limit is 2000 characters (including spaces).

Karen (and Ione): I think that I liked Ione's shorter title ☺ In my view, short is good. And, as for the point of low contrast…. I think it is still true that we don't know if it is the low contrast or the high coherence which leads to the different bandwidths found. We can speculate later (at the conference) about why low contrast may be the culprit.

And, I did make a few changes below (see the green print).

Also, I have seen other abstracts where they combine the results & conclusions together (like Ione did).

Ione-

The abs is currently 2144 characters. I think we can easily take out the first sentence of the results, because it's not necessary really. It will also be very easy to continue to nip and tuck to get it within limits. Although I did not change it bback, I think it would have been nice to keep the point that it's "all about low contast" because the tuning is broader at 1) low fixed lum contrasts and 2) high coherence, where lum contrasts are low. The way you changed the wording, that point is lost. Since it's really all the same data set (coherence and contrast plotted together, like you did), can't we just make the wording clear that the broadening happens at low contrast somehow? Also, do you think it's ok to not have a clear "conclusion" written?

CONTRAST, COHERENCE AND DIRECTIONAL TUNINGEFFECTS OF LUMINANCE CONTRAST AND COHERENCE ON DIRECTIONAL TUNING

((C.M. Anderson, I. Fine, K.R. Dobkins)) Psychology Dept., UC San Diego, La Jolla, CA

Purpose: Previous psychophysical (e.g., Ball & Sekuler, 1980; Raymond, 1993) and neurophysiological studies (e.g., Ball & Sekuler, 1980; Albright, 1984; Snowden et al. 1991; Britten & Newsome, 1998) have reportted that thebroad directional tuning of motion mechanisms is broad, with bandwidths ((i.e., widths at half height) that have ranginged from 70°-120° (e.g., Ball & Sekuler, 1980; Albright, 1984) depending on the study. At least In motion area MT, neurons, this direction tuning is also largely invariant across a variety ofwith coherence levels (Britten & Newsome, 1998). . Here, Ww e measured directional tuning psychophysically by having subjects detect global motion across a wide range of motion coherence and luminance contrast levels.

Methods: A 2-IFC procedure was employedused;, in which the 'noise' interval contained randomly moving dots and the 'signal' interval contained noise plus a proportion of two superimposed fields of coherently moving dots, while the 'noise' interval contained a field of randomly moving dots. We tested 7 angular differences between the directions of the two dot fields∂ in the signal interval (deltad=0°, 22.5°, 45°, 67.5°, 90°, 135°, and 180°). Subjects reported which interval contained signal. For 3 subjects Ww e obtained two types of thresholds for 3 subjects:: (1) *coherence thresholds,* obtained by varyingwhere the proportion of dots moving coherently in the 'signal' interval was varied., Coherence thresholds were obtained for several fixed luminance contrasts (rms, 3.2 – 30.2%) and (2) *luminance contrast thresholds,* obtained by varyingwhere the contrast of all the dots was varied. Coherence thresholds were obtained for several fixed luminance contrasts (3.2 – 30.2%), and Ccontrast thresholds were obtained for several fixed coherence levels (20 – 100%). Thresholds for a given intersection of contrast and coherence did not depend on whether coherence was fixed and contrast varied,

or vice versa. Directional tuning bandwidths were ~~obtained~~ calculated by fitting Gaussian functions to threshold ratios (~~i.e.,~~ threshold for deltad~~=~~0° / thresholds for the other ~~d~~deltas~~s~~) plotted as a function of deltad~~.~~ ~~.~~

Results and Conclusion~~s: s~~ ~~Subjects' thresholds for a given intersection of dot contrast and coherence did not depend on whether the threshold was determined by fixing coherence and varying contrast, or vice versa.~~ We found that directional tuning had a b~~B~~andwidth~~s~~ of 60-70° that was ~~were found to be~~ nearly invariant across a wide range of luminance contrasts ~~(60-70°),~~ and coherence levels, including contrasts and coherences for which ~~, even at levels~~ MT responses saturate~~that saturate the responses of area MT neurons (Britten & Newsome, 1998; Sclar et al., 1990)~~. However, we found ~~However~~ broader tuning, ~~was broader~~of ~~(~~~110-120°, ~~)~~ at ~~the~~ the intersection of very lo~~w~~~~west~~ contrasts (< 4%) and high~~hest~~ coherences (> 45%) ~~tested~~.

CR:~~ None.~~ Supported by NIH Grant EY12153~~ (KRD).