Burst detection paper

General workflow

Prove Humans are good ground truth for burst detection through simulation

Identify algorithms used for burst detection. Do all hyperparam optimization on test data.

Finally test algorithms on human selections we want the algorithms to estimate.  
  
Planned in Slack:

 Use human selections (probabilistic and consensus) to establish ground truth on real signals.

Comments: This sounds good. I'd argue that human selections shouldn't be considered ground truth and we should just look at alignment/agreement/overlap between humans vs algorithms. But this is a minor point that only matters when writing, e.g. analysis won't change just the interpretation.

 Find who in the lab did the best at burst detection so Dr. V can give them a prize. (practically done, just need to tie names to the scores)

 Write a package/script that can derive the metrics we'll use to compare burst detection algorithms

 For each algorithm we test, write a socket function that finds the algorithm's optimal hyperparameters, runs burst detection, and returns their selection.

 For each algorithm, compare algorithmic burst detection results against human ground truth.

Goal for today (01/13):

Demonstrate/Use a socket/pipeline that I could use on two algorithms.

Let the algorithms be two of: specparam, yolov11, lagged coherence, fbosc+specparam.