

| Obs | WA | WR | BW | BL | FT | STDFT |
|-----|----|----|----|----|------|-------|
| 1 | -1 | -1 | -1 | -1 | 3.67 | 0.052 |
| 2 | 1 | -1 | -1 | -1 | 3.69 | 0.052 |
| 3 | -1 | 1 | -1 | -1 | 3.74 | 0.055 |
| 4 | 1 | 1 | -1 | -1 | 3.70 | 0.062 |
| 5 | -1 | -1 | 1 | -1 | 3.72 | 0.052 |
| 6 | 1 | -1 | 1 | -1 | 3.55 | 0.065 |
| 7 | -1 | 1 | 1 | -1 | 3.97 | 0.052 |
| 8 | 1 | 1 | 1 | -1 | 3.77 | 0.098 |
| 9 | -1 | -1 | -1 | 1 | 3.50 | 0.079 |
| 10 | 1 | -1 | -1 | 1 | 3.73 | 0.072 |
| 11 | -1 | 1 | -1 | 1 | 3.58 | 0.083 |
| 12 | 1 | 1 | -1 | 1 | 3.63 | 0.132 |
| 13 | -1 | -1 | 1 | 1 | 3.44 | 0.058 |
| 14 | 1 | -1 | 1 | 1 | 3.55 | 0.049 |
| 15 | -1 | 1 | 1 | 1 | 3.70 | 0.081 |
| 16 | 1 | 1 | 1 | 1 | 3.62 | 0.051 |
| 17 | -2 | 0 | 0 | 0 | 3.61 | 0.129 |
| 18 | 2 | 0 | 0 | 0 | 3.64 | 0.085 |
| 19 | 0 | -2 | 0 | 0 | 3.55 | 0.100 |
| 20 | 0 | 2 | 0 | 0 | 3.73 | 0.063 |
| 21 | 0 | 0 | -2 | 0 | 3.61 | 0.051 |
| 22 | 0 | 0 | 2 | 0 | 3.60 | 0.095 |
| 23 | 0 | 0 | 0 | -2 | 3.80 | 0.049 |
| 24 | 0 | 0 | 0 | 2 | 3.60 | 0.055 |
| 25 | 0 | 0 | 0 | 0 | 3.77 | 0.032 |
| 26 | 0 | 0 | 0 | 0 | 3.75 | 0.055 |
| 27 | 0 | 0 | 0 | 0 | 3.70 | 0.072 |
| 28 | 0 | 0 | 0 | 0 | 3.68 | 0.055 |
| 29 | 0 | 0 | 0 | 0 | 3.69 | 0.078 |
| 30 | 0 | 0 | 0 | 0 | 3.66 | 0.058 |

| Obs | WA | WR | BW | BL | FT | STDFT |
|-----|----|----|----|----|------|-------|
| 1 | -1 | -1 | -1 | -1 | 3.67 | 0.052 |
| 2 | 1 | -1 | -1 | -1 | 3.69 | 0.052 |
| 3 | -1 | 1 | -1 | -1 | 3.74 | 0.055 |
| 4 | 1 | 1 | -1 | -1 | 3.70 | 0.062 |
| 5 | -1 | -1 | 1 | -1 | 3.72 | 0.052 |
| 6 | 1 | -1 | 1 | -1 | 3.55 | 0.065 |
| 7 | -1 | 1 | 1 | -1 | 3.97 | 0.052 |
| 8 | 1 | 1 | 1 | -1 | 3.77 | 0.098 |
| 9 | -1 | -1 | -1 | 1 | 3.50 | 0.079 |
| 10 | 1 | -1 | -1 | 1 | 3.73 | 0.072 |
| 11 | -1 | 1 | -1 | 1 | 3.58 | 0.083 |
| 12 | 1 | 1 | -1 | 1 | 3.63 | 0.132 |
| 13 | -1 | -1 | 1 | 1 | 3.44 | 0.058 |
| 14 | 1 | -1 | 1 | 1 | 3.55 | 0.049 |
| 15 | -1 | 1 | 1 | 1 | 3.70 | 0.081 |
| 16 | 1 | 1 | 1 | 1 | 3.62 | 0.051 |

The MEANS Procedure

| Analysis Variable : FT | | | | |
|------------------------|---------|--------|-----------------|----------|
| N | Sum | Mean | Corrected SS | Variance |
| 16 | 58.5600 | 3.6600 | 0.2344 | 0.0156 |

| Obs | WA | WR | BW | BL | FT | STDFT |
|-----|----|----|----|----|------|-------|
| 1 | 0 | 0 | 0 | 0 | 3.77 | 0.032 |
| 2 | 0 | 0 | 0 | 0 | 3.75 | 0.055 |
| 3 | 0 | 0 | 0 | 0 | 3.70 | 0.072 |
| 4 | 0 | 0 | 0 | 0 | 3.68 | 0.055 |
| 5 | 0 | 0 | 0 | 0 | 3.69 | 0.078 |
| 6 | 0 | 0 | 0 | 0 | 3.66 | 0.058 |

The MEANS Procedure

| Analysis Variable : FT | | | | |
|------------------------|---------|--------|-----------------|----------|
| N | Sum | Mean | Corrected SS | Variance |
| 6 | 22.2500 | 3.7083 | 0.0091 | 0.0018 |

| Obs | WA | WR | BW | BL | FT | STDFT |
|-----|----|----|----|----|------|-------|
| 1 | -1 | -1 | -1 | -1 | 3.67 | 0.052 |
| 2 | 1 | -1 | -1 | -1 | 3.69 | 0.052 |
| 3 | -1 | 1 | -1 | -1 | 3.74 | 0.055 |
| 4 | 1 | 1 | -1 | -1 | 3.70 | 0.062 |
| 5 | -1 | -1 | 1 | -1 | 3.72 | 0.052 |
| 6 | 1 | -1 | 1 | -1 | 3.55 | 0.065 |
| 7 | -1 | 1 | 1 | -1 | 3.97 | 0.052 |
| 8 | 1 | 1 | 1 | -1 | 3.77 | 0.098 |
| 9 | -1 | -1 | -1 | 1 | 3.50 | 0.079 |
| 10 | 1 | -1 | -1 | 1 | 3.73 | 0.072 |
| 11 | -1 | 1 | -1 | 1 | 3.58 | 0.083 |
| 12 | 1 | 1 | -1 | 1 | 3.63 | 0.132 |
| 13 | -1 | -1 | 1 | 1 | 3.44 | 0.058 |
| 14 | 1 | -1 | 1 | 1 | 3.55 | 0.049 |
| 15 | -1 | 1 | 1 | 1 | 3.70 | 0.081 |
| 16 | 1 | 1 | 1 | 1 | 3.62 | 0.051 |
| 17 | 0 | 0 | 0 | 0 | 3.77 | 0.032 |
| 18 | 0 | 0 | 0 | 0 | 3.75 | 0.055 |
| 19 | 0 | 0 | 0 | 0 | 3.70 | 0.072 |
| 20 | 0 | 0 | 0 | 0 | 3.68 | 0.055 |
| 21 | 0 | 0 | 0 | 0 | 3.69 | 0.078 |
| 22 | 0 | 0 | 0 | 0 | 3.66 | 0.058 |

The RSREG Procedure

| Coding Coefficients for the Independent Variables | | |
|---|----------------|------------|
| Factor | Subtracted off | Divided by |
| WA | 0 | 1.000000 |
| WR | 0 | 1.000000 |
| BW | 0 | 1.000000 |
| BL | 0 | 1.000000 |

| Response Surface for Variable FT | |
|----------------------------------|----------|
| Response Mean | 3.673182 |
| Root MSE | 0.038514 |
| R-Square | 0.9415 |
| Coefficient of Variation | 1.0485 |

| Regression | DF | Type I Sum of Squares | R-Square | F Value | Pr > F |
|--------------|----|-----------------------|----------|---------|--------|
| Linear | 4 | 0.117250 | 0.4622 | 19.76 | <.0001 |
| Quadratic | 1 | 0.010194 | 0.0402 | 6.87 | 0.0255 |
| Crossproduct | 6 | 0.111400 | 0.4391 | 12.52 | 0.0004 |
| Total Model | 11 | 0.238844 | 0.9415 | 14.64 | <.0001 |

| Residual | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-------------|----|----------------|-------------|---------|--------|
| Lack of Fit | 5 | 0.005750 | 0.001150 | 0.63 | 0.6860 |
| Pure Error | 5 | 0.009083 | 0.001817 | | |
| Total Error | 10 | 0.014833 | 0.001483 | | |

| Parameter | DF | Estimate | Standard Error | t Value | Pr > t | Parameter Estimate from Coded Data |
|-----------|----|-----------|----------------|---------|---------|------------------------------------|
| Intercept | 1 | 3.708333 | 0.015723 | 235.85 | <.0001 | 3.708333 |
| WA | 1 | -0.005000 | 0.009629 | -0.52 | 0.6149 | -0.005000 |
| WR | 1 | 0.053750 | 0.009629 | 5.58 | 0.0002 | 0.053750 |
| BW | 1 | 0.005000 | 0.009629 | 0.52 | 0.6149 | 0.005000 |
| BL | 1 | -0.066250 | 0.009629 | -6.88 | <.0001 | -0.066250 |
| WA*WA | 1 | -0.048333 | 0.018437 | -2.62 | 0.0255 | -0.048333 |
| WR*WA | 1 | -0.028750 | 0.009629 | -2.99 | 0.0137 | -0.028750 |
| WR*WR | 0 | 0 | . | . | . | 0 |
| BW*WA | 1 | -0.037500 | 0.009629 | -3.89 | 0.0030 | -0.037500 |
| BW*WR | 1 | 0.046250 | 0.009629 | 4.80 | 0.0007 | 0.046250 |
| BW*BW | 0 | 0 | . | . | . | 0 |
| BL*WA | 1 | 0.043750 | 0.009629 | 4.54 | 0.0011 | 0.043750 |
| BL*WR | 1 | -0.015000 | 0.009629 | -1.56 | 0.1503 | -0.015000 |
| BL*BW | 1 | -0.021250 | 0.009629 | -2.21 | 0.0518 | -0.021250 |
| BL*BL | 0 | 0 | . | . | . | 0 |

The RSREG Procedure

| Factor | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|-------------------|-------------|---------|--------|
| WA | 5 | 0.076944 | 0.015389 | 10.37 | 0.0010 |
| WR | 4 | 0.097275 | 0.024319 | 16.39 | 0.0002 |
| BW | 4 | 0.064350 | 0.016087 | 10.85 | 0.0012 |
| BL | 4 | 0.111675 | 0.027919 | 18.82 | 0.0001 |

The RSREG Procedure
Canonical Analysis of Response Surface Based on Coded Data

| Factor | Critical Value | |
|--|----------------|-----------|
| | Coded | Uncoded |
| WA | -0.097270 | -0.097270 |
| WR | -1.577645 | -1.577645 |
| BW | -2.204276 | -2.204276 |
| BL | -3.026752 | -3.026752 |
| Predicted value at stationary point: 3.760928 | | |

| Eigenvalues | Eigenvectors | | | |
|-------------------------------------|--------------|-----------|----------|-----------|
| | WA | WR | BW | BL |
| 0.039624 | -0.333792 | 0.561084 | 0.606928 | -0.453217 |
| -0.003899 | 0.144272 | 0.452005 | 0.283734 | 0.833290 |
| -0.023333 | -0.027869 | -0.684573 | 0.716303 | 0.132261 |
| -0.060726 | 0.931124 | 0.110615 | 0.195050 | -0.287625 |
| Stationary point is a saddle point. | | | | |

The RSREG Procedure

| Response Surface for Variable FT | |
|----------------------------------|----------|
| Response Mean | 3.665000 |
| Root MSE | 0.035978 |
| R-Square | 0.9365 |
| Coefficient of Variation | 0.9817 |

| Regression | DF | Type I Sum of Squares | R-Square | F Value | Pr > F |
|--------------|----|-----------------------|----------|---------|--------|
| Linear | 4 | 0.151000 | 0.4935 | 29.16 | <.0001 |
| Quadratic | 4 | 0.024133 | 0.0789 | 4.66 | 0.0121 |
| Crossproduct | 6 | 0.111400 | 0.3641 | 14.34 | <.0001 |
| Total Model | 14 | 0.286533 | 0.9365 | 15.81 | <.0001 |

| Residual | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-------------|----|----------------|-------------|---------|--------|
| Lack of Fit | 10 | 0.010333 | 0.001033 | 0.57 | 0.7907 |
| Pure Error | 5 | 0.009083 | 0.001817 | | |
| Total Error | 15 | 0.019417 | 0.001294 | | |

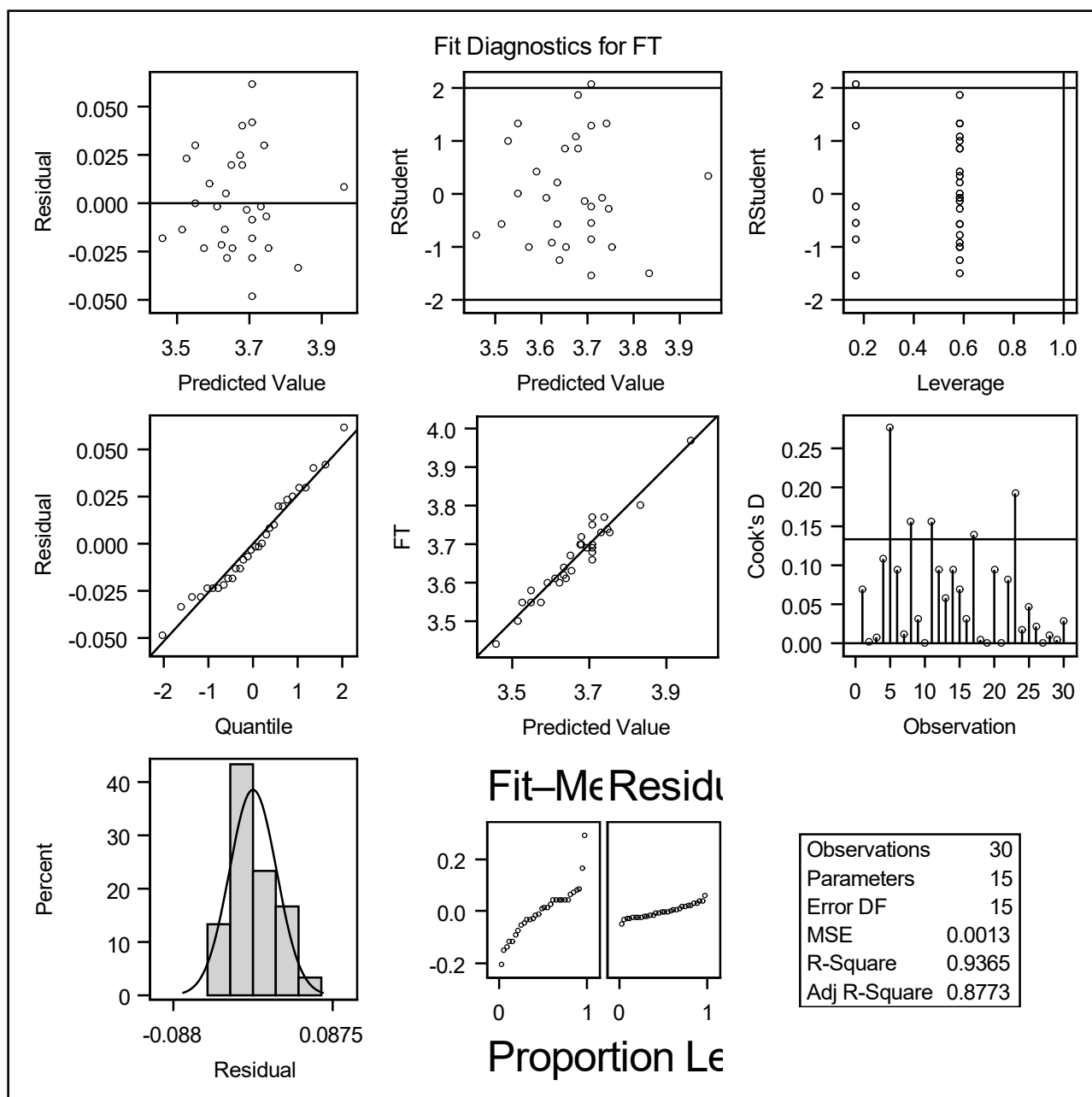
| Parameter | DF | Estimate | Standard Error | t Value | Pr > t |
|-----------|----|-----------|----------------|---------|---------|
| Intercept | 1 | 3.708333 | 0.014688 | 252.47 | <.0001 |
| WA | 1 | -0.000833 | 0.007344 | -0.11 | 0.9112 |
| WR | 1 | 0.050833 | 0.007344 | 6.92 | <.0001 |
| BW | 1 | 0.002500 | 0.007344 | 0.34 | 0.7383 |
| BL | 1 | -0.060833 | 0.007344 | -8.28 | <.0001 |
| WA*WA | 1 | -0.017917 | 0.006870 | -2.61 | 0.0198 |
| WR*WA | 1 | -0.028750 | 0.008995 | -3.20 | 0.0060 |
| WR*WR | 1 | -0.014167 | 0.006870 | -2.06 | 0.0570 |
| BW*WA | 1 | -0.037500 | 0.008995 | -4.17 | 0.0008 |
| BW*WR | 1 | 0.046250 | 0.008995 | 5.14 | 0.0001 |
| BW*BW | 1 | -0.022917 | 0.006870 | -3.34 | 0.0045 |
| BL*WA | 1 | 0.043750 | 0.008995 | 4.86 | 0.0002 |
| BL*WR | 1 | -0.015000 | 0.008995 | -1.67 | 0.1161 |
| BL*BW | 1 | -0.021250 | 0.008995 | -2.36 | 0.0321 |
| BL*BL | 1 | 0.000833 | 0.006870 | 0.12 | 0.9051 |

| Factor | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|----------------|-------------|---------|--------|
| WA | 5 | 0.075171 | 0.015034 | 11.61 | 0.0001 |
| WR | 5 | 0.118571 | 0.023714 | 18.32 | <.0001 |
| BW | 5 | 0.078505 | 0.015701 | 12.13 | <.0001 |
| BL | 5 | 0.130286 | 0.026057 | 20.13 | <.0001 |

The RSREG Procedure
Canonical Analysis of Response Surface

| Factor | Critical Value |
|---|----------------|
| WA | 0.851331 |
| WR | -0.358898 |
| BW | -0.878006 |
| BL | -0.272095 |
| Predicted value at stationary point: 3.706035 | |

| Eigenvalues | Eigenvectors | | | |
|-------------------------------------|--------------|-----------|-----------|-----------|
| | WA | WR | BW | BL |
| 0.035041 | 0.517705 | -0.450423 | -0.451723 | 0.570129 |
| -0.009525 | 0.040994 | 0.581762 | 0.375822 | 0.720160 |
| -0.035621 | 0.760837 | 0.505603 | -0.121989 | -0.388086 |
| -0.044061 | 0.389138 | -0.450596 | 0.799889 | -0.075578 |
| Stationary point is a saddle point. | | | | |



The RSREG Procedure

| Coding Coefficients for the Independent Variables | | |
|---|----------------|------------|
| Factor | Subtracted off | Divided by |
| WA | 0 | 1.000000 |
| WR | 0 | 1.000000 |
| BW | 0 | 1.000000 |
| BL | 0 | 1.000000 |

| Response Surface for Variable STDFT | |
|-------------------------------------|----------|
| Response Mean | 0.065591 |
| Root MSE | 0.018546 |
| R-Square | 0.6276 |
| Coefficient of Variation | 28.2757 |

| Regression | DF | Type I Sum of Squares | R-Square | F Value | Pr > F |
|--------------|----|-----------------------|----------|---------|--------|
| Linear | 4 | 0.002702 | 0.2925 | 1.96 | 0.1763 |
| Quadratic | 1 | 0.000435 | 0.0470 | 1.26 | 0.2873 |
| Crossproduct | 6 | 0.002661 | 0.2881 | 1.29 | 0.3439 |
| Total Model | 11 | 0.005798 | 0.6276 | 1.53 | 0.2547 |

| Residual | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-------------|----|----------------|-------------|---------|--------|
| Lack of Fit | 5 | 0.002150 | 0.000430 | 1.67 | 0.2941 |
| Pure Error | 5 | 0.001289 | 0.000258 | | |
| Total Error | 10 | 0.003440 | 0.000344 | | |

| Parameter | DF | Estimate | Standard Error | t Value | Pr > t | Parameter Estimate from Coded Data |
|-----------|----|-----------|----------------|---------|---------|------------------------------------|
| Intercept | 1 | 0.058333 | 0.007571 | 7.70 | <.0001 | 0.058333 |
| WA | 1 | 0.004313 | 0.004637 | 0.93 | 0.3742 | 0.004313 |
| WR | 1 | 0.008438 | 0.004637 | 1.82 | 0.0988 | 0.008438 |
| BW | 1 | -0.005062 | 0.004637 | -1.09 | 0.3005 | -0.005062 |
| BL | 1 | 0.007313 | 0.004637 | 1.58 | 0.1458 | 0.007313 |
| WA*WA | 1 | 0.009979 | 0.008878 | 1.12 | 0.2873 | 0.009979 |
| WR*WA | 1 | 0.004688 | 0.004637 | 1.01 | 0.3359 | 0.004688 |
| WR*WR | 0 | 0 | . | . | . | 0 |
| BW*WA | 1 | -0.001813 | 0.004637 | -0.39 | 0.7041 | -0.001813 |
| BW*WR | 1 | -0.001187 | 0.004637 | -0.26 | 0.8031 | -0.001187 |
| BW*BW | 0 | 0 | . | . | . | 0 |
| BL*WA | 1 | -0.003938 | 0.004637 | -0.85 | 0.4156 | -0.003938 |
| BL*WR | 1 | 0.002687 | 0.004637 | 0.58 | 0.5750 | 0.002687 |
| BL*BW | 1 | -0.010812 | 0.004637 | -2.33 | 0.0419 | -0.010812 |
| BL*BL | 0 | 0 | . | . | . | 0 |

The RSREG Procedure

| Factor | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|----------------|-------------|---------|--------|
| WA | 5 | 0.001384 | 0.000277 | 0.80 | 0.5713 |
| WR | 4 | 0.001629 | 0.000407 | 1.18 | 0.3752 |
| BW | 4 | 0.002356 | 0.000589 | 1.71 | 0.2233 |
| BL | 4 | 0.003090 | 0.000772 | 2.25 | 0.1366 |

The RSREG Procedure
Canonical Analysis of Response Surface Based on Coded Data

| Factor | Critical Value | |
|--|----------------|-----------|
| | Coded | Uncoded |
| WA | -0.951068 | -0.951068 |
| WR | 3.278116 | 3.278116 |
| BW | 1.837435 | 1.837435 |
| BL | -0.668805 | -0.668805 |
| Predicted value at stationary point: 0.063016 | | |

| Eigenvalues | Eigenvectors | | | |
|-------------------------------------|--------------|-----------|-----------|-----------|
| | WA | WR | BW | BL |
| 0.010759 | 0.970196 | 0.194660 | -0.020696 | -0.142826 |
| 0.005727 | 0.037164 | 0.247277 | -0.681104 | 0.688165 |
| -0.000702 | -0.186384 | 0.936159 | 0.296262 | -0.033100 |
| -0.005805 | 0.150333 | -0.156740 | 0.669252 | 0.710588 |
| Stationary point is a saddle point. | | | | |

The RSREG Procedure

| Response Surface for Variable STDFT | |
|--|----------|
| Response Mean | 0.069000 |
| Root MSE | 0.023742 |
| R-Square | 0.4696 |
| Coefficient of Variation | 34.4080 |

| Regression | DF | Type I Sum of Squares | R-Square | F Value | Pr > F |
|--------------|----|--------------------------|----------|---------|--------|
| Linear | 4 | 0.000865 | 0.0543 | 0.38 | 0.8168 |
| Quadratic | 4 | 0.003961 | 0.2484 | 1.76 | 0.1901 |
| Crossproduct | 6 | 0.002661 | 0.1669 | 0.79 | 0.5937 |
| Total Model | 14 | 0.007487 | 0.4696 | 0.95 | 0.5367 |

| Residual | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-------------|----|-------------------|-------------|---------|--------|
| Lack of Fit | 10 | 0.007166 | 0.000717 | 2.78 | 0.1354 |
| Pure Error | 5 | 0.001289 | 0.000258 | | |
| Total Error | 15 | 0.008455 | 0.000564 | | |

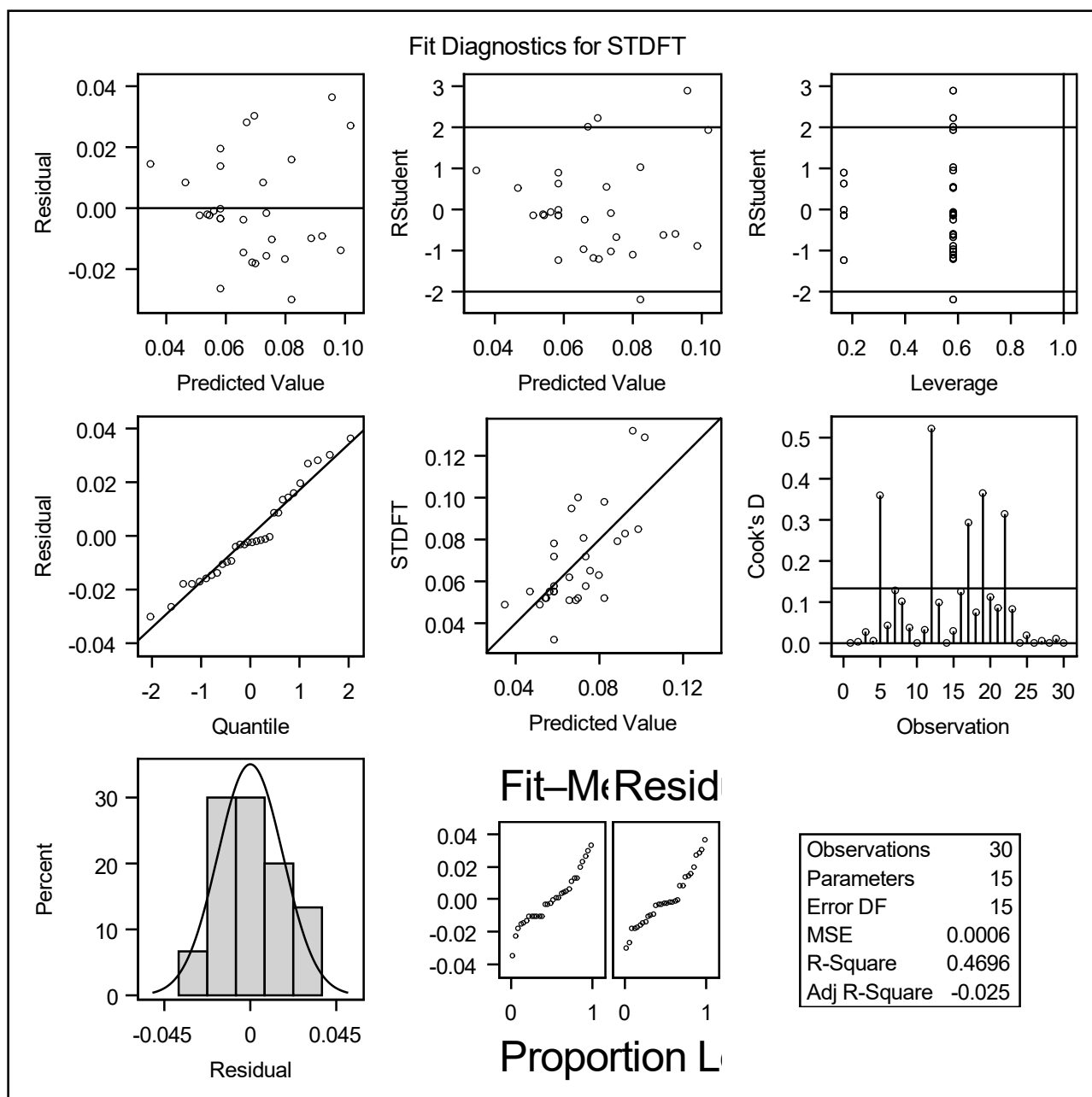
| Parameter | DF | Estimate | Standard Error | t Value | Pr > t |
|-----------|----|-----------|-------------------|---------|---------|
| Intercept | 1 | 0.058333 | 0.009692 | 6.02 | <.0001 |
| WA | 1 | -0.000792 | 0.004846 | -0.16 | 0.8724 |
| WR | 1 | 0.002542 | 0.004846 | 0.52 | 0.6076 |
| BW | 1 | 0.000292 | 0.004846 | 0.06 | 0.9528 |
| BL | 1 | 0.005375 | 0.004846 | 1.11 | 0.2848 |
| WA*WA | 1 | 0.010490 | 0.004533 | 2.31 | 0.0353 |
| WR*WA | 1 | 0.004688 | 0.005935 | 0.79 | 0.4420 |
| WR*WR | 1 | 0.004115 | 0.004533 | 0.91 | 0.3784 |
| BW*WA | 1 | -0.001813 | 0.005935 | -0.31 | 0.7643 |
| BW*WR | 1 | -0.001187 | 0.005935 | -0.20 | 0.8441 |
| BW*BW | 1 | 0.001990 | 0.004533 | 0.44 | 0.6670 |
| BL*WA | 1 | -0.003938 | 0.005935 | -0.66 | 0.5171 |
| BL*WR | 1 | 0.002687 | 0.005935 | 0.45 | 0.6572 |
| BL*BW | 1 | -0.010812 | 0.005935 | -1.82 | 0.0885 |
| BL*BL | 1 | -0.003260 | 0.004533 | -0.72 | 0.4831 |

| Factor | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|-------------------|-------------|---------|--------|
| WA | 5 | 0.003685 | 0.000737 | 1.31 | 0.3127 |
| WR | 5 | 0.001109 | 0.000222 | 0.39 | 0.8456 |
| BW | 5 | 0.002056 | 0.000411 | 0.73 | 0.6121 |
| BL | 5 | 0.003219 | 0.000644 | 1.14 | 0.3812 |

The RSREG Procedure
Canonical Analysis of Response Surface

| Factor | Critical Value |
|---|----------------|
| WA | 0.177751 |
| WR | -0.418221 |
| BW | 0.247499 |
| BL | 0.134194 |
| Predicted value at stationary point: 0.058128 | |

| Eigenvalues | Eigenvectors | | | |
|-------------------------------------|--------------|-----------|-----------|-----------|
| | WA | WR | BW | BL |
| 0.011439 | 0.950029 | 0.295461 | -0.066280 | -0.075855 |
| 0.005996 | -0.141406 | 0.423943 | -0.729541 | 0.517733 |
| 0.002924 | -0.243420 | 0.849959 | 0.448759 | -0.130120 |
| -0.007025 | 0.134889 | -0.102686 | 0.511852 | 0.842180 |
| Stationary point is a saddle point. | | | | |



The RSREG Procedure

| Response Surface for Variable LOG_STDFT | |
|--|-----------|
| Response Mean | -1.182696 |
| Root MSE | 0.138930 |
| R-Square | 0.4630 |
| Coefficient of Variation | -11.7469 |

| Regression | DF | Type I Sum of Squares | R-Square | F Value | Pr > F |
|--------------|----|--------------------------|----------|---------|--------|
| Linear | 4 | 0.029123 | 0.0540 | 0.38 | 0.8214 |
| Quadratic | 4 | 0.130322 | 0.2417 | 1.69 | 0.2049 |
| Crossproduct | 6 | 0.090206 | 0.1673 | 0.78 | 0.5991 |
| Total Model | 14 | 0.249651 | 0.4630 | 0.92 | 0.5564 |

| Residual | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-------------|----|-------------------|-------------|---------|--------|
| Lack of Fit | 10 | 0.197494 | 0.019749 | 1.07 | 0.5000 |
| Pure Error | 5 | 0.092028 | 0.018406 | | |
| Total Error | 15 | 0.289522 | 0.019301 | | |

| Parameter | DF | Estimate | Standard Error | t Value | Pr > t |
|-----------|----|-----------|-------------------|---------|---------|
| Intercept | 1 | -1.250212 | 0.056718 | -22.04 | <.0001 |
| WA | 1 | -0.002130 | 0.028359 | -0.08 | 0.9411 |
| WR | 1 | 0.013536 | 0.028359 | 0.48 | 0.6400 |
| BW | 1 | 0.003615 | 0.028359 | 0.13 | 0.9003 |
| BL | 1 | 0.031822 | 0.028359 | 1.12 | 0.2795 |
| WA*WA | 1 | 0.058750 | 0.026527 | 2.21 | 0.0427 |
| WR*WA | 1 | 0.021528 | 0.034732 | 0.62 | 0.5447 |
| WR*WR | 1 | 0.028666 | 0.026527 | 1.08 | 0.2969 |
| BW*WA | 1 | -0.007203 | 0.034732 | -0.21 | 0.8385 |
| BW*WR | 1 | -0.002794 | 0.034732 | -0.08 | 0.9370 |
| BW*BW | 1 | 0.014410 | 0.026527 | 0.54 | 0.5950 |
| BL*WA | 1 | -0.033569 | 0.034732 | -0.97 | 0.3491 |
| BL*WR | 1 | 0.010504 | 0.034732 | 0.30 | 0.7665 |
| BL*BW | 1 | -0.062270 | 0.034732 | -1.79 | 0.0932 |
| BL*BL | 1 | -0.017431 | 0.026527 | -0.66 | 0.5211 |

| Factor | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|--------|----|-------------------|-------------|---------|--------|
| WA | 5 | 0.121055 | 0.024211 | 1.25 | 0.3334 |
| WR | 5 | 0.036242 | 0.007248 | 0.38 | 0.8576 |
| BW | 5 | 0.069005 | 0.013801 | 0.72 | 0.6218 |
| BL | 5 | 0.114473 | 0.022895 | 1.19 | 0.3617 |

The RSREG Procedure
Canonical Analysis of Response Surface

| Factor | Critical Value |
|--|----------------|
| WA | 0.144572 |
| WR | -0.310528 |
| BW | 0.277786 |
| BL | 0.183831 |
| Predicted value at stationary point: -1.249040 | |

| Eigenvalues | Eigenvectors | | | |
|-------------------------------------|--------------|-----------|-----------|-----------|
| | WA | WR | BW | BL |
| 0.064879 | 0.947069 | 0.251603 | 0.045253 | -0.194188 |
| 0.035715 | -0.000115 | 0.497359 | -0.726203 | 0.474619 |
| 0.023426 | -0.271312 | 0.826201 | 0.472713 | -0.142565 |
| -0.039625 | 0.171613 | -0.081989 | 0.497115 | 0.846583 |
| Stationary point is a saddle point. | | | | |

The RSREG Procedure

Fit Diagnostics for LOG_STDFT

