SHEET1

**Regression Analysis: ΔL versus T13-T15, (T0-T15)^2, (T13-T15)^2**

**Regression Equation**

|  |  |  |
| --- | --- | --- |
| ΔL | = | -20.03 + 3.673 (T13-T15) + 0.03930 (T0-T15)^2 - 0.1315 (T13-T15)^2 |

**Coefficients**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Term** | **Coef** | **SE Coef** | **T-Value** | **P-Value** | **VIF** |
| Constant | -20.03 | 3.39 | -5.90 | 0.000 |  |
| T13-T15 | 3.673 | 0.859 | 4.28 | 0.000 | 229.92 |
| (T0-T15)^2 | 0.03930 | 0.00518 | 7.59 | 0.000 | 5.08 |
| (T13-T15)^2 | -0.1315 | 0.0434 | -3.03 | 0.003 | 198.31 |

**Model Summary**

|  |  |  |  |
| --- | --- | --- | --- |
| **S** | **R-sq** | **R-sq(adj)** | **R-sq(pred)** |
| 0.818680 | 95.21% | 95.02% | 94.32% |

**Analysis of Variance**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Adj SS** | **Adj MS** | **F-Value** | **P-Value** |
| Regression | 3 | 999.44 | 333.147 | 497.06 | 0.000 |
| T13-T15 | 1 | 12.27 | 12.265 | 18.30 | 0.000 |
| (T0-T15)^2 | 1 | 38.62 | 38.620 | 57.62 | 0.000 |
| (T13-T15)^2 | 1 | 6.15 | 6.153 | 9.18 | 0.003 |
| Error | 75 | 50.27 | 0.670 |  |  |
| Total | 78 | 1049.71 |  |  |  |

**Fits and Diagnostics for Unusual Observations**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Obs** | **ΔL** | **Fit** | **Resid** | **Std Resid** |  |  |
| 1 | 0.000 | -1.649 | 1.649 | 2.66 | R | X |
| 2 | 0.932 | 0.674 | 0.258 | 0.36 |  | X |
| 3 | 2.682 | 2.552 | 0.131 | 0.18 |  | X |
| 4 | 3.931 | 3.960 | -0.029 | -0.04 |  | X |
| 6 | 6.720 | 8.359 | -1.639 | -2.12 | R |  |
| 23 | 16.598 | 14.863 | 1.734 | 2.14 | R |  |
| 28 | 17.117 | 15.240 | 1.877 | 2.31 | R |  |
| 31 | 17.117 | 15.253 | 1.864 | 2.29 | R |  |

*R  Large residual  
X  Unusual X*

