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PHI LME

```
load('analysis_results/split2250_bipolarRerefType1_lineNoiseRemoved_postPuffpreStim_detrend0_zscore0_nChannels2t4_phithree_lmeStats.mat')
```

```
model_spec  
model_null_specs
```

```
for i = 1 : 3  
    compare(model_nulls{i}, model_full)  
end
```

```
model_spec =
```

```
'phi ~ nChannels + condition + tau + (1|fly) + (1|fly:set)'
```

```
model_null_specs =
```

```
1×3 cell array
```

```
'phi ~ condition + ...'    'phi ~ nChannels + ...'    'phi ~ nChannels + ...'
```

```
ans =
```

THEORETICAL LIKELIHOOD RATIO TEST

Model	DF	AIC	BIC	LogLik	LRStat
LME	6	3.8549e+05	3.8555e+05	-1.9274e+05	
ALTIME	7	2.6706e+05	2.6713e+05	-1.3352e+05	1.1843e+05

deltaDF	pValue
---------	--------

1	0
---	---

```
ans =
```

THEORETICAL LIKELIHOOD RATIO TEST

Model	DF	AIC	BIC	LogLik	LRStat	deltaDF
LME	6	3.0814e+05	3.082e+05	-1.5406e+05		
ALTIME	7	2.6706e+05	2.6713e+05	-1.3352e+05	41083	1

pValue

0

ans =

THEORETICAL LIKELIHOOD RATIO TEST

Model	DF	AIC	BIC	LogLik	LRStat	deltaDF
LME	6	3.0069e+05	3.0075e+05	-1.5034e+05		
ALTIME	7	2.6706e+05	2.6713e+05	-1.3352e+05	33636	1

pValue

0

PHI-STAR LME

```
load('analysis_results/split2250_bipolarRerefType1_lineNoiseRemoved_postPuffpreStim_detrend0_zscore0_nChannels2t4_phistar_lmeStats.mat')
```

```
model_spec  
model_null_specs
```

```
for i = 1 : 3  
    compare(model_nulls{i}, model_full)  
end
```

model_spec =

'phi ~ nChannels + condition + tau + (1|fly) + (1|fly:set)'

model_null_specs =

1×3 cell array

'phi ~ condition + ...' 'phi ~ nChannels + ...' 'phi ~ nChannels + ...'

ans =

THEORETICAL LIKELIHOOD RATIO TEST

Model	DF	AIC	BIC	LogLik	LRStat	deltaDF
LME	6	2.3267e+05	2.3273e+05	-1.1633e+05		
ALTIME	7	2.2077e+05	2.2084e+05	-1.1038e+05	11900	1

pValue

0

ans =

THEORETICAL LIKELIHOOD RATIO TEST

Model	DF	AIC	BIC	LogLik	LRStat	deltaDF
LME	6	2.3743e+05	2.3749e+05	-1.1871e+05		
ALTLME	7	2.2077e+05	2.2084e+05	-1.1038e+05	16666	1

pValue

0

ans =

THEORETICAL LIKELIHOOD RATIO TEST

Model	DF	AIC	BIC	LogLik	LRStat	deltaDF
LME	6	2.2125e+05	2.2131e+05	-1.1062e+05		
ALTLME	7	2.2077e+05	2.2084e+05	-1.1038e+05	481.65	1

pValue

0

FEEDBACK ANOVA

anova_feedback

anova_feedback =

6×6 cell array

Columns 1 through 5

'Source'	'SS'	'df'	'MS'	'F'
'Columns'	[0.0141]	[2]	[0.0070]	[1.6380]
'Rows'	[2.2463e-04]	[1]	[2.2463e-04]	[0.0523]
'Interaction'	[5.1095e-04]	[2]	[2.5547e-04]	[0.0595]
'Error'	[0.3093]	[72]	[0.0043]	[]
'Total'	[0.3241]	[77]	[]	[]

Column 6

'Prob>F'
[0.2015]
[0.8198]
[0.9423]
[]
[]

PHI PHI-STAR CORRELATIONS ANOVA

```
anova_correlations
```

```
anova_correlations =
```

```
6×6 cell array
```

'Source'	'SS'	'df'	'MS'	'F'	'Prob>F'
'Columns'	[0.6317]	[2]	[0.3159]	[13.8227]	[4.5186e-06]
'Rows'	[0.2390]	[2]	[0.1195]	[5.2291]	[0.0068]
'Interaction'	[0.0182]	[4]	[0.0046]	[0.1996]	[0.9381]
'Error'	[2.4680]	[108]	[0.0229]	[]	[]
'Total'	[3.3569]	[116]	[]	[]	[]

PHI PHI-STAR MIP MATCH ANOVA

```
for i = 1 : 3
    anova_mips{i}
end
```

```
ans =
```

```
6×6 cell array
```

'Source'	'SS'	'df'	'MS'	'F'	'Prob>F'
'Columns'	[0]	[2]	[0]	[NaN]	[NaN]
'Rows'	[0]	[1]	[0]	[NaN]	[NaN]
'Interaction'	[0]	[2]	[0]	[NaN]	[NaN]
'Error'	[0]	[72]	[0]	[]	[]
'Total'	[0]	[77]	[]	[]	[]

```
ans =
```

```
6×6 cell array
```

```
Columns 1 through 5
```

'Source'	'SS'	'df'	'MS'	'F'
'Columns'	[0.0016]	[2]	[7.8250e-04]	[0.7412]
'Rows'	[2.6703e-04]	[1]	[2.6703e-04]	[0.2529]
'Interaction'	[4.2650e-04]	[2]	[2.1325e-04]	[0.2020]
'Error'	[0.0760]	[72]	[0.0011]	[]
'Total'	[0.0783]	[77]	[]	[]

```
Column 6
```

'Prob>F'
[0.4801]
[0.6165]
[0.8176]
[]
[]

ans =

6×6 cell array

Columns 1 through 5

'Source'	'SS'	'df'	'MS'	'F'
'Columns'	[0.0021]	[2]	[0.0010]	[0.7280]
'Rows'	[0.0014]	[1]	[0.0014]	[1.0215]
'Interaction'	[1.0394e-04]	[2]	[5.1972e-05]	[0.0369]
'Error'	[0.1015]	[72]	[0.0014]	[]
'Total'	[0.1051]	[77]	[]	[]

Column 6

'Prob>F'
[0.4864]
[0.3155]
[0.9638]
[]
[]