# Quantifying stochastic noise in cultured circadian reporter cells

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Running head:
Quantifying circadian stochastic noise

Keywords:
Systems Biology | Circadian Rhythms
Gene Regulatory Network | Stochastic | Synchronization

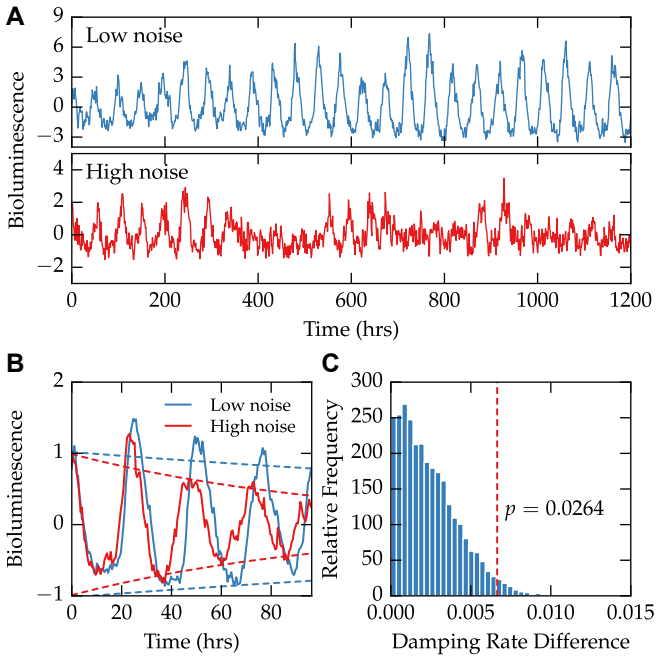


**Figure 1: Figure Title.** (**A**) Part A. (**B**) Part B. (**C**) Part C.

| | $T$ | | $\ln A$ | | $d$ | |
|---|---|---|---|---|---|---|
| | C | P | C | P | C | P |
| $\mu$ | $-0.234$ | 0.187 | 0.443 | $-0.343$ | 0.043 | 0.090 |
| $\sigma$ | 0.774 | 1.820 | 0.778 | 1.753 | 0.878 | 1.688 |
| Skew | 0.153 | 0.367 | -1.823 | $-0.580$ | -0.107 | 0.371 |
| Kurt | 3.772 | 0.591 | 8.329 | 0.476 | 2.423 | 0.373 |

**Table 1: Fitted Parameters**

**Abstract**

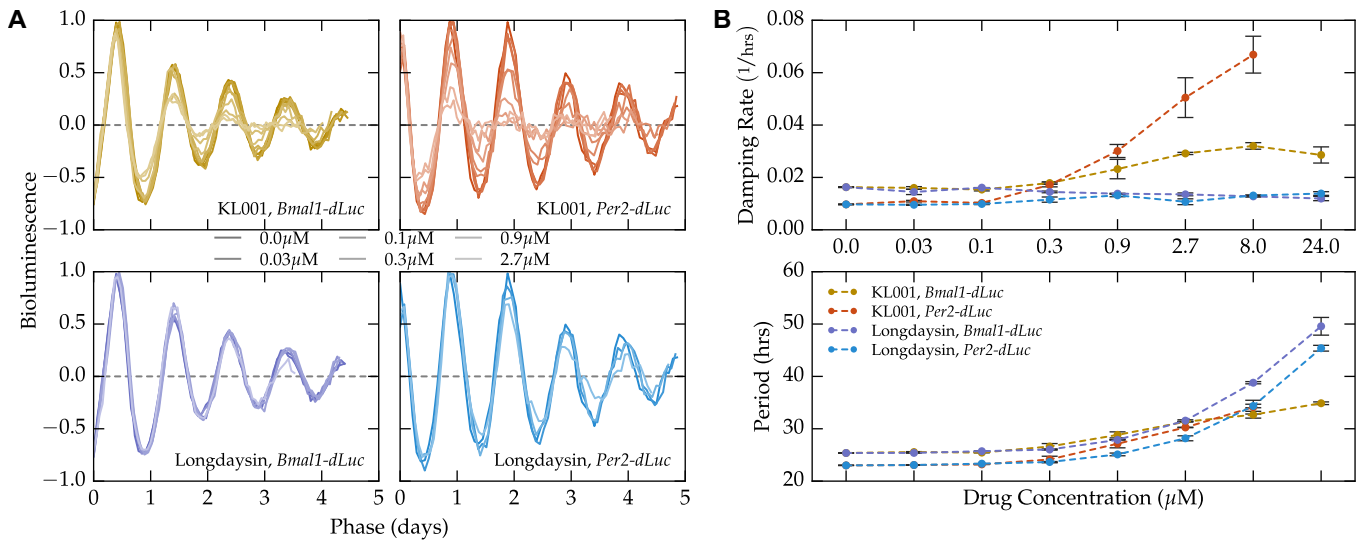


**Figure 2: Figure Title.** (**A**) Part A. (**B**) Part B.

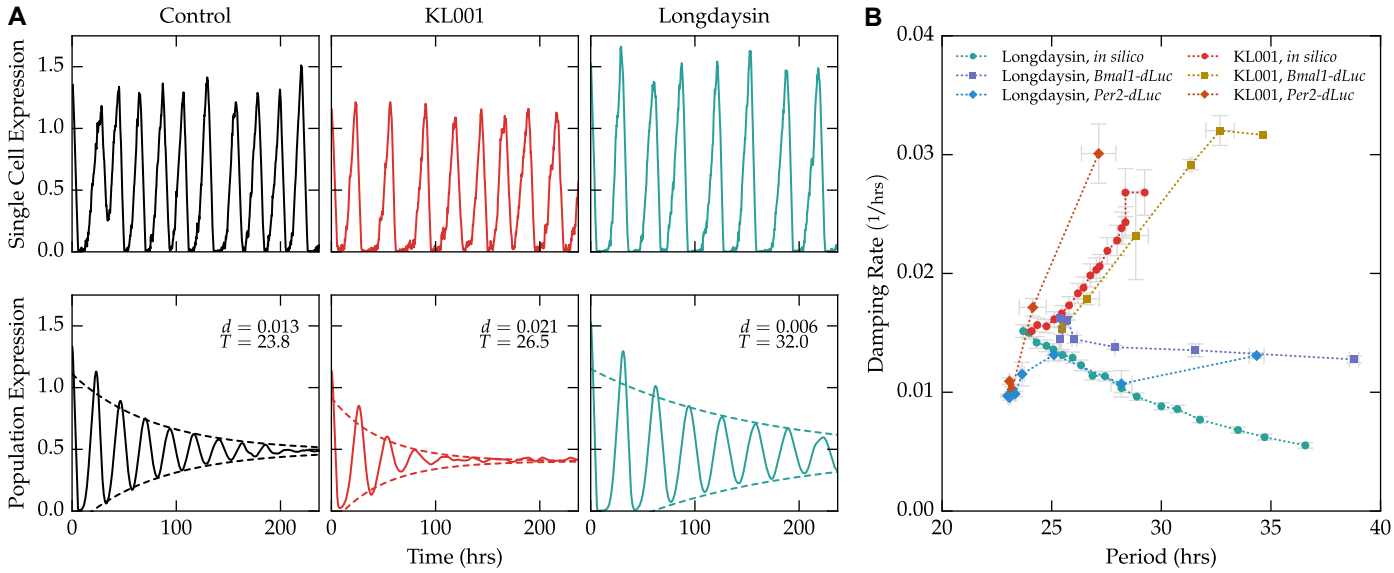


**Figure 3: Figure Title.** (**A**) Part A. (**B**) Part B.

| | $d$ | $\ln A$ | $T$ | $\theta$ |
|---|---|---|---|---|
| $d$ | 1.000 | 0.285 | −0.142 | −0.269 |
| $\ln A$ | 0.285 | 1.000 | −0.022 | −0.112 |
| $T$ | −0.142 | −0.022 | 1.000 | −0.113 |
| $\theta$ | −0.269 | −0.112 | −0.113 | 1.000 |

**Table 2: Correlation matrix**

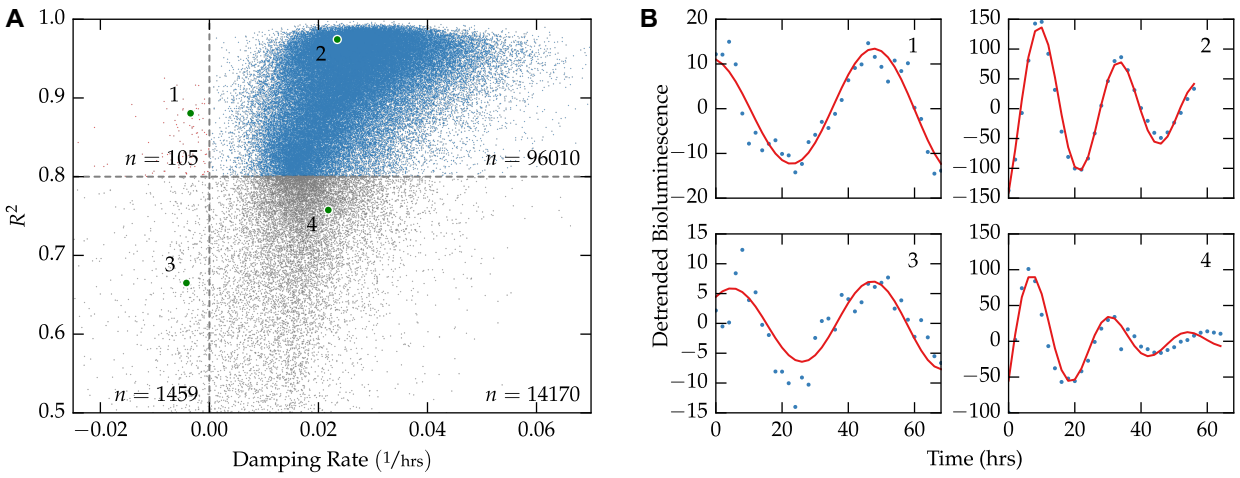


**Figure 4: Figure Title.** (**A**) Part A. (**B**) Part B.

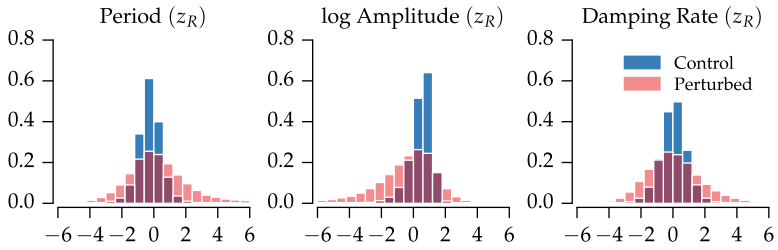


**Figure 5: Figure Title.** (**A**) Part A. (**B**) Part B.

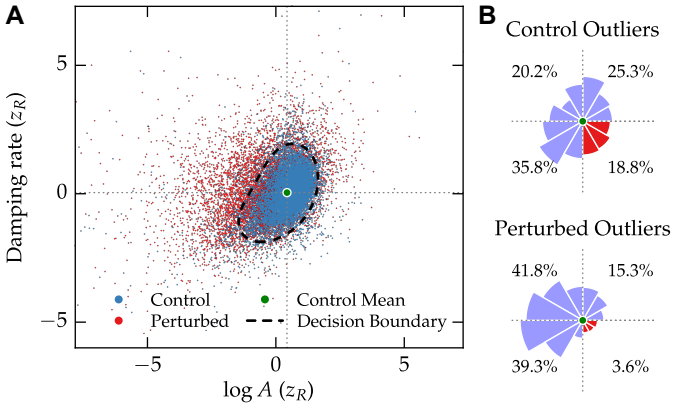


**Figure 6: Figure Title.** (**A**) Part A. (**B**) Part B.

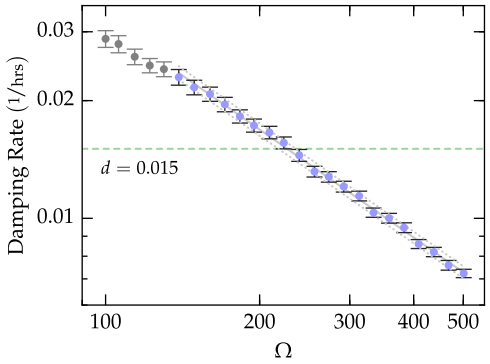


**Figure S1: Figure Title.** (**A**) Part A. (**B**) Part B.

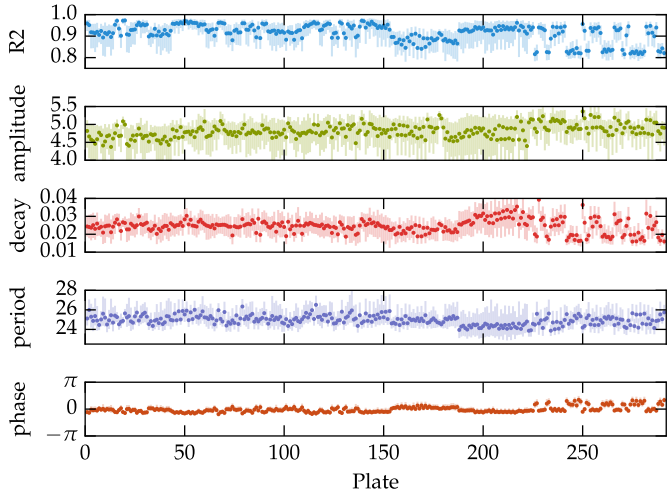


**Figure S2: figure title.** (**a**) part a. (**b**) part b.

## Introduction

## Materials and Methods

## Results and Discussion

## Conclusion

## Acknowledgments

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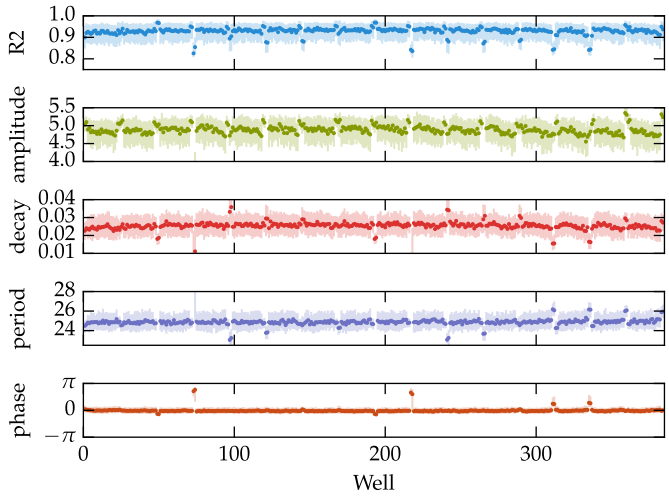


**Figure S3: figure title.** (**a**) part a. (**b**) part b.

| | | | |
|---|---|---|---|
| **Dep. Variable:** | decay | **R-squared:** | 0.169 |
| **Model:** | OLS | **Adj. R-squared:** | 0.169 |
| **Method:** | Least Squares | **F-statistic:** | 4782. |
| **Date:** | Wed, 11 Feb 2015 | **Prob (F-statistic):** | 0.00 |
| **Time:** | 16:26:22 | **Log-Likelihood:** | $-1.7248e+05$ |
| **No. Observations:** | 94053 | **AIC:** | $3.450e+05$ |
| **Df Residuals:** | 94048 | **BIC:** | $3.450e+05$ |

| | **coef** | **std err** | **t** | **P>\|t\|** | **[95.0% Conf. Int.]** |
|---|---|---|---|---|---|
| **const** | −0.0370 | 0.014 | −2.572 | 0.010 | −0.065, −0.009 |
| **amplitude** | 0.2375 | 0.003 | 86.282 | 0.000 | 0.232, 0.243 |
| **period** | −0.1521 | 0.003 | 56.798 | 0.000 | −0.157, −0.147 |
| **phase** | −0.2354 | 0.003 | 85.598 | 0.000 | −0.241, −0.230 |
| **type** | 0.3197 | 0.015 | 20.664 | 0.000 | 0.289, 0.350 |

| | | | |
|---|---|---|---|
| **Omnibus:** | 9769.391 | **Durbin-Watson:** | 1.876 |
| **Prob(Omnibus):** | 0.000 | **Jarque-Bera (JB):** | 18459.719 |
| **Skew:** | 0.697 | **Prob(JB):** | 0.00 |
| **Kurtosis:** | 4.664 | **Cond. No.** | 8.34 |

**Table S1:** OLS Regression Results