1. **File description:**

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| File name | description |
| 1.fiber\_photometry\_data\_analysis.m | Process fiber photometry data (Fig.1-4,6 et al.) |
| 2.ff\_df\_f\_oscillation\_PSD\_CA1.m | To get the PSD of CAMP oscillation (Fig.2H ,3L) |
| 3.CAMP\_phase\_of\_ripple\_spindle.m | To get the CAMP phase of ripple/spindle (Fig.2L ) |
| 4.CA1\_mPFC\_gcamp\_sigma\_correlation.m | To access the correlation between CA1 and mPFC gcamp (Fig.6) |

1. **Demo data description:**

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| --- | --- |
| File name | description |
| 1.fiber\_photometry\_data\_analysis.m | Process fiber photometry data (Fig.1-4,6 et al.) |
| 2.ff\_df\_f\_oscillation\_PSD\_CA1.m | To get the PSD of CAMP oscillation (Fig.2H ,3L) |
| 3.CAMP\_phase\_of\_ripple\_spindle.m | To get the CAMP phase of ripple/spindle (Fig.2L ) |
| 4.CA1\_mPFC\_gcamp\_sigma\_correlation.m | To access the correlation between CA1 and mPFC gcamp (Fig.6) |
| 5. ff\_brainstate.m | Function related to fiber\_photometry\_data\_analysis.m |
| 6. ffExpFit.m |

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| File name | Related code |
| brainState.mat | 1.fiber\_photometry\_data\_analysis.m |
| ff\_data.mat |
| CAMP\_tosum\_n\_28\_0309.mat | 2.ff\_df\_f\_oscillation\_PSD\_CA1.m |
| ripple\_spindle\_dataNex.mat | 3.CAMP\_phase\_of\_ripple\_spindle.m |
| CA1\_mPFC\_sigma\_correlation.mat | 4.CA1\_mPFC\_gcamp\_sigma\_correlation.m |