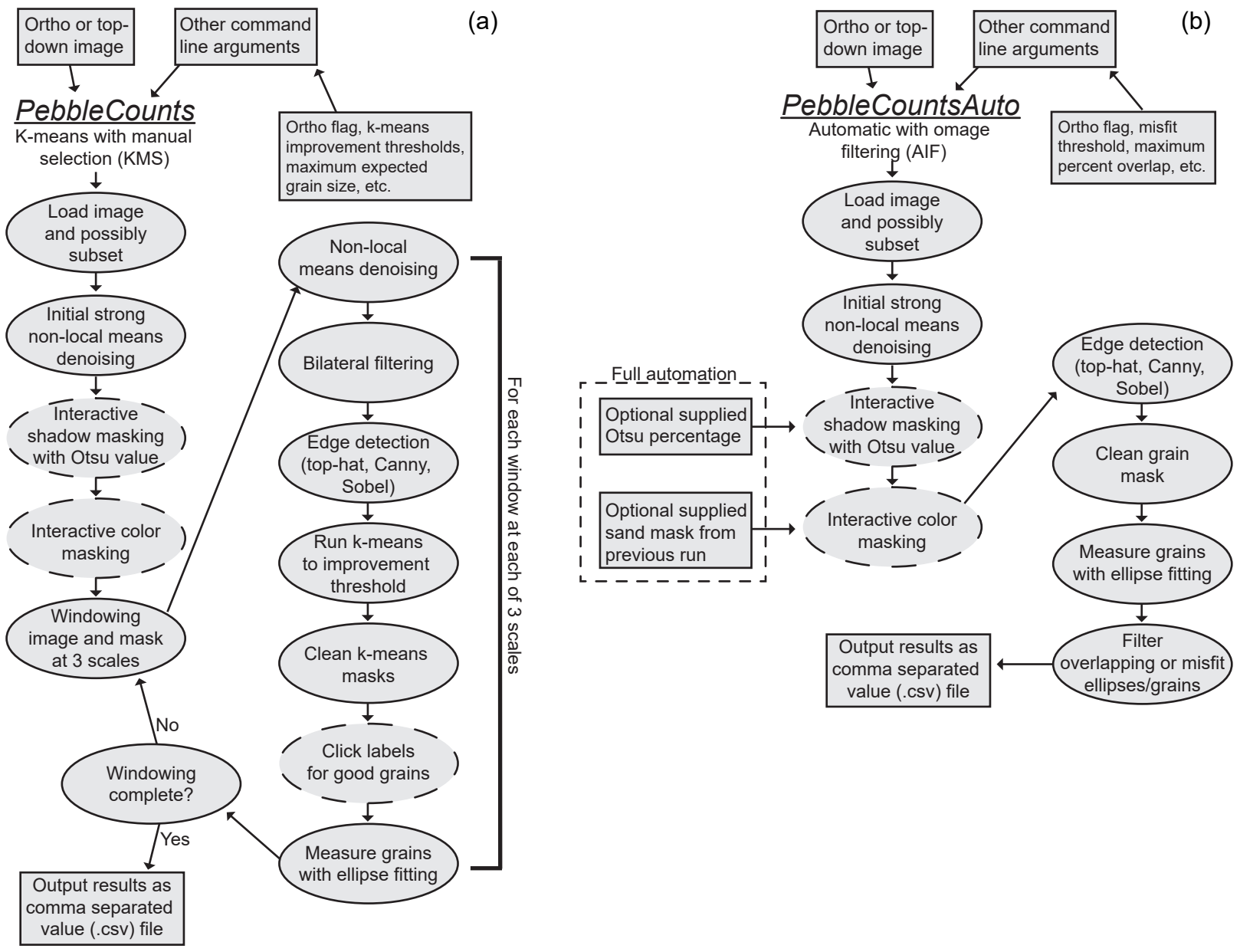
(a)
Ortho or top-down image
Other command line arguments
PebbleCounts
K-means with manual selection (KMS)
Ortho flag, k-means improvement thresholds, maximum expected grain size, etc.
Load image and possibly subset
Initial strong non-local means denoising
Interactive shadow masking with Otsu value
Interactive color masking
Windowing image and mask at 3 scales
No
Windowing complete?
Yes
Output results as comma separated value (.csv) file
Non-local means denoising
Bilateral filtering
Edge detection (top-hat, Canny, Sobel)
Run k-means to improvement threshold
Clean k-means masks
Click labels for good grains
Measure grains with ellipse fitting
For each window at each of 3 scales
(b)
Ortho or top-down image
Other command line arguments
PebbleCountsAuto
Automatic with omage filtering (AIF)
Ortho flag, misfit threshold, maximum percent overlap, etc.
Load image and possibly subset
Initial strong non-local means denoising
Full automation
Optional supplied Otsu percentage
Optional supplied sand mask from previous run
Interactive shadow masking with Otsu value
Interactive color masking
Edge detection (top-hat, Canny, Sobel)
Clean grain mask
Measure grains with ellipse fitting
Filter overlapping or misfit ellipses/grains
Output results as comma separated value (.csv) file