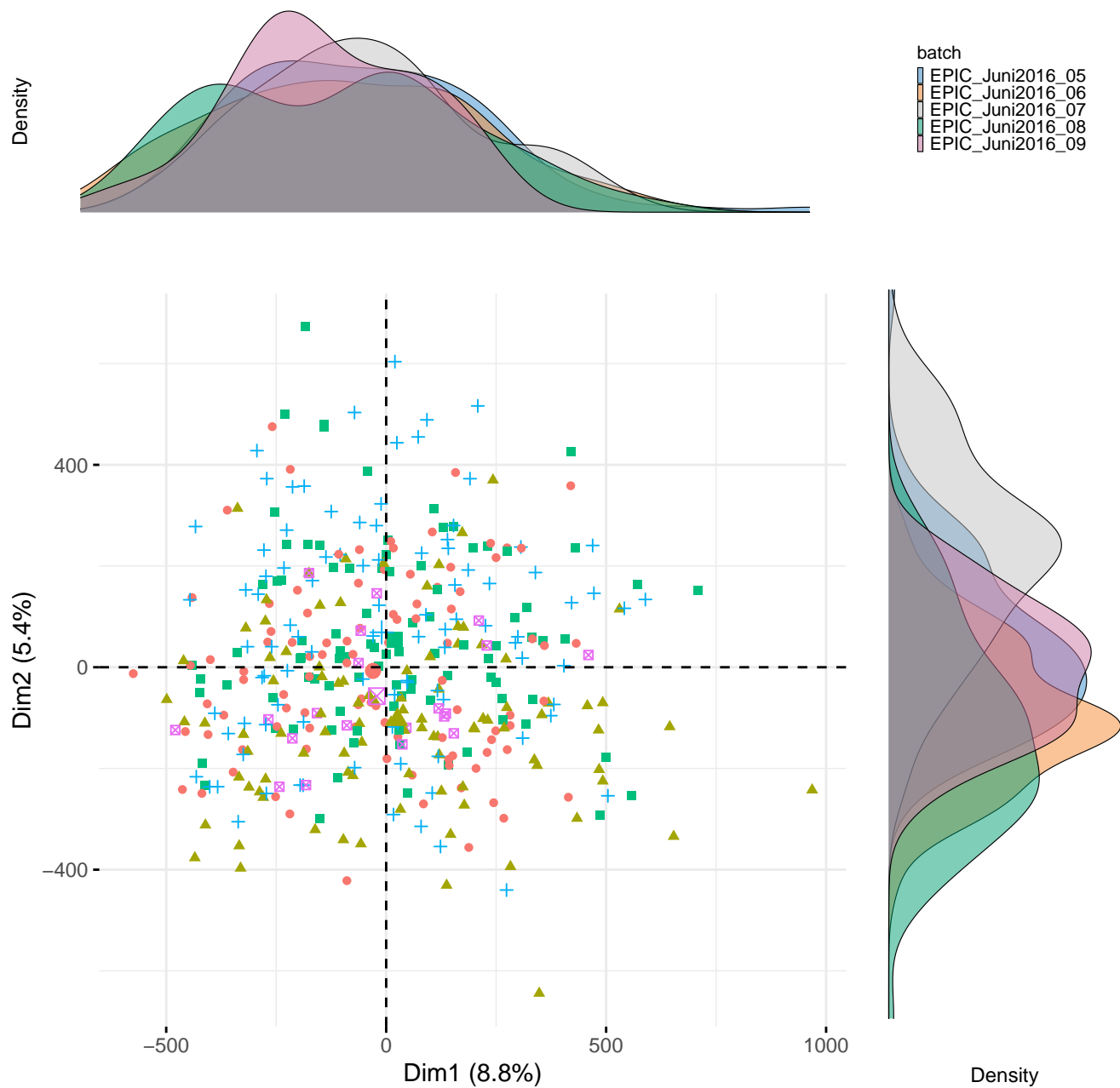
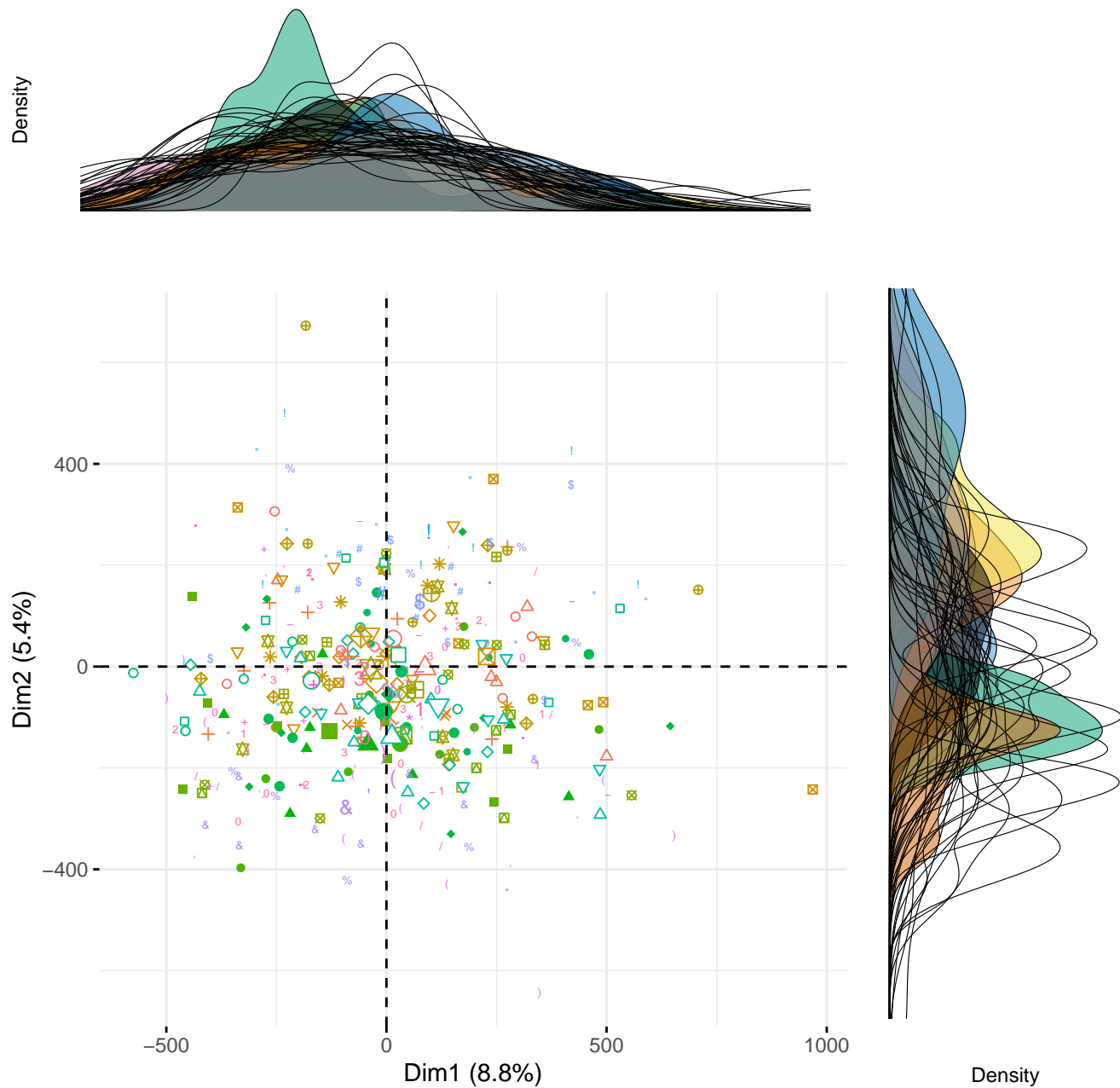


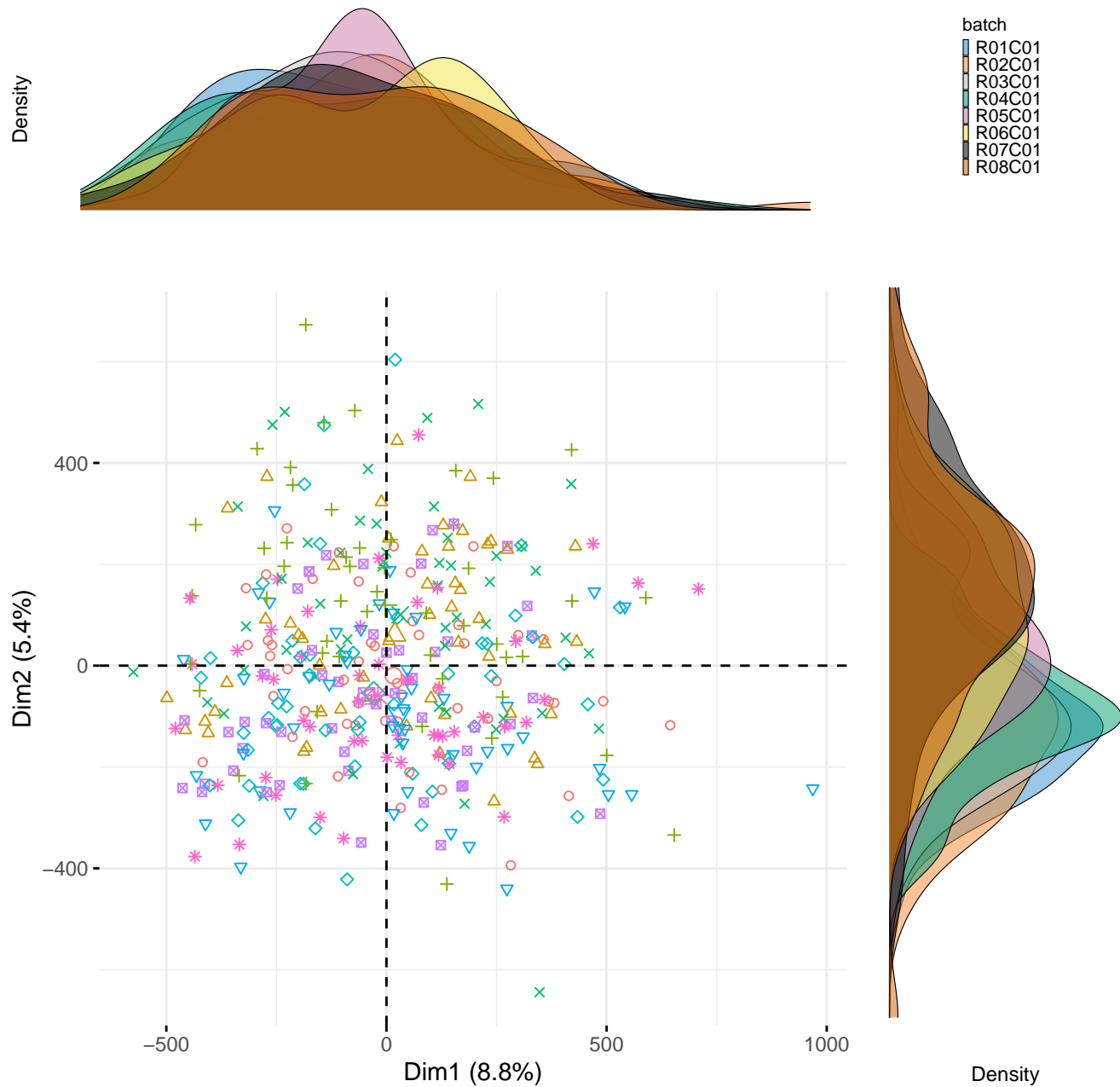
PCA Individual Map and Density Plots byPlate



PCA Individual Map and Density Plots bySlide



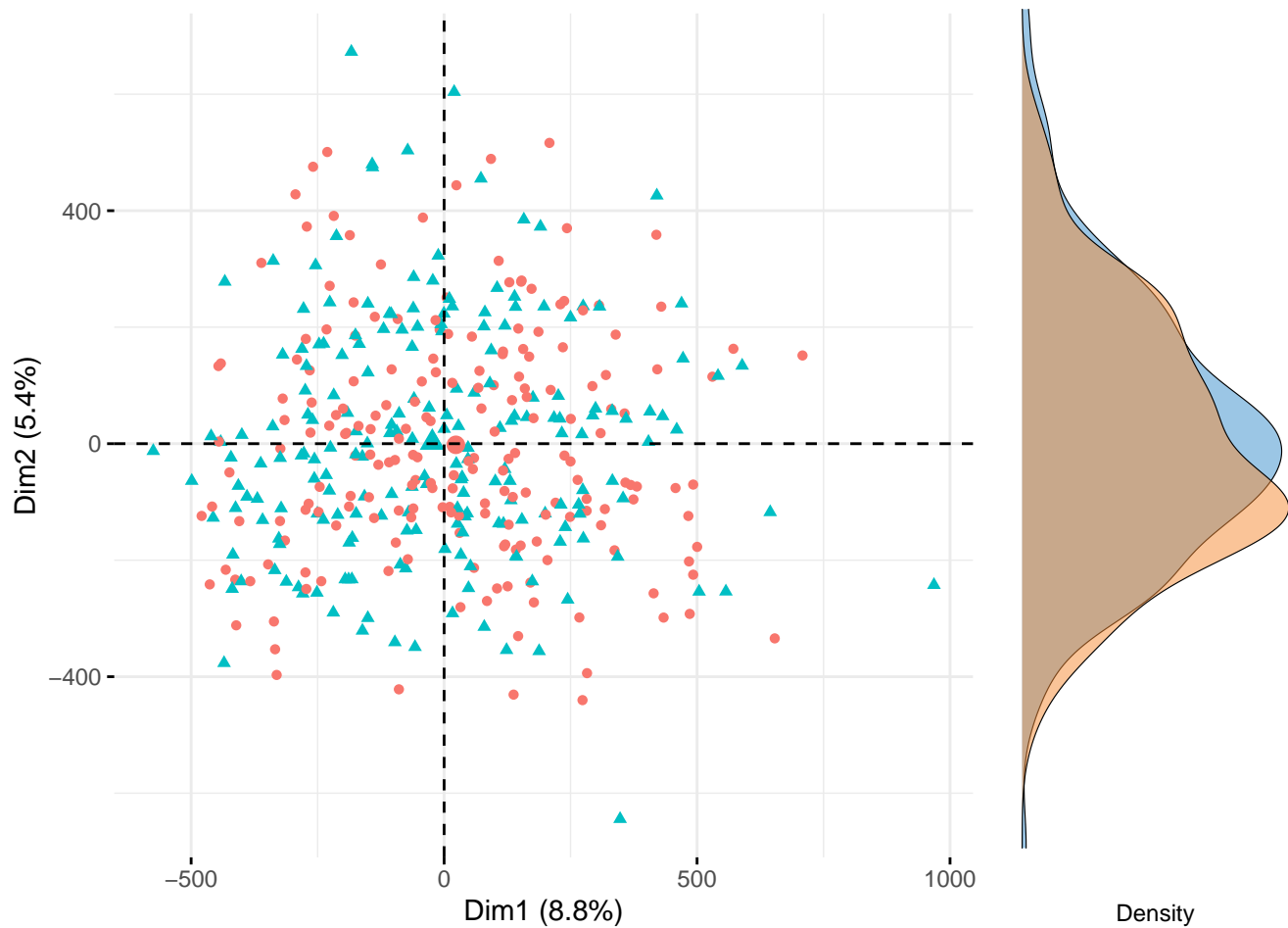
PCA Individual Map and Density Plots byArray



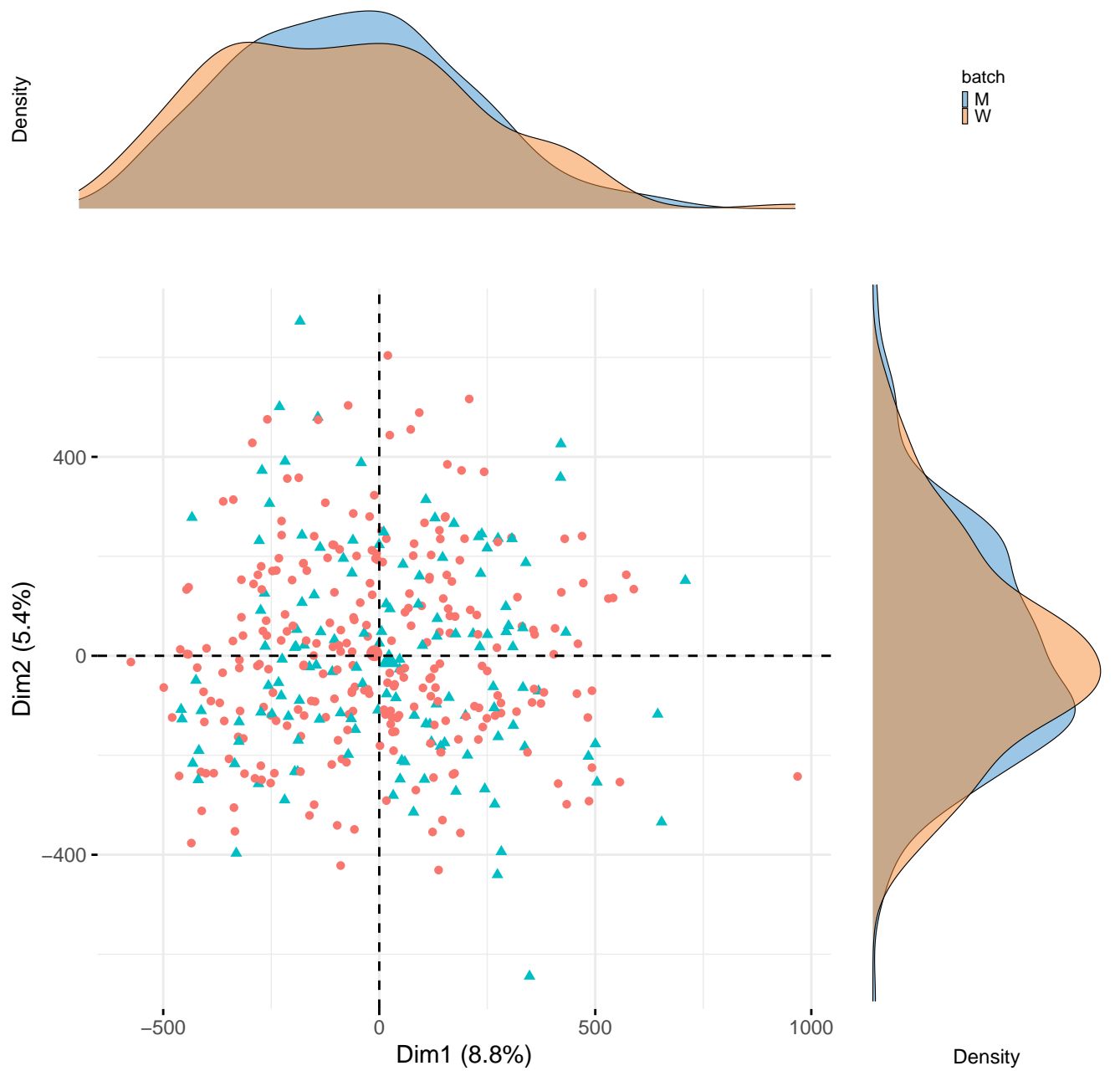
PCA Individual Map and Density Plots byGroup (dex/veh)

Density

batch
dex
veh



PCA Individual Map and Density Plots bySex



Summary table of P-values for PCs

| | Plate | Slide | Array | DEX | Sex |
|-----|--------------|--------------|--------------|--------------|-----------|
| PC1 | 3.584438e-01 | 9.911839e-01 | 7.085990e-01 | 3.491603e-54 | 0.7621092 |
| PC2 | 7.263513e-37 | 3.182475e-32 | 5.787849e-21 | 2.709166e-01 | 0.6017284 |
| PC3 | 1.995854e-61 | 4.116877e-82 | 1.162186e-11 | 1.648580e-01 | 0.1665054 |
| PC4 | 1.035088e-01 | 9.843404e-07 | 4.540187e-05 | 3.805267e-04 | 0.4175180 |
| PC5 | 8.744589e-17 | 2.289277e-46 | 2.193012e-02 | 2.511310e-01 | 0.1440686 |
| PC6 | 1.884224e-02 | 9.600490e-12 | 1.049526e-01 | 1.415589e-01 | 0.6514740 |

ANOVA results for Plate

```
$PC1
Analysis of Variance Table

Response: pc
              Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate  4   286550    71637   1.0953  0.3584
Residuals              398 26029952    65402

$PC2
Analysis of Variance Table

Response: pc
              Df Sum Sq Mean Sq F value    Pr(>F)
prin.comp$Sample_Plate  4  5694470 1423618   54.937 < 2.2e-16 ***
Residuals              398 10313565    25913
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

$PC3
Analysis of Variance Table

Response: pc
              Df Sum Sq Mean Sq F value    Pr(>F)
prin.comp$Sample_Plate  4  3852286   963072  106.08 < 2.2e-16 ***
Residuals              398  3613400    9079
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

$PC4
Analysis of Variance Table

Response: pc
              Df Sum Sq Mean Sq F value    Pr(>F)
prin.comp$Sample_Plate  4   131078    32770   1.937  0.1035
Residuals              398  6733352   16918

$PC5
Analysis of Variance Table

Response: pc
              Df Sum Sq Mean Sq F value    Pr(>F)
prin.comp$Sample_Plate  4   721105   180276  22.523 < 2.2e-16 ***
Residuals              398  3185660    8004
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

$PC6
Analysis of Variance Table

Response: pc
              Df Sum Sq Mean Sq F value    Pr(>F)
prin.comp$Sample_Plate  4   104104   26026  0.29885  0.01884 *
```


ANOVA results for Slide

```
$PC1
Analysis of Variance Table

Response: pc

              Df Sum Sq Mean Sq F value Pr(>F)
as.factor(as.character(prin.comp$Slide))  50  1980144   39603   0.5728  0.9912
Residuals                                352 24336358   69137

$PC2
Analysis of Variance Table

Response: pc

              Df Sum Sq Mean Sq F value    Pr(>F)
as.factor(as.character(prin.comp$Slide))  50  8260145   165203   7.5055 < 2.2e-16
Residuals                                352 7747890    22011

as.factor(as.character(prin.comp$Slide)) ***
Residuals
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

$PC3
Analysis of Variance Table

Response: pc

              Df Sum Sq Mean Sq F value    Pr(>F)
as.factor(as.character(prin.comp$Slide))  50 5680492   113610  22.401 < 2.2e-16
Residuals                                352 1785194    5072

as.factor(as.character(prin.comp$Slide)) ***
Residuals
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

$PC4
Analysis of Variance Table

Response: pc

              Df Sum Sq Mean Sq F value    Pr(>F)
as.factor(as.character(prin.comp$Slide))  50 1780830    35617   2.4662 9.843e-07
Residuals                                352 5083600   14442

as.factor(as.character(prin.comp$Slide)) ***
Residuals
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

$PC5
Analysis of Variance Table

Response: pc

              Df Sum Sq Mean Sq F value    Pr(>F)
```

ANOVA results for Array

\$PC1

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|------------------|-----|----------|---------|---------|--------|
| prin.comp\$Array | 7 | 302818 | 43260 | 0.6569 | 0.7086 |
| Residuals | 395 | 26013684 | 65857 | | |

\$PC2

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|------------------|-----|----------|---------|---------|---------------|
| prin.comp\$Array | 7 | 3899786 | 557112 | 18.174 | < 2.2e-16 *** |
| Residuals | 395 | 12108249 | 30654 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

\$PC3

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|------------------|-----|---------|---------|---------|---------------|
| prin.comp\$Array | 7 | 1135191 | 162170 | 10.119 | 1.162e-11 *** |
| Residuals | 395 | 6330496 | 16027 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

\$PC4

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|------------------|-----|---------|---------|---------|--------------|
| prin.comp\$Array | 7 | 526815 | 75259 | 4.6906 | 4.54e-05 *** |
| Residuals | 395 | 6337615 | 16045 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

\$PC5

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|------------------|-----|---------|---------|---------|-----------|
| prin.comp\$Array | 7 | 157642 | 22520.3 | 2.3727 | 0.02193 * |
| Residuals | 395 | 3749123 | 9491.5 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

\$PC6

Analysis of Variance Table

Response: pc

ANOVA results for Sample Group

\$PC1

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------------------|-----|----------|----------|---------|---------------|
| prin.comp\$Sample_Group | 1 | 11870882 | 11870882 | 329.53 | < 2.2e-16 *** |
| Residuals | 401 | 14445620 | 36024 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

\$PC2

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------------------|-----|----------|---------|---------|--------|
| prin.comp\$Sample_Group | 1 | 48374 | 48374 | 1.2155 | 0.2709 |
| Residuals | 401 | 15959661 | 39800 | | |

\$PC3

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------------------|-----|---------|---------|---------|--------|
| prin.comp\$Sample_Group | 1 | 35873 | 35873 | 1.9362 | 0.1649 |
| Residuals | 401 | 7429813 | 18528 | | |

\$PC4

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------------------|-----|---------|---------|---------|---------------|
| prin.comp\$Sample_Group | 1 | 213020 | 213020 | 12.842 | 0.0003805 *** |
| Residuals | 401 | 6651410 | 16587 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

\$PC5

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------------------|-----|---------|---------|---------|--------|
| prin.comp\$Sample_Group | 1 | 12826 | 12825.9 | 1.3208 | 0.2511 |
| Residuals | 401 | 3893940 | 9710.6 | | |

\$PC6

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------------------|-----|---------|---------|---------|--------|
| prin.comp\$Sample_Group | 1 | 19211 | 19211.3 | 2.1695 | 0.1416 |
| Residuals | 401 | 3550972 | 8855.3 | | |

ANOVA results for Sex

\$PC1

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|----------------|-----|----------|---------|---------|--------|
| prin.comp\$sex | 1 | 6021 | 6021 | 0.0918 | 0.7621 |
| Residuals | 401 | 26310481 | 65612 | | |

\$PC2

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|----------------|-----|----------|---------|---------|--------|
| prin.comp\$sex | 1 | 10884 | 10884 | 0.2728 | 0.6017 |
| Residuals | 401 | 15997151 | 39893 | | |

\$PC3

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|----------------|-----|---------|---------|---------|--------|
| prin.comp\$sex | 1 | 35596 | 35596 | 1.9211 | 0.1665 |
| Residuals | 401 | 7430091 | 18529 | | |

\$PC4

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|----------------|-----|---------|---------|---------|--------|
| prin.comp\$sex | 1 | 11256 | 11256 | 0.6587 | 0.4175 |
| Residuals | 401 | 6853174 | 17090 | | |

\$PC5

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|----------------|-----|---------|---------|---------|--------|
| prin.comp\$sex | 1 | 20761 | 20760.8 | 2.1423 | 0.1441 |
| Residuals | 401 | 3886005 | 9690.8 | | |

\$PC6

Analysis of Variance Table

Response: pc

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|----------------|-----|---------|---------|---------|--------|
| prin.comp\$sex | 1 | 1818 | 1818.5 | 0.2044 | 0.6515 |
| Residuals | 401 | 3568365 | 8898.7 | | |