Fig. 1 Distribution of Overlap Index (n=192)
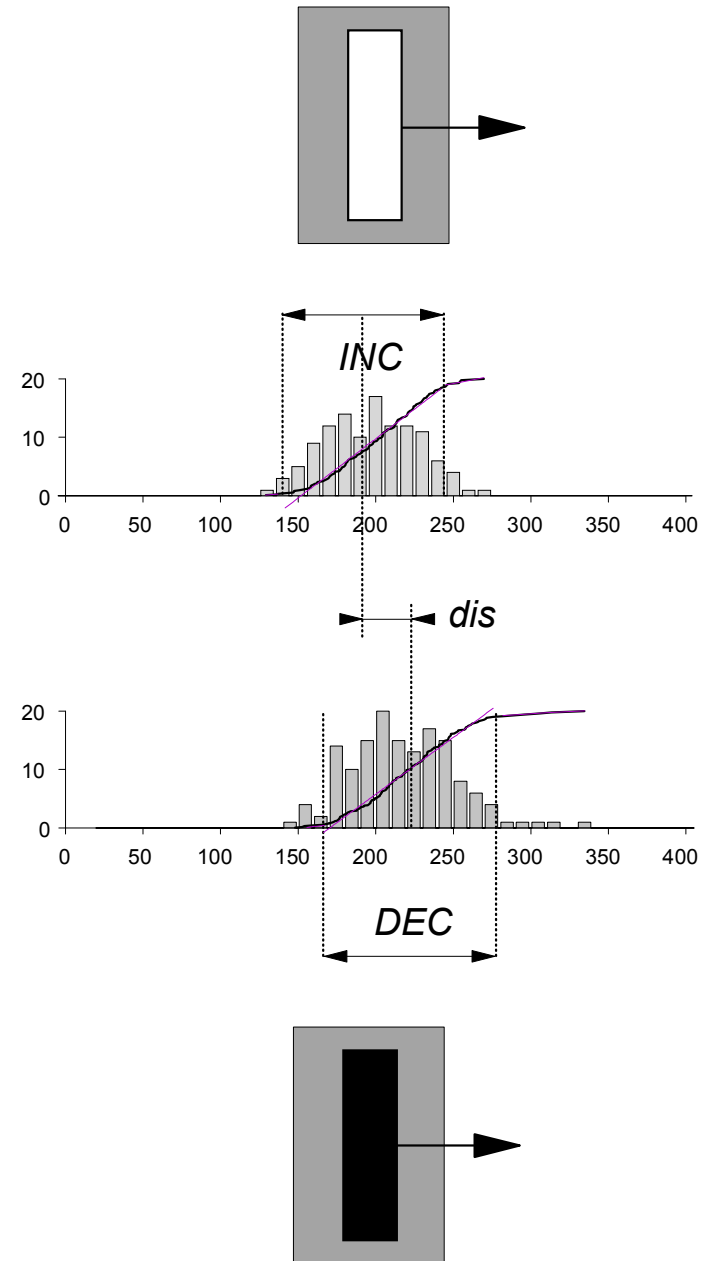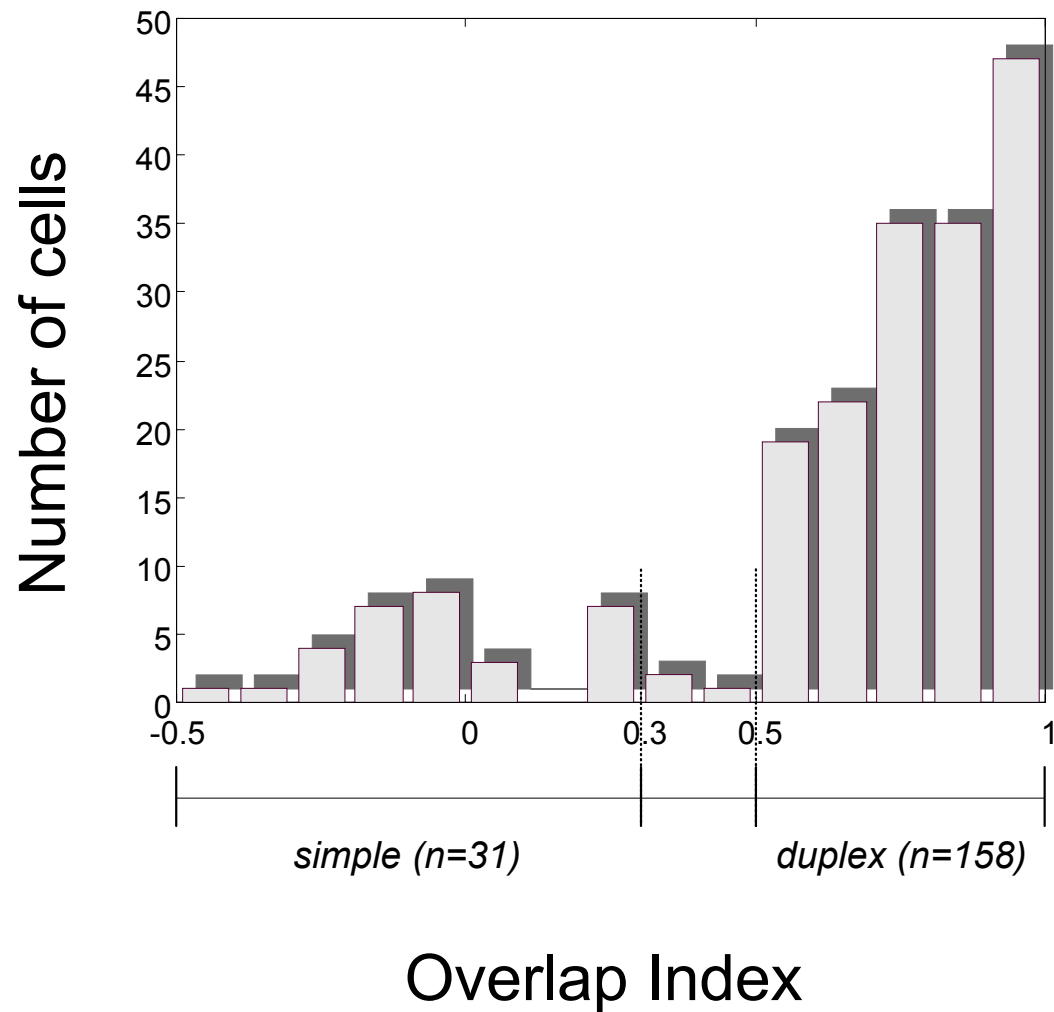
Fig. 2 Subunits AR width *vs.* OI (n=192)
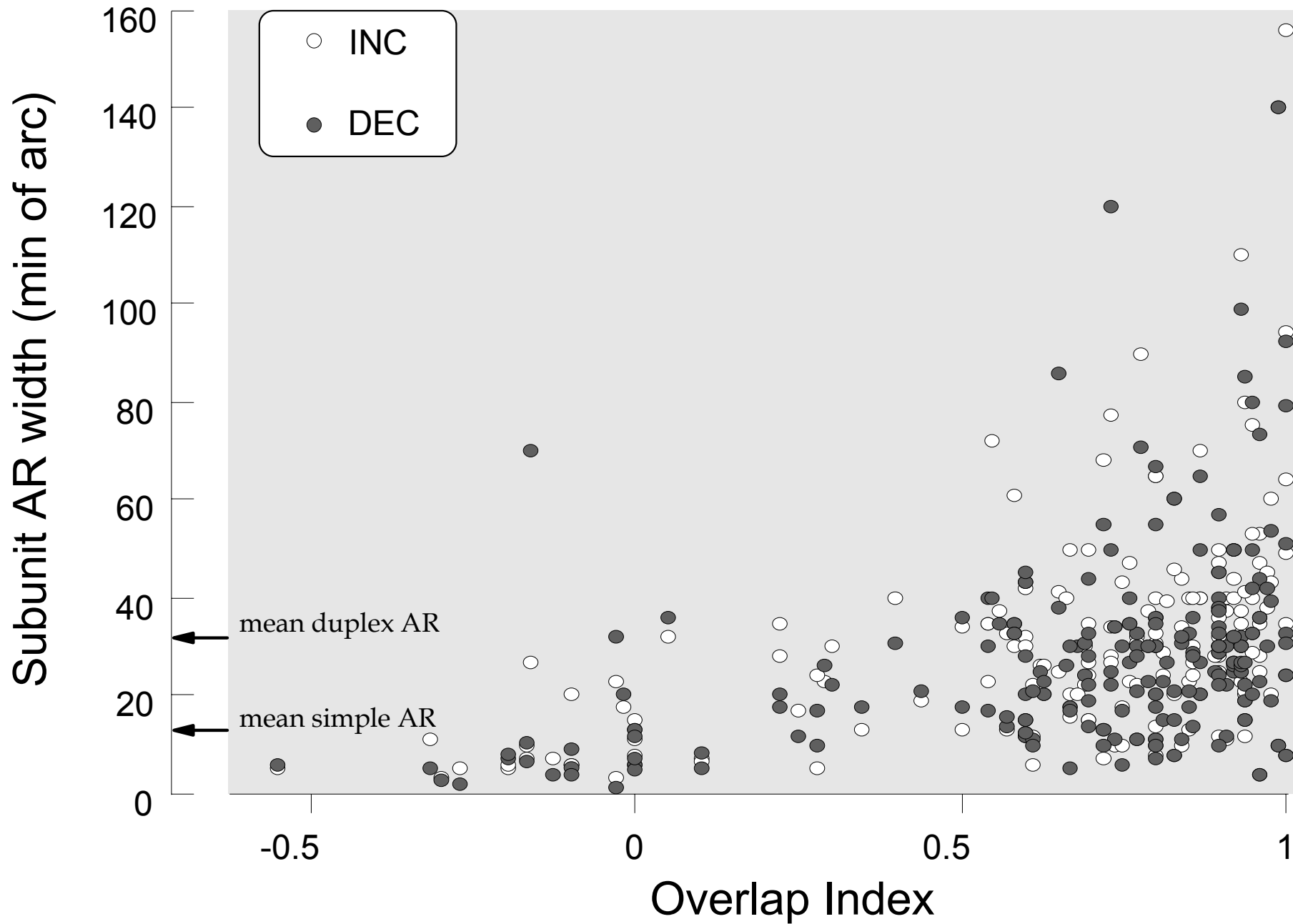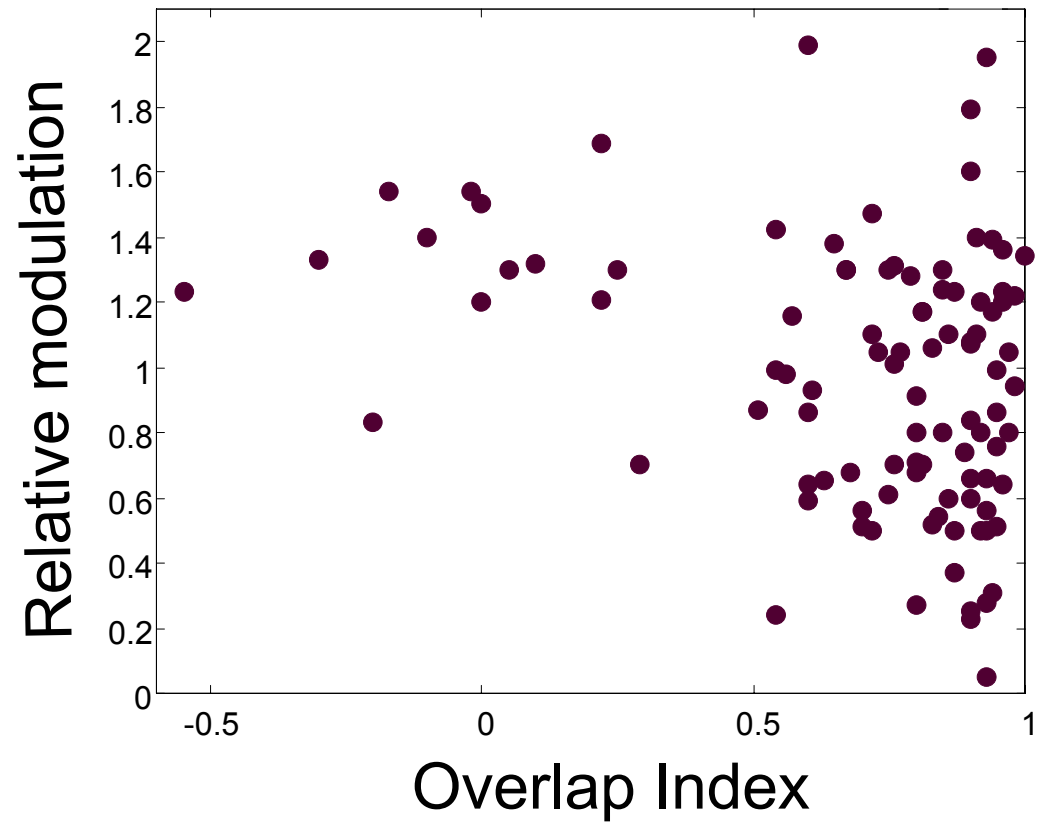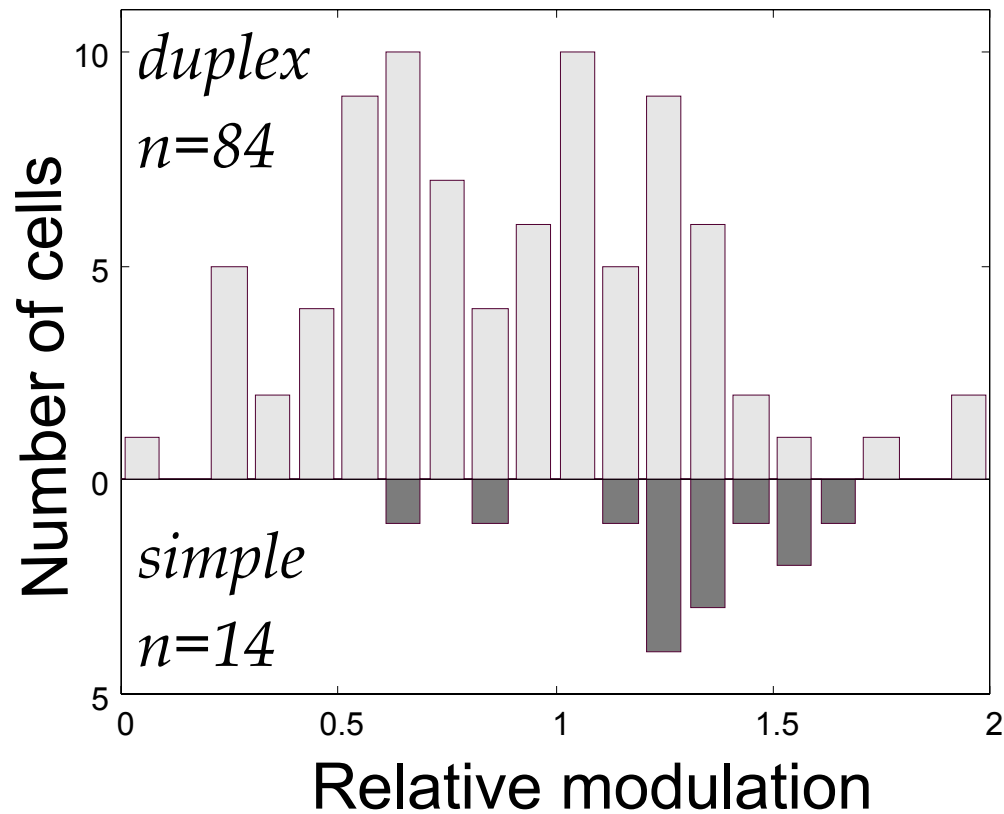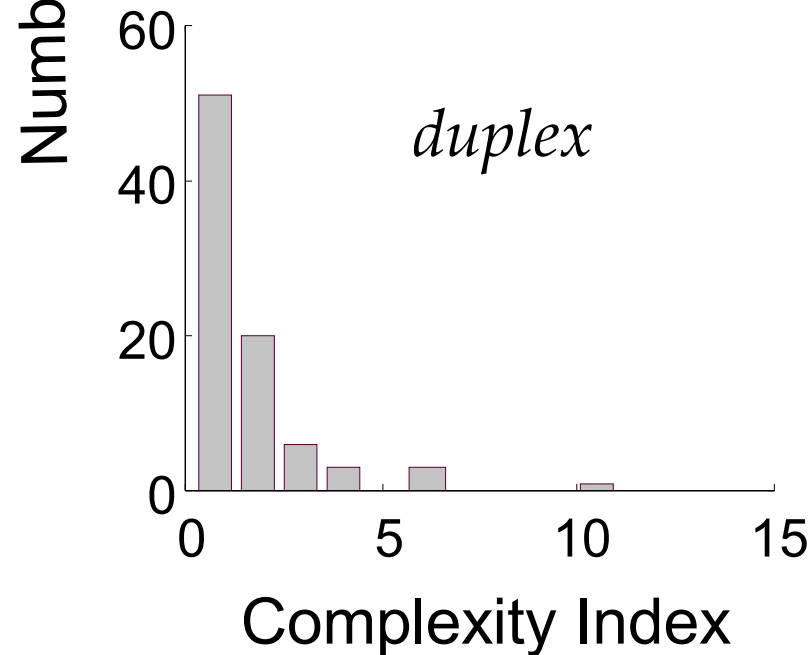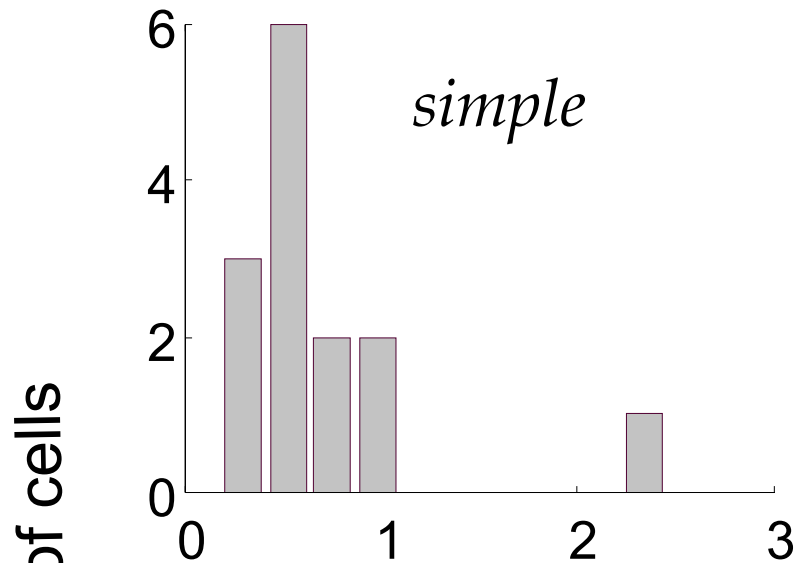
Fig. 3 Distribution of cells with regard to modulation of the response to drifting grating

Relative modulation (RM) is defined as:

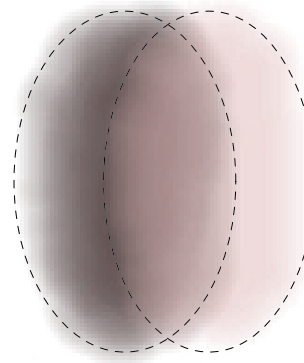$$RM_1 = \frac{AC_1}{DC - DC_{spont.}}$$

Fig. 4 "Complexity Indices" Distribution

simple

duplex

Number of cells

Complexity Index

Complexity index is defined as ratio of mean subunit AR width to grating bar width:

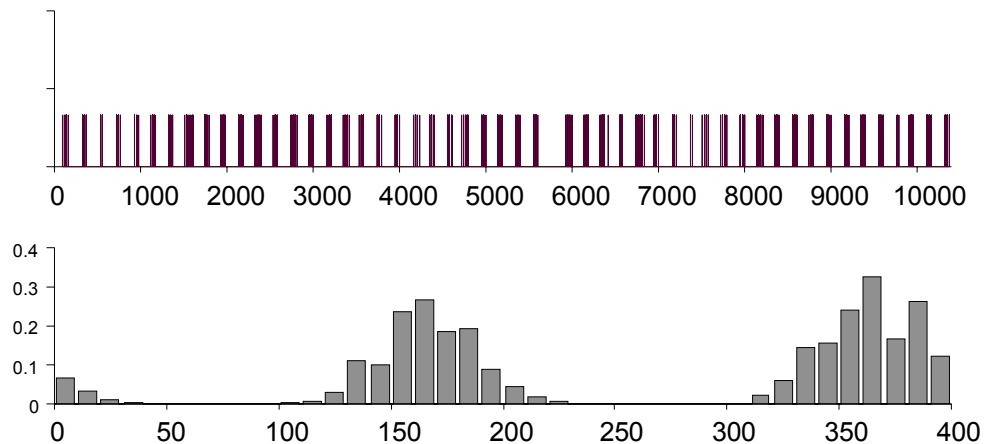$$CI = \frac{0.5(INC + DEC)}{grating\ half\ period}$$
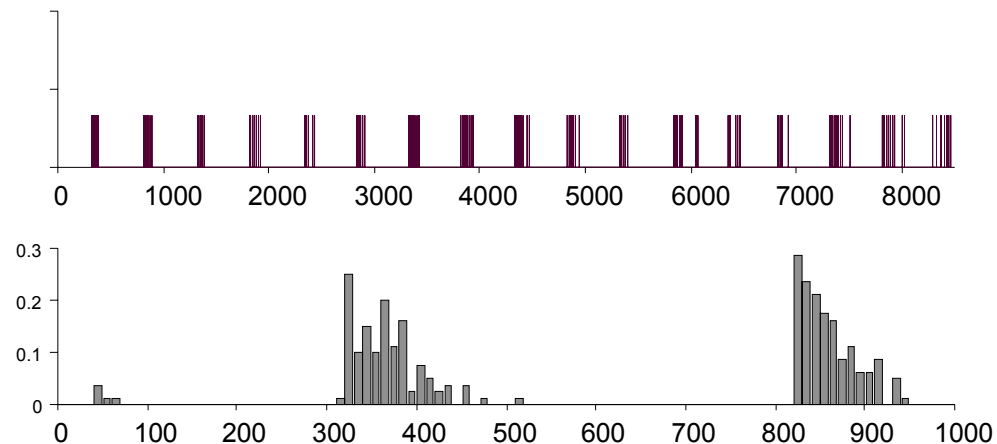
```
mean AR 30'
grating 1 cpd
CI 1
```

Fig. 5 Simple cell (10982). OI = -0.17, AR = 14', BD 0 spk/s

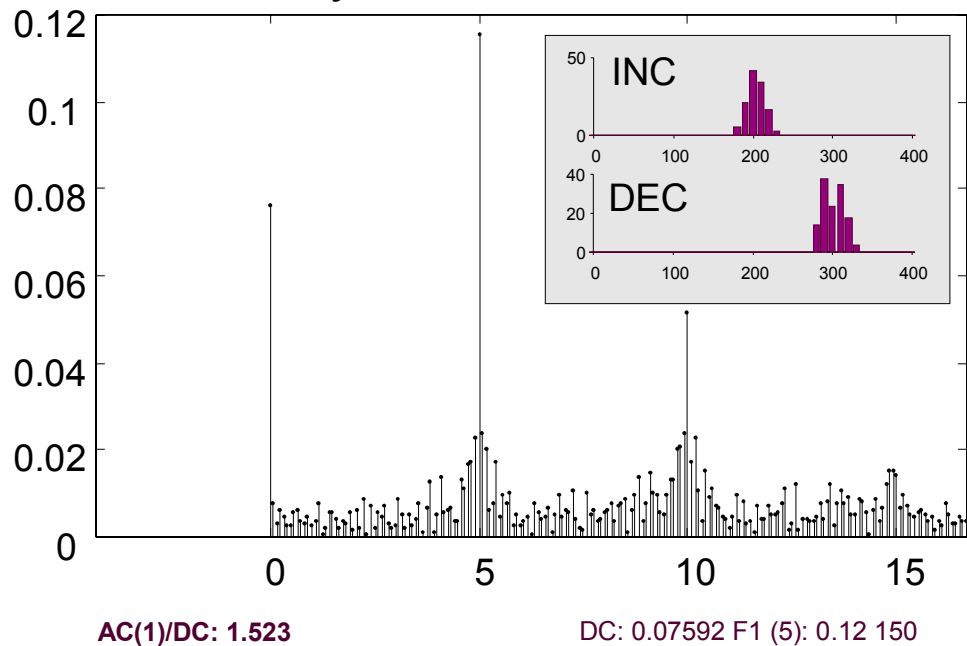*Drifting Sine, Window 62', SF 2 cpd, TF 5 Hz*

Counterphase Sine, Window 62', SF 2 cpd, TF 2 Hz

Time (ms)
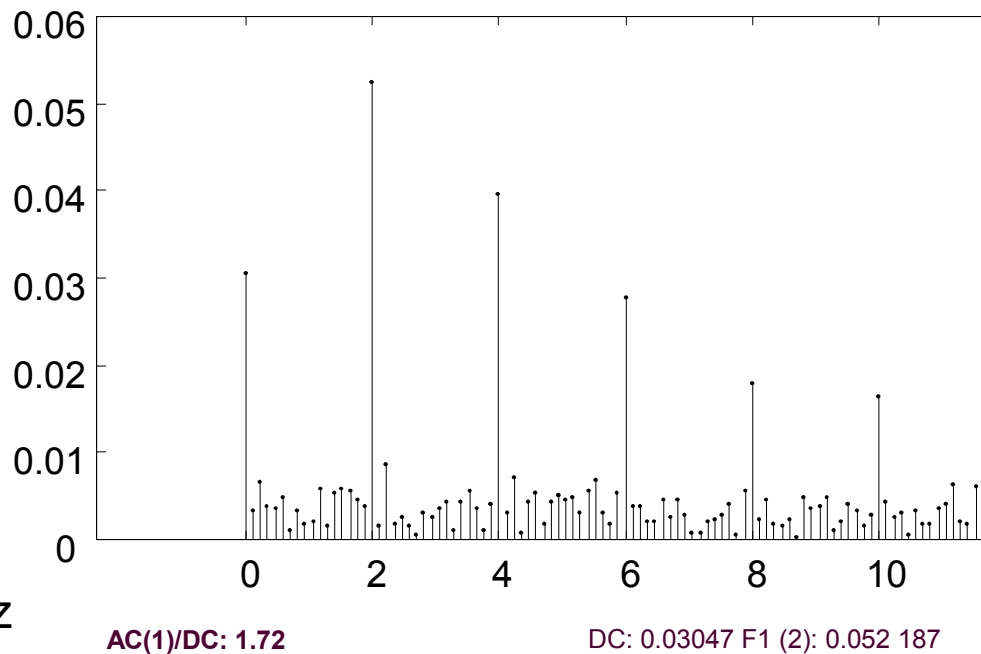
Harmonic analysis

RM = 1.52

INC

DEC

Hz

AC(1)/DC: 1.523   DC: 0.07592 F1 (5): 0.12 150
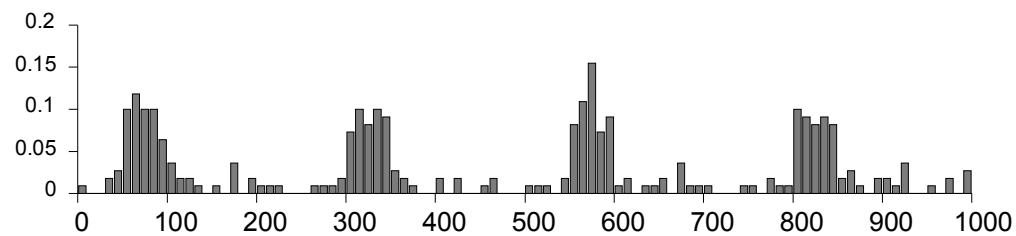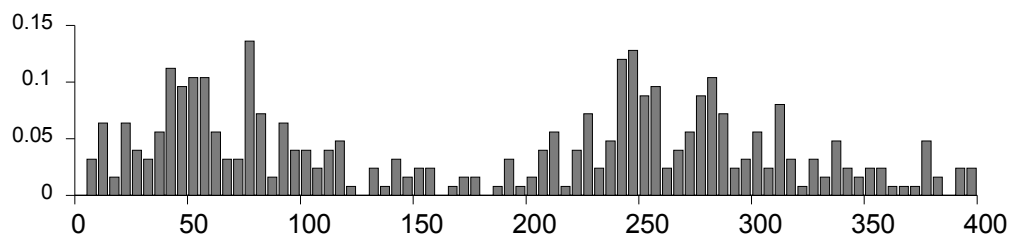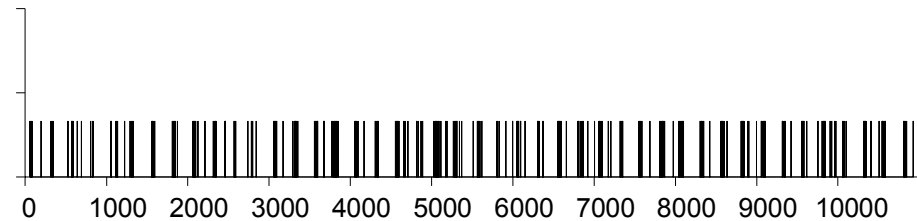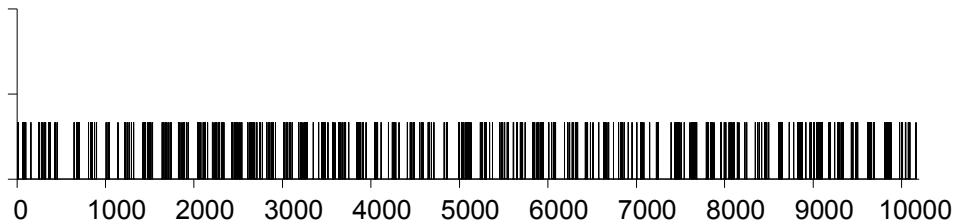
AC(1)/DC: 1.72   DC: 0.03047 F1 (2): 0.052 187

Fig. 6 Duplex cell (22883). OI = 0.95, AR = 51', BD 7 spk/s

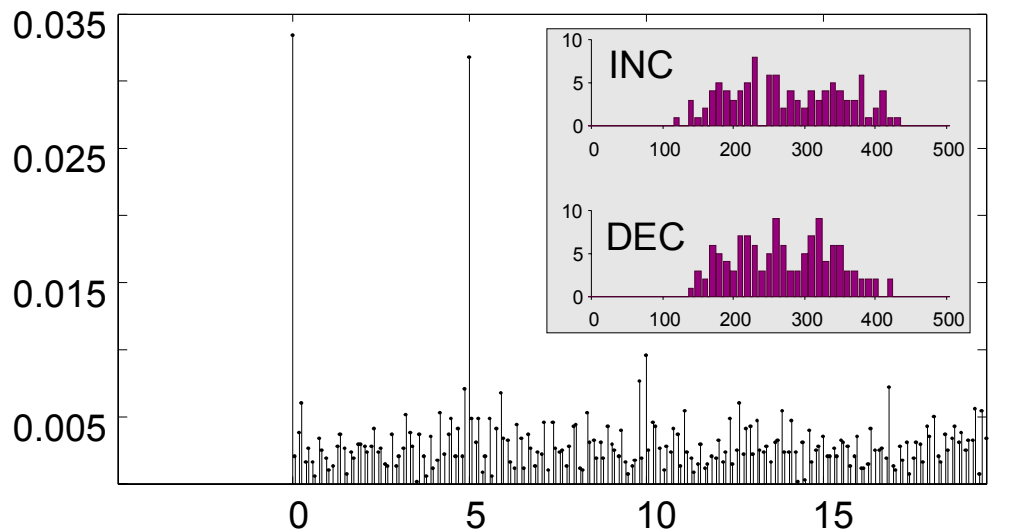*Drifting Sine, Window 52', SF 1 cpd, TF 5 Hz* *Counterphase Sine, TF 2 Hz, Window and SF varied*

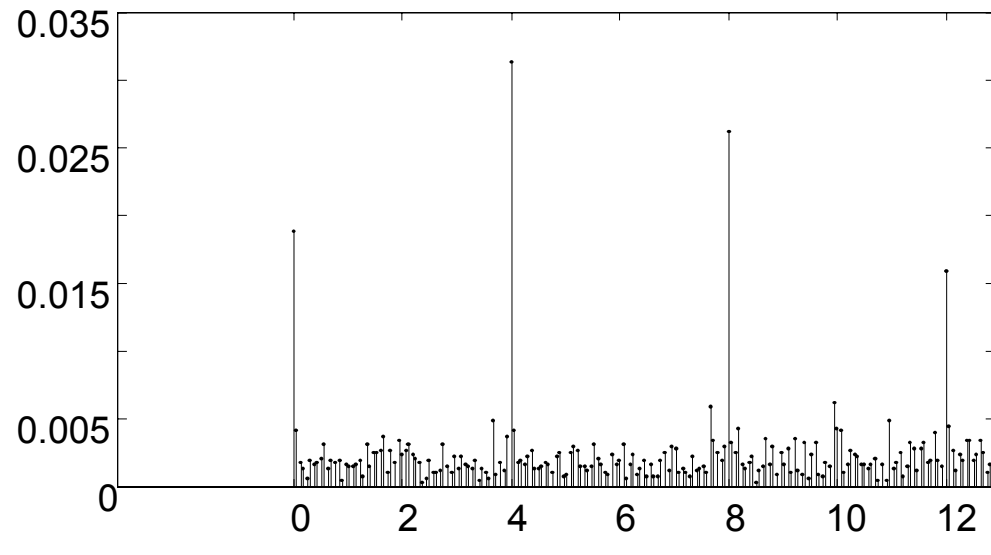*Harmonic analysis* **RM = 0.95**

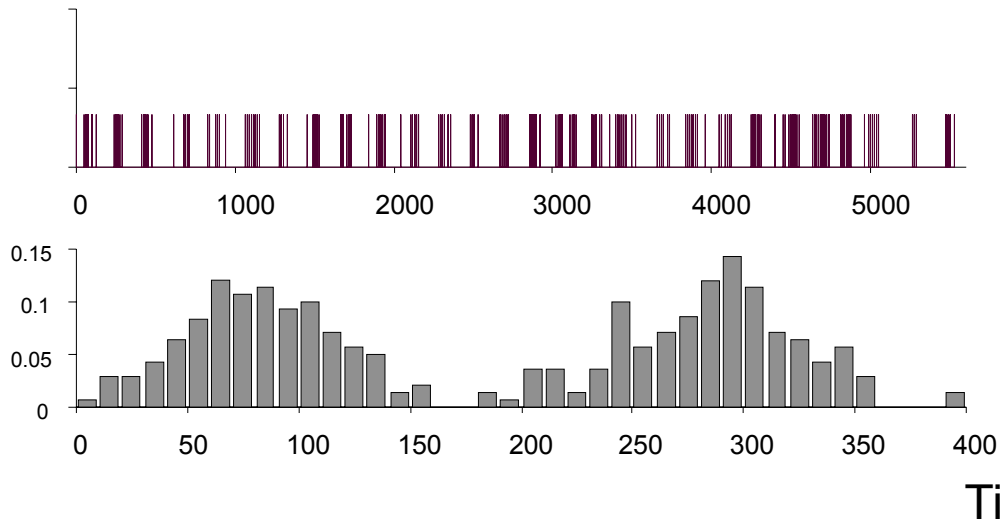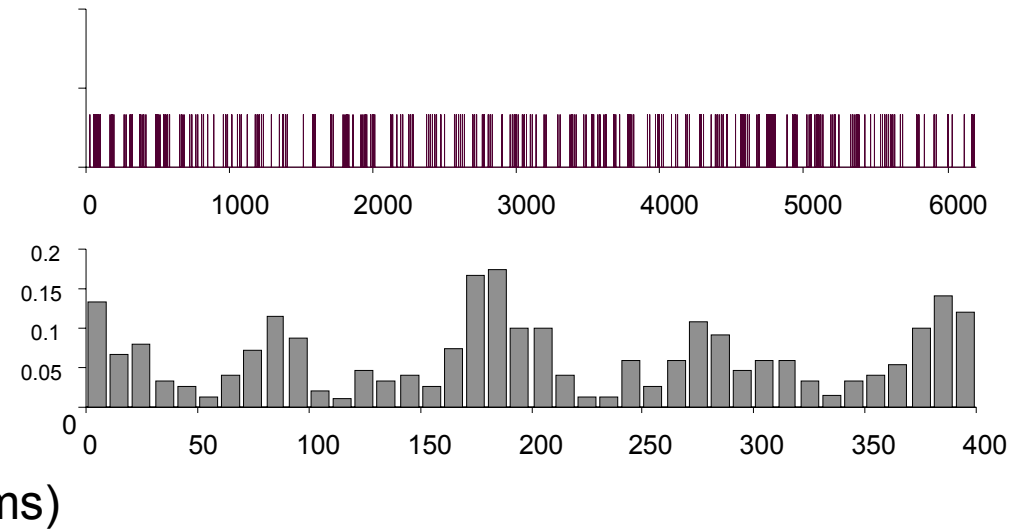**AC(1)/DC: 0.9501 -BD=0.007** DC: 0.03339 F1 (5): 0.032 -19.7

AC(1)/DC: 0.1228 -BD=0.007 DC: 0.01887 F1 (2): 0.0023 14.5

Fig. 7 Duplex cell (28682). OI = 0.94, AR = 17', BD 2 spk/s
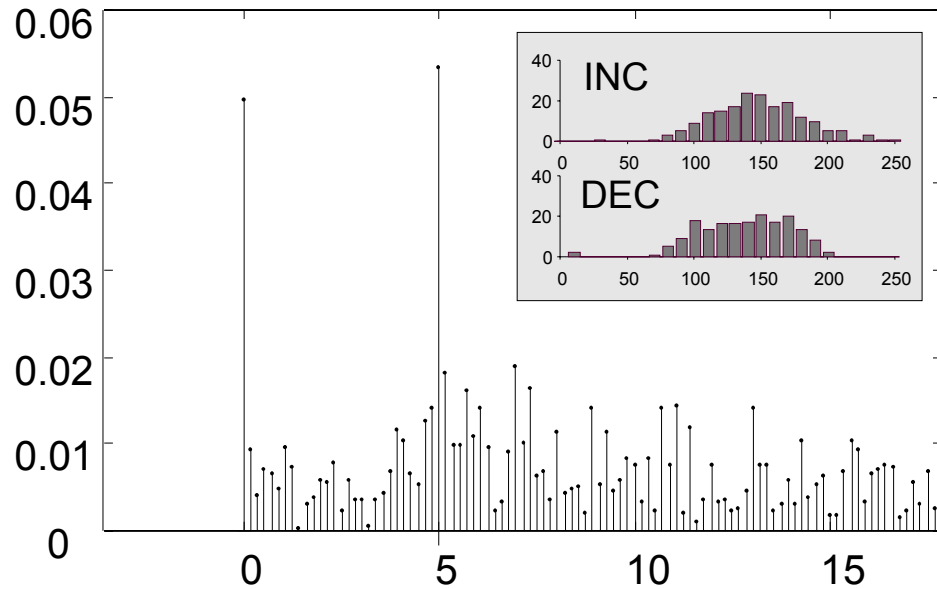
Drifting Sine, Window 12', SF 4 cpd, TF 5 Hz

Drifting Sine, Window 12', SF 0.5 cpd, TF 5 Hz

Time (ms)
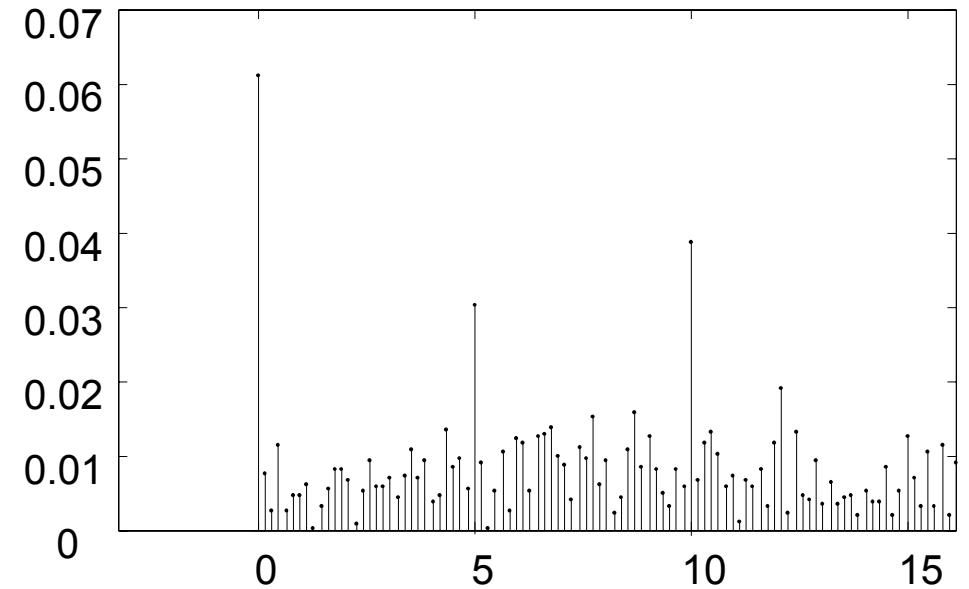
Harmonic analysis

RM = 1.15

INC

DEC

Hz

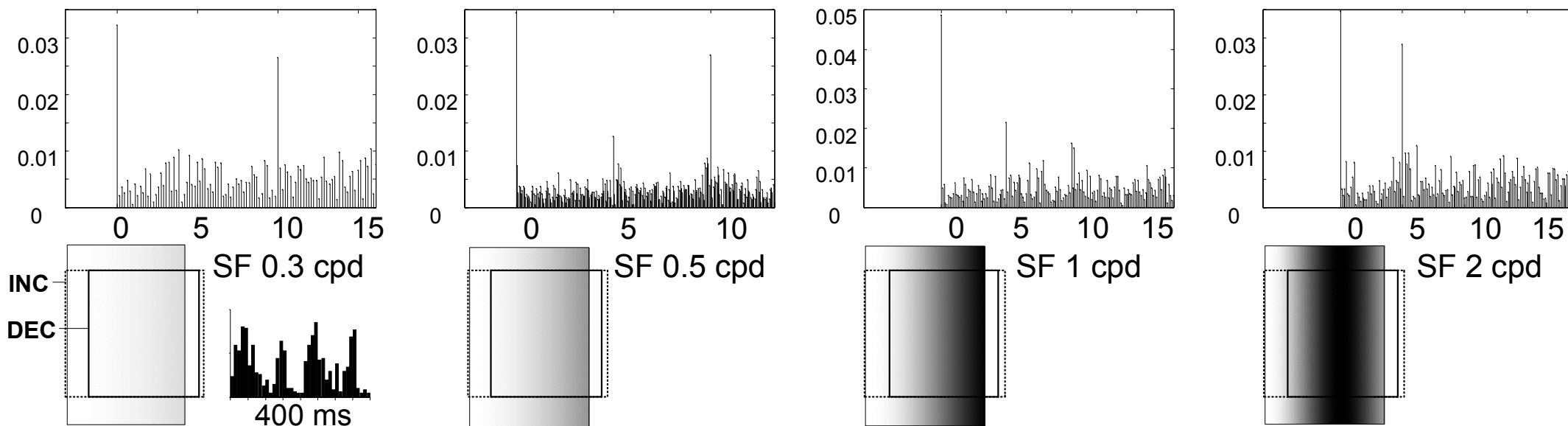**AC(1)/DC: 1.15**   **-BD=0.002**   DC: 0.04961 F1 (5): 0.054 -62.4

AC(1)/DC: 0.50   **-BD=0.002**   DC: 0.06106 F1 (5): 0.030 118

Fig. 8 Duplex cell (15884). OI = 0.97, AR = 34', BD 0 spk/s

Drifting Sine, Window 23', TF 5 Hz, various SF - spectra of responses

SF 0.3 cpd

INC

DEC

400 ms

SF 0.5 cpd

SF 1 cpd

SF 2 cpd

Drifting Sine, SF 0.5 cpd, TF 5 Hz, various Window sizes

26'

44'

83'

116'

400 ms