**Uncertainty Analysis for LBLOCA Analysis of APR-1400 Design**

**by MK CHO**

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1. Introduction

(test)What is Front Matter?

1. Uncertainty Quantification Input Options

|  |  |
| --- | --- |
| SNAP Version | 3.0.2 |
| Uncertainty Plug-in Version | 1.6.0 |
| RELAP5 Analysis Code | 6.2.2 |
| Model Name | Steady State Calculation for LBLOCA Analysis of APR-1400 Design |
| Model File | C:\Users\k732cmk\Desktop\200320\_mkcho\_KNS\_mobility\APR1400-200102a\_RCP\_control\_mkcho200427\_KNS.med |
| Error Handling | Ignore model check errors |
| Random Seed | 926573 (system-generated) |
| Sampling Method | Monte-Carlo |
| Order Statistics | disabled |
| Probability Level | 95.0% |
| Confidence Level | 95.0% |
| Number of Required Tasks | 93 |
| Number of Requested Tasks | 200 |

Model Variables and Distributions

| Distribution Name | Distribution Type | Application Rule | Distribution Parameters | Model Variables | Nominal |
| --- | --- | --- | --- | --- | --- |
| d01 | Uniform | Factor | a:0.4, b:1.5 | v01\_GapConductance | 1.0 |
| d02 | Normal | Factor | μ:1.0, σ:0.051, [-∞, ∞] | v02\_FuelConductivity | 1.0 |
| d03 | Normal | Factor | μ:1.0, σ:6.8e-3, [-∞, ∞] | v03\_CorePower | 1.0 |
| d04 | Normal | Factor | μ:1.0, σ:0.022, [-∞, ∞] | v04\_DecayHeat | 1.0 |
| d05 | Normal | Factor | μ:0.998, σ:0.1306, [-∞, ∞] | v05\_DittusBoelterLiqConv | 0.998 |
| d06 | Normal | Factor | μ:0.995, σ:0.155, [-∞, ∞] | v06\_ChenNucleateBoiling | 0.995 |
| d07 | Normal | Factor | μ:0.985, σ:0.2715, [-∞, ∞] | v07\_GroeneveldCHF | 0.985 |
| d08 | Normal | Factor | μ:1.0, σ:0.1535, [-∞, ∞] | v08\_ChenTransitionBoiling | 1.0 |
| d09 | Normal | Factor | μ:1.004, σ:0.192, [-∞, ∞] | v09\_BromleyFilmBoiling | 1.004 |
| d10 | Normal | Factor | μ:0.947, σ:0.1306, [-∞, ∞] | v10\_DittusBoelterVapConv | 0.998 |
| d11 | Normal | Scalar | μ:1.0, σ:0.31, [-∞, ∞] | v11\_ZuberCHFcorrelation | Replacement |
| d12 | Lognormal | Factor | μ:0.019802627, σ:0.16004258, (4.9E-324, 3.4028235E38] | v12\_WesimannTBcorrelation | 1.0 |
| d13 | Normal | Factor | μ:1.0, σ:0.125, [-∞, ∞] | v13\_QFBromleycorrelation | 1.0 |
| d14 | Normal | Factor | μ:1.0, σ:0.25, [-∞, ∞] | v14\_Forslund\_RohsenoowFBcorrelation | 1.0 |
| d15 | Normal | Factor | μ:1.0, σ:0.25, [-∞, ∞] | v15\_RefloodSuperheatedVaporcorrelation | 1.0 |
| d16 | Normal | Factor | μ:0.947, σ:0.0728, [-∞, ∞] | v16\_BreakCD | 1.0 |
| d17 | Uniform | Factor | a:0.0, b:1.0 | v17\_Pump2pHead | 1.0 |
| d18 | Uniform | Factor | a:0.0, b:1.0 | v18\_Pump2pTorque | 1.0 |
| d19 | Uniform | Scalar | a:4.03e6, b:4.46e6 | v19\_SITpressure | Replacement |
| d20 | Uniform | Factor | a:0.861, b:1.037 | v20\_SITinventory\_level | 1.0 |
| d21 | Uniform | Scalar | a:294.1, b:321.9 | v21\_SITtemperature | Replacement |
| d22 | Uniform | Scalar | a:283.0, b:321.89 | v22\_IRWSTtemperature | Replacement |
| d23 | Normal | Factor | μ:0.91845, σ:0.175293, [-∞, ∞] | v23\_DryWetCriteria | 1.0 |
| d24 | Normal | Factor | μ:0.33605, σ:0.3556, [-∞, ∞] | v24\_WeberNumber | 1.0 |
| d25 | Normal | Factor | μ:1.26494, σ:0.3058, [-∞, ∞] | v25\_DropletInterfacialHeatTransfer | 1.0 |
| d26 | Uniform | Factor | a:0.9, b:1.1 | v26\_BurstTemperatureDial | 1.0 |
| d27 | Uniform | Factor | a:0.3, b:1.7 | v27\_BurstStrainDial | 1.0 |
| d28 | Normal | Factor | μ:1.0, σ:0.0125, [-∞, ∞] | v28\_OxidationDial | 1.0 |
| d29 | Uniform | Scalar | a:0.0, b:3.7364e-5 | v01\_1\_OxideThickness | Replacement |

Application Information

The following applications were used in this job stream.

| Step | Application Info |
| --- | --- |
| SS | Name: MARSKS15\_148 |
| Description: The Reactor Excursion and Leak Analysis Program. |
| Location: D:\00 codes\99 MARS\MARS-KS1.5\_bin\_SVN148\_Release\MARS\_KS1.5\_bin\_SVN148\_Release.exe |
| SS | Name: MARSKS15\_148 |
| Description: The Reactor Excursion and Leak Analysis Program. |
| Location: D:\00 codes\99 MARS\MARS-KS1.5\_bin\_SVN148\_Release\MARS\_KS1.5\_bin\_SVN148\_Release.exe |
| APTextract | Name: Extract\_Data |
| Description: AptPlot Data Extraction |
| Location: C:\snap\Aptplot\bin\AptBatch.exe |
| TR | Name: MARSKS15\_148 |
| Description: The Reactor Excursion and Leak Analysis Program. |
| Location: D:\00 codes\99 MARS\MARS-KS1.5\_bin\_SVN148\_Release\MARS\_KS1.5\_bin\_SVN148\_Release.exe |
| TR | Name: MARSKS15\_148 |
| Description: The Reactor Excursion and Leak Analysis Program. |
| Location: D:\00 codes\99 MARS\MARS-KS1.5\_bin\_SVN148\_Release\MARS\_KS1.5\_bin\_SVN148\_Release.exe |
| python | Name: Python |
| Description: Python is a powerful, easy to read programming language that provides constructs intended to enable clear programs on both a small and large scale. The Python Script job step allows Python programs to be executed as part of a SNAP Job Stream. |
| Location: ${SNAPINSTALL}\lib\jython.jar |

* 1. Figure of Merit (FOM) Definitions

The following two figures of merit are defined for the uncertainty analysis:

* R\_critical [lower limit]
* PCT

1. Variate and Response Data

An initial DAKOTA run was performed using the specified input parameters to generate a set of variates for each task. The individual tasks were then performed and the figures of merit were extracted from the completed calculations.

A total of 93 tasks are required to calculate the 0 order statistic for the specified FOMs with a 95.0% probability and a 95.0% confidence level. 200 tasks were completed successfully.

PCT vs. Iteration Index

variate2614683785337778857.emf alt text

R\_critical vs. Iteration Index

variate5033612961481896400.emf alt text

R\_critical vs. PCT

variate2509872843620703447.emf alt text

PCT vs. d01 (v01\_GapConductance)

variate8227042892168423324.emf alt text

PCT vs. d02 (v02\_FuelConductivity)

variate6029505766010804790.emf alt text

PCT vs. d03 (v03\_CorePower)

variate2945022009906507485.emf alt text

PCT vs. d04 (v04\_DecayHeat)

variate3803024944713519374.emf alt text

PCT vs. d05 (v05\_DittusBoelterLiqConv [\*0.998])

variate2201998988798963779.emf alt text

PCT vs. d06 (v06\_ChenNucleateBoiling [\*0.995])

variate4648410929401734593.emf alt text

PCT vs. d07 (v07\_GroeneveldCHF [\*0.985])

variate7198232986289407634.emf alt text

PCT vs. d08 (v08\_ChenTransitionBoiling)

variate9212608881165857411.emf alt text

PCT vs. d09 (v09\_BromleyFilmBoiling [\*1.004])

variate8600606264662743845.emf alt text

PCT vs. d10 (v10\_DittusBoelterVapConv [\*0.998])

variate3885760716203860215.emf alt text

PCT vs. d11 (v11\_ZuberCHFcorrelation -)

variate5436534218276920046.emf alt text

PCT vs. d12 (v12\_WesimannTBcorrelation)

variate2860525607228595539.emf alt text

PCT vs. d13 (v13\_QFBromleycorrelation)

variate7891222433409779020.emf alt text

PCT vs. d14 (v14\_Forslund\_RohsenoowFBcorrelation)

variate101746563320442866.emf alt text

PCT vs. d15 (v15\_RefloodSuperheatedVaporcorrelation)

variate5497221946879850836.emf alt text

PCT vs. d16 (v16\_BreakCD)

variate4442059368565128536.emf alt text

PCT vs. d17 (v17\_Pump2pHead)

variate2826199374633792100.emf alt text

PCT vs. d18 (v18\_Pump2pTorque)

variate550763678446873983.emf alt text

PCT vs. d19 (v19\_SITpressure pa)

variate4619333476255778551.emf alt text

PCT vs. d20 (v20\_SITinventory\_level)

variate6377511049731117680.emf alt text

PCT vs. d21 (v21\_SITtemperature K)

variate4776788352808224570.emf alt text

PCT vs. d22 (v22\_IRWSTtemperature K)

variate1952052734964348407.emf alt text

PCT vs. d23 (v23\_DryWetCriteria)

variate658212774081122691.emf alt text

PCT vs. d24 (v24\_WeberNumber)

variate2061547749366341724.emf alt text

PCT vs. d25 (v25\_DropletInterfacialHeatTransfer)

variate2420977699044113970.emf alt text

PCT vs. d26 (v26\_BurstTemperatureDial)

variate3791809398815677521.emf alt text

PCT vs. d27 (v27\_BurstStrainDial)

variate1147888314912926912.emf alt text

PCT vs. d28 (v28\_OxidationDial)

variate6166726923439139371.emf alt text

PCT vs. d29 (v01\_1\_OxideThickness m)

variate5633232188066710651.emf alt text

R\_critical vs. d01 (v01\_GapConductance)

variate6074861520581223978.emf alt text

R\_critical vs. d02 (v02\_FuelConductivity)

variate1406246689044923588.emf alt text

R\_critical vs. d03 (v03\_CorePower)

variate7851852201334063770.emf alt text

R\_critical vs. d04 (v04\_DecayHeat)

variate6639272038992518915.emf alt text

R\_critical vs. d05 (v05\_DittusBoelterLiqConv [\*0.998])

variate5691626184442477728.emf alt text

R\_critical vs. d06 (v06\_ChenNucleateBoiling [\*0.995])

variate1496506560457659804.emf alt text

R\_critical vs. d07 (v07\_GroeneveldCHF [\*0.985])

variate5328411880707730375.emf alt text

R\_critical vs. d08 (v08\_ChenTransitionBoiling)

variate6085793299844088994.emf alt text

R\_critical vs. d09 (v09\_BromleyFilmBoiling [\*1.004])

variate6854554729451681298.emf alt text

R\_critical vs. d10 (v10\_DittusBoelterVapConv [\*0.998])

variate4953315798620738719.emf alt text

R\_critical vs. d11 (v11\_ZuberCHFcorrelation -)

variate2965756375997891876.emf alt text

R\_critical vs. d12 (v12\_WesimannTBcorrelation)

variate2631929226219539060.emf alt text

R\_critical vs. d13 (v13\_QFBromleycorrelation)

variate6071078361113038314.emf alt text

R\_critical vs. d14 (v14\_Forslund\_RohsenoowFBcorrelation)

variate1693642560400140151.emf alt text

R\_critical vs. d15 (v15\_RefloodSuperheatedVaporcorrelation)

variate6070333385151729115.emf alt text

R\_critical vs. d16 (v16\_BreakCD)

variate7005893348589828522.emf alt text

R\_critical vs. d17 (v17\_Pump2pHead)

variate6627718317553392258.emf alt text

R\_critical vs. d18 (v18\_Pump2pTorque)

variate3819160412546667258.emf alt text

R\_critical vs. d19 (v19\_SITpressure pa)

variate4410013937896009826.emf alt text

R\_critical vs. d20 (v20\_SITinventory\_level)

variate8194626755699164892.emf alt text

R\_critical vs. d21 (v21\_SITtemperature K)

variate6652682110843410248.emf alt text

R\_critical vs. d22 (v22\_IRWSTtemperature K)

variate8357580501750910853.emf alt text

R\_critical vs. d23 (v23\_DryWetCriteria)

variate8578364442197456844.emf alt text

R\_critical vs. d24 (v24\_WeberNumber)

variate5569175992216179069.emf alt text

R\_critical vs. d25 (v25\_DropletInterfacialHeatTransfer)

variate2826876516707194541.emf alt text

R\_critical vs. d26 (v26\_BurstTemperatureDial)

variate464453069735395442.emf alt text

R\_critical vs. d27 (v27\_BurstStrainDial)

variate1921384046229241930.emf alt text

R\_critical vs. d28 (v28\_OxidationDial)

variate4249896517117991023.emf alt text

R\_critical vs. d29 (v01\_1\_OxideThickness m)

variate6448464431374045260.emf alt text

The variates and FOM values for each task are tabulated below:

Variate Data Table [1 of 6]

| Task # | d02 (v02\_FuelConductivity) | d03 (v03\_CorePower) | d04 (v04\_DecayHeat) | d05 (v05\_DittusBoelterLiqConv [\*0.998]) | d06 (v06\_ChenNucleateBoiling [\*0.995]) |
| --- | --- | --- | --- | --- | --- |
| 1 | 0.95123 | 0.99314 | 0.99996 | 0.88901 | 0.67118 |
| 2 | 1.01262 | 0.99661 | 1.00229 | 0.94466 | 1.27944 |
| 3 | 1.04281 | 0.99429 | 0.9962 | 1.19755 | 1.20317 |
| 4 | 0.98688 | 0.99775 | 0.98446 | 0.7525 | 1.20205 |
| 5 | 0.99075 | 1.01755 | 0.9908 | 1.03411 | 0.81198 |
| 6 | 0.97394 | 0.98995 | 1.03842 | 0.86133 | 0.93601 |
| 7 | 1.0389 | 1.00175 | 1.00392 | 1.16451 | 1.02213 |
| 8 | 1.04022 | 0.98972 | 1.02539 | 0.82988 | 1.13789 |
| 9 | 1.00733 | 1.01199 | 0.98515 | 0.74586 | 1.15185 |
| 10 | 1.00708 | 0.998 | 1.01836 | 1.33067 | 0.68925 |
| 11 | 0.91292 | 0.9991 | 1.01408 | 0.98725 | 0.75249 |
| 12 | 0.97686 | 1.00087 | 1.011 | 0.91957 | 0.94896 |
| 13 | 0.95009 | 0.98986 | 1.02547 | 1.08857 | 0.74128 |
| 14 | 1.00099 | 1.00032 | 1.01663 | 1.01102 | 1.09112 |
| 15 | 0.99583 | 0.99143 | 1.00989 | 1.04371 | 1.06605 |
| 16 | 1.03771 | 1.00893 | 1.03731 | 0.75833 | 1.05199 |
| 17 | 1.01348 | 0.99412 | 0.9785 | 1.13339 | 0.87059 |
| 18 | 0.93893 | 1.00815 | 1.01488 | 1.03762 | 0.94149 |
| 19 | 1.06593 | 1.00973 | 0.96627 | 1.09709 | 1.20037 |
| 20 | 1.00828 | 1.00354 | 1.01138 | 1.04772 | 0.97493 |
| 21 | 0.97286 | 0.99848 | 0.9623 | 0.81392 | 0.87525 |
| 22 | 1.05119 | 0.99772 | 0.97942 | 0.9949 | 1.05751 |
| 23 | 1.01964 | 0.98975 | 1.01279 | 1.03441 | 0.99989 |
| 24 | 0.90552 | 0.99364 | 0.99887 | 1.06389 | 1.00846 |
| 25 | 0.95259 | 1.00241 | 0.98838 | 0.81269 | 0.83499 |
| 26 | 1.00673 | 0.99785 | 0.97634 | 0.92712 | 1.33126 |
| 27 | 0.96072 | 1.00863 | 0.99497 | 1.16295 | 1.29011 |
| 28 | 0.95413 | 1.00229 | 1.02309 | 1.01992 | 0.9916 |
| 29 | 0.92866 | 0.99842 | 1.02474 | 0.99641 | 1.44966 |
| 30 | 1.1187 | 0.99881 | 1.00488 | 0.98768 | 0.89107 |
| 31 | 0.93203 | 1.01615 | 0.98209 | 1.10453 | 0.95644 |
| 32 | 1.04169 | 0.99703 | 0.99476 | 0.99612 | 0.99793 |
| 33 | 1.02978 | 0.99553 | 1.00008 | 1.18173 | 0.77858 |
| 34 | 0.98147 | 0.98568 | 0.98159 | 1.15938 | 1.17073 |
| 35 | 0.95639 | 0.99792 | 1.00146 | 1.18019 | 1.04441 |
| 36 | 1.03539 | 0.99888 | 0.9701 | 1.08394 | 0.90526 |
| 37 | 1.00367 | 0.9927 | 0.96701 | 1.12237 | 0.85238 |
| 38 | 1.03359 | 1.00501 | 1.03312 | 0.8498 | 0.86178 |
| 39 | 0.95067 | 1.00874 | 1.0078 | 1.00804 | 1.42044 |
| 40 | 0.92976 | 1.00089 | 0.99809 | 1.1426 | 0.99413 |
| 41 | 0.96712 | 0.99722 | 1.03206 | 1.04269 | 0.92367 |
| 42 | 0.99115 | 1.00051 | 1.03134 | 0.90804 | 0.71637 |
| 43 | 1.01574 | 1.00629 | 0.98396 | 1.11041 | 1.01941 |
| 44 | 1.02191 | 1.00106 | 1.06182 | 1.05664 | 1.11659 |
| 45 | 1.00131 | 0.99324 | 0.99914 | 1.00814 | 1.11676 |
| 46 | 1.06927 | 0.99328 | 1.01303 | 1.20366 | 0.8908 |
| 47 | 0.98074 | 1.01004 | 1.04166 | 1.00339 | 0.89594 |
| 48 | 1.00694 | 0.99936 | 1.02716 | 0.92841 | 0.78315 |
| 49 | 1.00122 | 0.99709 | 1.02423 | 0.87389 | 0.869 |
| 50 | 1.01015 | 0.99564 | 0.99264 | 0.92578 | 1.02714 |
| 51 | 0.98192 | 0.98735 | 1.01713 | 0.78368 | 1.08778 |
| 52 | 0.94627 | 1.00275 | 0.97013 | 0.78232 | 1.04969 |
| 53 | 0.97812 | 0.99046 | 0.92188 | 0.92315 | 0.88601 |
| 54 | 0.99842 | 0.99637 | 1.01248 | 1.01397 | 1.08538 |
| 55 | 1.10577 | 1.00049 | 1.02878 | 1.14089 | 1.17539 |
| 56 | 0.88281 | 1.01025 | 0.97691 | 1.09217 | 0.96925 |
| 57 | 0.97427 | 1.00168 | 1.03862 | 1.16932 | 1.01817 |
| 58 | 1.05382 | 0.98807 | 0.99051 | 0.72311 | 0.91004 |
| 59 | 0.96306 | 1.01565 | 1.04294 | 1.16763 | 1.08481 |
| 60 | 1.0066 | 0.99022 | 0.98953 | 1.14762 | 0.97872 |
| 61 | 1.0221 | 0.99307 | 1.0193 | 1.00945 | 0.87395 |
| 62 | 0.9909 | 0.99966 | 1.01417 | 0.94918 | 0.75937 |
| 63 | 1.03799 | 0.99522 | 0.99579 | 1.1312 | 0.84502 |
| 64 | 1.01292 | 0.99315 | 1.01865 | 1.12418 | 0.8813 |
| 65 | 0.95264 | 0.99548 | 0.95624 | 0.87977 | 1.11819 |
| 66 | 0.99353 | 1.0033 | 1.00753 | 1.09971 | 1.06889 |
| 67 | 1.03974 | 1.00837 | 1.00034 | 1.12451 | 1.11278 |
| 68 | 1.03341 | 0.99955 | 0.99167 | 1.14578 | 1.0695 |
| 69 | 1.0304 | 1.00253 | 1.04786 | 0.96632 | 0.91774 |
| 70 | 1.04342 | 1.00596 | 1.00804 | 1.18254 | 1.04246 |
| 71 | 1.05157 | 1.00207 | 0.97746 | 1.2517 | 1.05828 |
| 72 | 0.94468 | 1.00371 | 0.99243 | 1.07781 | 0.93157 |
| 73 | 0.98841 | 1.00295 | 1.01033 | 1.11333 | 1.22662 |
| 74 | 0.97956 | 1.0036 | 0.99237 | 1.2001 | 1.0642 |
| 75 | 1.0258 | 1.00279 | 0.99623 | 0.77221 | 1.05157 |
| 76 | 0.96596 | 1.0116 | 0.99022 | 1.20287 | 1.17938 |
| 77 | 0.92249 | 0.99425 | 1.00793 | 0.87173 | 1.04722 |
| 78 | 0.97816 | 0.99999 | 1.00786 | 1.0351 | 1.06356 |
| 79 | 0.95632 | 1.00491 | 1.02173 | 1.02793 | 1.04686 |
| 80 | 1.0026 | 1.00226 | 0.96552 | 1.10592 | 0.88138 |
| 81 | 1.00911 | 0.99625 | 1.01447 | 1.04007 | 1.25243 |
| 82 | 0.96782 | 1.00776 | 0.97801 | 1.01825 | 1.02066 |
| 83 | 1.02097 | 0.99111 | 0.97176 | 1.17423 | 1.04971 |
| 84 | 0.92407 | 1.00013 | 1.0185 | 1.1822 | 1.05599 |
| 85 | 1.04097 | 0.99187 | 0.98861 | 0.82905 | 0.90597 |
| 86 | 1.10242 | 0.99401 | 1.01988 | 0.85857 | 0.86967 |
| 87 | 0.92728 | 0.99999 | 1.0078 | 1.12542 | 0.99364 |
| 88 | 0.94832 | 0.99891 | 1.00417 | 0.8528 | 1.12635 |
| 89 | 1.12148 | 1.00174 | 0.99293 | 0.91649 | 1.09598 |
| 90 | 1.07852 | 0.99513 | 1.00851 | 1.02452 | 0.90309 |
| 91 | 1.03575 | 1.01004 | 0.95713 | 0.94491 | 1.24933 |
| 92 | 1.00115 | 1.00047 | 1.01983 | 1.28412 | 1.09091 |
| 93 | 0.99348 | 0.99904 | 1.00238 | 0.96557 | 0.73254 |
| 94 | 1.01861 | 1.00852 | 1.03174 | 1.01901 | 0.95294 |
| 95 | 1.01402 | 0.9953 | 0.98513 | 0.94235 | 0.87192 |
| 96 | 0.99413 | 0.99221 | 0.99846 | 1.04613 | 0.98339 |
| 97 | 1.0946 | 0.99413 | 1.00965 | 0.85274 | 0.81325 |
| 98 | 0.96094 | 1.00923 | 0.97868 | 0.95437 | 0.84606 |
| 99 | 1.00291 | 0.99428 | 0.99925 | 0.97866 | 1.02313 |
| 100 | 1.00089 | 0.98648 | 1.0129 | 1.0821 | 1.21786 |
| 101 | 1.01782 | 1.00736 | 0.98741 | 1.10337 | 1.2883 |
| 102 | 1.01053 | 0.99966 | 1.00825 | 0.99013 | 0.93492 |
| 103 | 0.9293 | 0.99325 | 1.00529 | 0.90784 | 1.10621 |
| 104 | 1.01001 | 0.99681 | 1.04113 | 0.94822 | 0.87003 |
| 105 | 0.96394 | 0.9898 | 1.00985 | 1.04649 | 0.84028 |
| 106 | 0.99933 | 0.99206 | 1.00694 | 1.05818 | 1.08806 |
| 107 | 0.96848 | 1.00384 | 0.97445 | 0.98027 | 0.70486 |
| 108 | 1.03196 | 0.99914 | 0.99872 | 1.06715 | 1.12847 |
| 109 | 0.92847 | 0.98942 | 1.00653 | 1.1081 | 0.95385 |
| 110 | 0.93691 | 1.00318 | 1.02253 | 0.80557 | 1.06015 |
| 111 | 1.03964 | 0.99419 | 0.9743 | 0.80752 | 0.8033 |
| 112 | 0.9829 | 0.99677 | 0.99452 | 0.79602 | 0.89117 |
| 113 | 0.94449 | 1.00038 | 0.96946 | 0.84347 | 1.18808 |
| 114 | 1.02812 | 1.00296 | 0.97845 | 0.92886 | 0.74319 |
| 115 | 0.9887 | 1.00142 | 1.01524 | 1.04879 | 1.03518 |
| 116 | 1.03929 | 1.00735 | 1.03498 | 1.04806 | 1.08509 |
| 117 | 0.91236 | 0.99744 | 0.97648 | 0.98784 | 0.84944 |
| 118 | 1.0578 | 0.99175 | 1.01919 | 0.95276 | 0.91462 |
| 119 | 0.99534 | 0.998 | 0.98516 | 0.9073 | 0.98497 |
| 120 | 1.01964 | 0.9965 | 0.96714 | 1.16489 | 0.9684 |
| 121 | 0.97128 | 0.99362 | 0.99933 | 1.04004 | 1.13395 |
| 122 | 0.99941 | 1.0017 | 0.97981 | 1.08552 | 0.87278 |
| 123 | 1.02755 | 1.0101 | 1.01723 | 0.80576 | 0.84004 |
| 124 | 1.06515 | 1.01174 | 1.02003 | 0.80224 | 1.17252 |
| 125 | 1.01974 | 1.0054 | 1.01115 | 1.21704 | 1.126 |
| 126 | 0.94415 | 0.99906 | 1.00673 | 1.23229 | 0.47113 |
| 127 | 1.02508 | 0.99924 | 1.01641 | 1.09213 | 1.04796 |
| 128 | 1.02395 | 1.01091 | 1.00026 | 0.96451 | 1.09846 |
| 129 | 1.00413 | 1.00801 | 1.02845 | 1.22386 | 0.78068 |
| 130 | 1.10964 | 1.00119 | 0.98455 | 1.15088 | 0.95713 |
| 131 | 1.01821 | 0.99646 | 1.0209 | 0.99339 | 0.88307 |
| 132 | 1.04425 | 0.99103 | 0.99748 | 0.97606 | 0.92109 |
| 133 | 0.97627 | 1.01028 | 0.98579 | 1.07263 | 0.80862 |
| 134 | 0.90506 | 0.99405 | 1.03159 | 0.83463 | 1.25974 |
| 135 | 0.96173 | 0.99502 | 0.96098 | 1.02187 | 0.90481 |
| 136 | 0.9842 | 0.99857 | 1.02325 | 0.63854 | 0.94543 |
| 137 | 0.99214 | 1.01178 | 0.99499 | 0.90362 | 1.10342 |
| 138 | 0.90936 | 0.99321 | 0.96817 | 0.92616 | 0.84686 |
| 139 | 1.0305 | 0.99937 | 1.02876 | 1.04511 | 1.34672 |
| 140 | 1.01671 | 1.0054 | 0.99439 | 1.01306 | 1.26104 |
| 141 | 1.04569 | 1.00691 | 0.99296 | 0.86938 | 0.94864 |
| 142 | 1.02269 | 0.99958 | 0.99035 | 1.13536 | 1.06403 |
| 143 | 1.03288 | 1.00403 | 0.96868 | 0.90668 | 0.94543 |
| 144 | 0.98529 | 1.00121 | 0.99068 | 0.99766 | 1.12732 |
| 145 | 0.99394 | 1.0006 | 1.0019 | 1.05215 | 0.75777 |
| 146 | 0.99724 | 1.00131 | 0.97689 | 0.98162 | 0.80064 |
| 147 | 0.99676 | 1.00546 | 0.98358 | 1.06578 | 0.8949 |
| 148 | 1.01551 | 0.99497 | 1.04204 | 0.84468 | 1.25105 |
| 149 | 1.00222 | 1.00195 | 1.01299 | 1.02603 | 0.73436 |
| 150 | 1.03193 | 0.99442 | 1.01183 | 0.76822 | 1.10189 |
| 151 | 0.99395 | 1.00367 | 0.99102 | 1.13448 | 1.04315 |
| 152 | 0.93388 | 1.00539 | 1.00567 | 1.03367 | 0.88744 |
| 153 | 1.07327 | 0.99082 | 0.9789 | 1.24257 | 1.32825 |
| 154 | 0.9973 | 0.99399 | 0.97384 | 1.21514 | 0.87145 |
| 155 | 0.93361 | 1.00075 | 0.9966 | 0.80573 | 1.16735 |
| 156 | 1.02779 | 0.99875 | 1.00563 | 0.96944 | 0.54601 |
| 157 | 0.9961 | 1.00457 | 0.98999 | 1.00135 | 1.00648 |
| 158 | 1.03721 | 0.99589 | 0.99025 | 0.91968 | 1.17615 |
| 159 | 0.97723 | 0.99452 | 1.01585 | 1.20002 | 0.57163 |
| 160 | 0.99807 | 0.99632 | 0.99639 | 0.84658 | 0.92853 |
| 161 | 1.00905 | 1.00662 | 0.98993 | 1.0185 | 1.14916 |
| 162 | 0.9361 | 1.00389 | 1.02606 | 1.12287 | 0.83436 |
| 163 | 0.97664 | 0.9995 | 0.97061 | 1.05008 | 0.92899 |
| 164 | 1.00846 | 1.00508 | 1.00134 | 1.07576 | 0.75566 |
| 165 | 0.96721 | 0.99869 | 1.01731 | 0.69794 | 1.21341 |
| 166 | 1.01616 | 0.9995 | 1.01731 | 1.20175 | 1.07148 |
| 167 | 0.97765 | 0.99442 | 1.01234 | 0.93129 | 0.98289 |
| 168 | 0.96525 | 0.9918 | 1.00982 | 0.84489 | 1.04756 |
| 169 | 0.94755 | 0.99525 | 1.00148 | 1.0322 | 1.14819 |
| 170 | 0.94722 | 1.00537 | 0.97484 | 0.76521 | 0.92368 |
| 171 | 1.00281 | 1.00218 | 0.99006 | 0.70894 | 0.9028 |
| 172 | 0.97231 | 0.99242 | 0.98111 | 0.92167 | 1.24268 |
| 173 | 0.94559 | 0.99 | 0.96635 | 1.00353 | 0.72548 |
| 174 | 1.00096 | 1.00115 | 1.00559 | 0.88545 | 0.67563 |
| 175 | 0.97364 | 0.99992 | 0.9888 | 1.00494 | 0.98778 |
| 176 | 0.9869 | 0.99907 | 1.03377 | 0.70132 | 1.1983 |
| 177 | 0.94641 | 1.00136 | 0.98356 | 1.08808 | 1.14847 |
| 178 | 1.08044 | 0.99403 | 0.94511 | 1.12599 | 1.12566 |
| 179 | 1.01086 | 1.01637 | 1.00784 | 0.8656 | 0.85804 |
| 180 | 0.96838 | 1.00561 | 0.9968 | 0.71749 | 0.90237 |
| 181 | 1.08898 | 1.00104 | 1.00346 | 1.06142 | 0.66974 |
| 182 | 0.9338 | 0.98353 | 1.00869 | 0.95255 | 0.99862 |
| 183 | 0.89548 | 0.99067 | 1.00094 | 1.35278 | 1.13003 |
| 184 | 1.07023 | 1.00293 | 0.98449 | 0.84198 | 1.17525 |
| 185 | 0.97242 | 0.99824 | 1.0273 | 1.26394 | 0.90636 |
| 186 | 0.99666 | 0.99583 | 1.00308 | 1.11333 | 1.01579 |
| 187 | 1.03732 | 1.00337 | 0.98645 | 0.85486 | 1.00097 |
| 188 | 0.99909 | 1.00037 | 1.0026 | 1.35382 | 0.94403 |
| 189 | 1.05555 | 1.00309 | 0.97916 | 1.05324 | 1.07221 |
| 190 | 0.89511 | 1.01328 | 0.99034 | 0.8953 | 0.9525 |
| 191 | 1.06499 | 1.00553 | 1.00565 | 1.30601 | 0.87823 |
| 192 | 0.91185 | 0.99937 | 0.99984 | 1.07231 | 1.06012 |
| 193 | 1.00603 | 0.98938 | 0.97783 | 0.8912 | 1.2074 |
| 194 | 1.06493 | 1.00035 | 0.997 | 1.19294 | 1.03367 |
| 195 | 1.12998 | 1.00058 | 0.98265 | 0.7517 | 0.82014 |
| 196 | 1.02468 | 0.99773 | 0.99759 | 0.94992 | 0.95151 |
| 197 | 0.98616 | 1.01008 | 0.98809 | 0.90183 | 0.86583 |
| 198 | 1.05681 | 0.99693 | 1.01272 | 0.97091 | 1.0457 |
| 199 | 1.04022 | 1.0054 | 1.00433 | 0.73547 | 0.69029 |
| 200 | 0.90865 | 1.00169 | 0.99559 | 1.04875 | 1.07329 |

Variate Data Table [2 of 6]

| Task # | d07 (v07\_GroeneveldCHF [\*0.985]) | d08 (v08\_ChenTransitionBoiling) | d09 (v09\_BromleyFilmBoiling [\*1.004]) | d10 (v10\_DittusBoelterVapConv [\*0.998]) | d11 (v11\_ZuberCHFcorrelation -) |
| --- | --- | --- | --- | --- | --- |
| 1 | 0.97826 | 0.96933 | 0.80281 | 0.94373 | 1.18221 |
| 2 | 0.99286 | 0.68037 | 0.87669 | 0.82329 | 0.53183 |
| 3 | 1.22527 | 0.6578 | 0.99674 | 0.97274 | 0.9089 |
| 4 | 0.96249 | 0.92563 | 1.3915 | 1.02476 | 0.74488 |
| 5 | 0.44492 | 1.07242 | 1.4228 | 1.02688 | 1.36234 |
| 6 | 1.39183 | 1.18708 | 0.8741 | 0.96185 | 0.78242 |
| 7 | 0.68535 | 1.06359 | 0.90136 | 1.28836 | 0.77558 |
| 8 | 0.9684 | 0.74704 | 0.79812 | 0.93338 | 1.76676 |
| 9 | 1.01651 | 1.0185 | 0.98456 | 0.94186 | 0.87562 |
| 10 | 1.32509 | 0.66229 | 0.8539 | 0.97152 | 1.18148 |
| 11 | 0.6893 | 1.00409 | 1.12204 | 1.07965 | 0.2722 |
| 12 | 0.83398 | 1.10349 | 0.63551 | 0.97343 | 1.10244 |
| 13 | 0.9114 | 0.90127 | 1.06552 | 0.92453 | 1.3266 |
| 14 | 0.74019 | 1.10742 | 0.74076 | 0.982 | 1.32944 |
| 15 | 1.02186 | 0.81014 | 0.87503 | 0.90989 | 1.22892 |
| 16 | 1.33294 | 1.06009 | 0.9572 | 1.11739 | 0.37644 |
| 17 | 1.17415 | 1.15643 | 1.17888 | 1.0327 | 0.59797 |
| 18 | 1.26617 | 0.83714 | 0.80626 | 0.80927 | 1.23712 |
| 19 | 1.40149 | 1.19279 | 1.02432 | 0.96798 | 0.76511 |
| 20 | 0.9593 | 1.09117 | 1.16077 | 0.77372 | 0.76214 |
| 21 | 0.93839 | 0.92561 | 1.20131 | 1.02967 | 0.92882 |
| 22 | 0.99532 | 1.07468 | 1.08027 | 0.97553 | 0.94977 |
| 23 | 1.46542 | 0.99597 | 1.36781 | 0.96319 | 1.15407 |
| 24 | 0.72849 | 0.83056 | 1.13067 | 0.91383 | 1.53665 |
| 25 | 1.46573 | 1.06966 | 0.91063 | 1.10898 | 1.46347 |
| 26 | 0.99792 | 1.09933 | 1.06471 | 0.90809 | 1.21257 |
| 27 | 0.89374 | 1.1086 | 1.05356 | 0.78109 | 0.97259 |
| 28 | 0.73246 | 0.95733 | 1.30681 | 0.91913 | 1.44551 |
| 29 | 0.84114 | 1.19892 | 1.08732 | 0.80028 | 1.43285 |
| 30 | 0.88121 | 0.99074 | 0.99593 | 0.86705 | 1.19079 |
| 31 | 1.31088 | 0.94741 | 0.92254 | 1.0315 | 1.40792 |
| 32 | 1.11611 | 1.04956 | 1.00809 | 0.9836 | 1.06414 |
| 33 | 1.41434 | 1.08492 | 0.72832 | 0.80503 | 0.84239 |
| 34 | 0.76883 | 1.14822 | 1.00295 | 0.74399 | 1.42736 |
| 35 | 0.86172 | 0.96518 | 0.59692 | 1.08903 | 0.55781 |
| 36 | 1.14601 | 1.20023 | 1.10181 | 1.02602 | 0.7443 |
| 37 | 0.74677 | 0.98546 | 0.89367 | 0.91146 | 1.49774 |
| 38 | 1.15372 | 1.0292 | 1.02514 | 0.94661 | 1.05667 |
| 39 | 0.61599 | 0.99436 | 1.10513 | 0.96067 | 0.88387 |
| 40 | 1.08167 | 0.81369 | 1.08211 | 0.94347 | 0.7662 |
| 41 | 1.20405 | 1.06228 | 0.91365 | 0.87843 | 1.04323 |
| 42 | 1.18463 | 1.05197 | 0.87182 | 0.75033 | 1.01621 |
| 43 | 1.18904 | 1.29201 | 1.0755 | 0.94993 | 0.96676 |
| 44 | 1.15389 | 0.97973 | 1.14501 | 1.07718 | 1.33807 |
| 45 | 0.89674 | 0.86648 | 1.11443 | 0.99303 | 0.70546 |
| 46 | 0.55279 | 1.14485 | 1.00102 | 0.82628 | 0.38676 |
| 47 | 1.0842 | 1.00644 | 0.90746 | 1.04411 | 1.4333 |
| 48 | 0.63396 | 0.90905 | 1.28154 | 0.97817 | 1.02849 |
| 49 | 1.00857 | 0.98965 | 0.92576 | 0.81154 | 0.52356 |
| 50 | 0.98554 | 1.01654 | 1.12278 | 0.94508 | 0.40171 |
| 51 | 0.59095 | 1.07132 | 1.01517 | 1.22644 | 1.7698 |
| 52 | 0.93282 | 0.91157 | 0.74574 | 0.93186 | 1.08343 |
| 53 | 1.35626 | 0.94606 | 1.15122 | 0.81576 | 0.7672 |
| 54 | 0.63343 | 1.14061 | 0.9807 | 0.87151 | 0.9845 |
| 55 | 0.98425 | 0.81852 | 1.16593 | 0.92246 | 0.59905 |
| 56 | 1.11327 | 1.07082 | 0.87769 | 0.9195 | 0.86294 |
| 57 | 0.9744 | 1.19161 | 0.72399 | 1.04063 | 0.72097 |
| 58 | 0.86269 | 1.24392 | 1.10779 | 0.94406 | 1.25971 |
| 59 | 1.42046 | 0.88657 | 1.3217 | 0.88905 | 1.33877 |
| 60 | 1.08953 | 1.33206 | 0.95951 | 0.80338 | 1.63871 |
| 61 | 0.73839 | 1.01689 | 0.83295 | 0.94575 | 1.3234 |
| 62 | 1.20943 | 0.97973 | 1.16053 | 0.9619 | 0.74383 |
| 63 | 1.36866 | 0.73479 | 0.92896 | 0.99441 | 1.00551 |
| 64 | 0.7659 | 0.98299 | 1.2395 | 0.6954 | 1.38319 |
| 65 | 0.94755 | 0.67841 | 0.88674 | 1.01122 | 1.5624 |
| 66 | 0.9714 | 1.0737 | 1.09991 | 0.7686 | 1.27494 |
| 67 | 0.80501 | 0.76961 | 0.72652 | 0.93793 | 1.66592 |
| 68 | 0.91456 | 0.92672 | 0.85336 | 1.12439 | 1.14483 |
| 69 | 1.07537 | 0.95323 | 0.62486 | 0.80049 | 0.57735 |
| 70 | 1.65829 | 0.95596 | 1.26632 | 1.05781 | 1.06055 |
| 71 | 0.7607 | 0.81012 | 0.85666 | 0.79325 | 1.03178 |
| 72 | 1.2902 | 0.72415 | 1.32445 | 0.87428 | 0.85813 |
| 73 | 1.58372 | 0.7985 | 1.09971 | 1.0487 | 1.352 |
| 74 | 1.13218 | 1.00477 | 1.0896 | 1.00248 | 2.05529 |
| 75 | 0.92256 | 0.93936 | 0.55208 | 0.92574 | 1.19886 |
| 76 | 0.85781 | 0.83408 | 0.71529 | 0.87339 | 0.59558 |
| 77 | 0.95606 | 0.95282 | 1.32493 | 0.87156 | 0.83334 |
| 78 | 1.24213 | 0.94836 | 1.10351 | 0.9707 | 0.84015 |
| 79 | 1.46637 | 0.75412 | 0.80578 | 0.91798 | 1.0238 |
| 80 | 0.76325 | 1.02887 | 1.20027 | 0.86121 | 0.89774 |
| 81 | 1.18732 | 1.25935 | 0.87416 | 1.0349 | 1.07746 |
| 82 | 1.39561 | 0.863 | 1.09493 | 1.00365 | 1.48778 |
| 83 | 0.8966 | 0.81577 | 1.02323 | 1.05324 | 1.20744 |
| 84 | 0.77161 | 0.96073 | 0.86238 | 0.75977 | 0.87459 |
| 85 | 1.28982 | 0.82315 | 0.93688 | 0.93135 | 1.02647 |
| 86 | 1.25103 | 1.00789 | 1.12363 | 1.01377 | 0.95955 |
| 87 | 1.49564 | 1.09113 | 0.9542 | 0.86128 | 1.15201 |
| 88 | 0.88689 | 1.24159 | 1.21895 | 1.02812 | 0.77593 |
| 89 | 0.98085 | 1.0849 | 1.24251 | 0.91517 | 1.13129 |
| 90 | 0.87056 | 0.95956 | 1.04763 | 1.12762 | 0.73971 |
| 91 | 1.04745 | 0.88382 | 1.13781 | 0.765 | 1.13657 |
| 92 | 0.80054 | 0.91646 | 0.98631 | 0.97876 | 0.69681 |
| 93 | 1.37897 | 0.8753 | 1.09649 | 0.70205 | 1.53041 |
| 94 | 0.90389 | 1.25078 | 1.06529 | 1.06838 | 1.34974 |
| 95 | 1.21429 | 1.06878 | 1.02856 | 0.96868 | 1.81868 |
| 96 | 1.09798 | 0.94491 | 0.94541 | 0.98939 | 0.88418 |
| 97 | 1.24958 | 0.83199 | 1.24862 | 0.99614 | 1.13729 |
| 98 | 0.62291 | 0.71029 | 1.09649 | 0.94546 | 0.88116 |
| 99 | 1.16381 | 1.2685 | 0.72775 | 1.00512 | 1.05027 |
| 100 | 1.23683 | 1.11688 | 0.82362 | 0.96099 | 0.97273 |
| 101 | 0.52924 | 0.81941 | 0.85703 | 0.93254 | 0.51695 |
| 102 | 1.0074 | 0.93588 | 0.6665 | 0.96634 | 0.79247 |
| 103 | 1.38381 | 0.81333 | 0.92011 | 0.72628 | 1.39333 |
| 104 | 0.65698 | 1.1005 | 0.95684 | 0.84151 | 1.4636 |
| 105 | 1.26921 | 1.0255 | 1.43827 | 0.97894 | 1.23409 |
| 106 | 0.57925 | 0.92721 | 0.81299 | 0.93783 | 0.91233 |
| 107 | 0.80565 | 1.2385 | 1.03026 | 0.80023 | 0.67834 |
| 108 | 1.24847 | 1.2441 | 0.81902 | 0.92335 | 1.07685 |
| 109 | 1.14917 | 0.87272 | 1.03548 | 0.83451 | 0.81355 |
| 110 | 0.90527 | 0.71775 | 1.0754 | 0.86305 | 0.83948 |
| 111 | 1.17485 | 1.00075 | 0.90528 | 1.06521 | 0.66616 |
| 112 | 1.21836 | 1.17428 | 0.95011 | 0.98923 | 0.77532 |
| 113 | 0.93734 | 0.91294 | 0.87744 | 1.08787 | 0.9688 |
| 114 | 0.93706 | 1.11516 | 0.94503 | 0.73611 | 0.48449 |
| 115 | 1.06787 | 1.04527 | 1.02261 | 1.09319 | 0.67432 |
| 116 | 1.43387 | 1.07267 | 0.97654 | 0.9251 | 1.14666 |
| 117 | 0.91679 | 1.01512 | 1.0197 | 1.09792 | 0.80394 |
| 118 | 0.84403 | 0.85087 | 0.92506 | 0.89285 | 1.0166 |
| 119 | 1.35192 | 1.00308 | 0.96401 | 1.01186 | 1.39098 |
| 120 | 0.68513 | 0.92355 | 0.93885 | 1.08085 | 0.92157 |
| 121 | 0.93041 | 0.90886 | 1.06046 | 0.9401 | 0.75202 |
| 122 | 1.0559 | 1.21027 | 1.01024 | 1.0667 | 0.91482 |
| 123 | 0.7115 | 0.62849 | 1.01153 | 1.05566 | 0.6036 |
| 124 | 0.6703 | 1.12491 | 1.08665 | 0.89582 | 0.9256 |
| 125 | 0.89061 | 1.24081 | 0.96062 | 1.02649 | 1.41045 |
| 126 | 0.76492 | 1.10212 | 1.07463 | 0.83078 | 0.71719 |
| 127 | 1.24616 | 0.94617 | 0.82778 | 0.76124 | 0.49017 |
| 128 | 0.83358 | 0.72128 | 1.38188 | 0.92873 | 0.56229 |
| 129 | 0.67222 | 0.96626 | 1.34819 | 0.99777 | 1.31067 |
| 130 | 0.88824 | 0.93885 | 0.98994 | 0.85549 | 1.01466 |
| 131 | 0.77195 | 1.06504 | 1.12389 | 0.61693 | 0.85311 |
| 132 | 0.80052 | 0.91842 | 1.00151 | 1.05128 | 0.82932 |
| 133 | 0.6759 | 0.76721 | 0.85484 | 1.16231 | 1.12629 |
| 134 | 0.95474 | 0.8367 | 1.21595 | 0.92876 | 0.96462 |
| 135 | 0.93155 | 0.93046 | 0.9388 | 1.04027 | 0.11934 |
| 136 | 0.74527 | 1.09463 | 0.91911 | 0.83203 | 0.82648 |
| 137 | 0.80978 | 1.13537 | 0.86794 | 0.75352 | 1.47705 |
| 138 | 0.9769 | 1.03869 | 0.77344 | 0.71737 | 1.21878 |
| 139 | 0.87426 | 1.11152 | 0.93319 | 0.91582 | 0.63482 |
| 140 | 1.47127 | 0.84876 | 1.06138 | 0.88627 | 1.46229 |
| 141 | 0.7887 | 0.90295 | 1.08555 | 0.84649 | 0.92639 |
| 142 | 0.39941 | 0.99182 | 1.26716 | 0.91289 | 0.9047 |
| 143 | 0.96682 | 0.98754 | 0.63999 | 0.99689 | 0.87031 |
| 144 | 0.60366 | 1.20344 | 0.96121 | 1.11232 | 1.21633 |
| 145 | 0.8242 | 0.87136 | 0.98565 | 1.22759 | 0.967 |
| 146 | 0.58106 | 0.88867 | 0.88223 | 0.66952 | 0.92716 |
| 147 | 1.00468 | 1.1233 | 0.81067 | 0.70813 | 1.44208 |
| 148 | 0.91571 | 0.79349 | 1.1622 | 0.94302 | 1.09986 |
| 149 | 1.13613 | 0.84096 | 0.96526 | 0.92281 | 0.79793 |
| 150 | 1.05296 | 0.93156 | 0.74203 | 0.76513 | 0.92282 |
| 151 | 1.39075 | 1.17853 | 0.69853 | 0.99151 | 0.79849 |
| 152 | 1.17727 | 1.08579 | 0.84978 | 0.86439 | 1.0498 |
| 153 | 1.05412 | 0.88675 | 0.78711 | 0.97102 | 1.46711 |
| 154 | 0.84493 | 1.01629 | 1.15425 | 0.91806 | 1.22032 |
| 155 | 0.84346 | 1.0124 | 0.78196 | 0.95341 | 1.3453 |
| 156 | 1.35896 | 0.95753 | 1.38478 | 0.95917 | 0.97215 |
| 157 | 0.84865 | 1.03156 | 0.8582 | 1.00597 | 1.02087 |
| 158 | 1.20098 | 0.98116 | 1.16919 | 0.95013 | 0.88757 |
| 159 | 0.49738 | 0.9299 | 0.65775 | 1.05882 | 0.66623 |
| 160 | 0.66289 | 0.83863 | 0.94708 | 1.06419 | 1.52361 |
| 161 | 1.73139 | 0.98302 | 0.74059 | 0.99923 | 1.23451 |
| 162 | 0.69833 | 0.78762 | 0.96096 | 1.02252 | 1.2786 |
| 163 | 0.69357 | 0.98695 | 0.99052 | 0.86713 | 1.19532 |
| 164 | 1.19391 | 1.15394 | 0.91839 | 0.86615 | 1.24353 |
| 165 | 0.50915 | 0.95578 | 0.80204 | 0.91384 | 1.05039 |
| 166 | 1.67081 | 0.95305 | 1.21479 | 0.86572 | 0.92947 |
| 167 | 0.97647 | 1.22212 | 1.05951 | 1.12279 | 1.4933 |
| 168 | 0.88056 | 0.89344 | 0.9053 | 1.1169 | 1.4676 |
| 169 | 0.71334 | 0.84649 | 1.13419 | 0.89627 | 0.84158 |
| 170 | 1.28977 | 1.03051 | 1.10143 | 1.13672 | 0.66808 |
| 171 | 1.59885 | 0.9312 | 0.71982 | 0.7445 | 1.11075 |
| 172 | 1.10086 | 0.77682 | 1.08221 | 1.04462 | 1.12413 |
| 173 | 0.89785 | 0.96218 | 1.06268 | 0.85215 | 1.09887 |
| 174 | 0.91817 | 0.79089 | 0.93863 | 0.94192 | 1.04558 |
| 175 | 1.05509 | 0.94101 | 1.07762 | 0.89134 | 0.71562 |
| 176 | 0.78436 | 1.18536 | 0.93778 | 0.86811 | 0.57787 |
| 177 | 0.97765 | 1.12258 | 1.20408 | 0.83634 | 1.31811 |
| 178 | 1.01791 | 0.90363 | 0.89267 | 0.88954 | 0.81228 |
| 179 | 0.65015 | 1.0578 | 1.07572 | 1.01636 | 1.31195 |
| 180 | 0.84145 | 1.16385 | 1.28774 | 0.8884 | 1.84311 |
| 181 | 1.4585 | 0.9912 | 1.06475 | 1.07782 | 1.24208 |
| 182 | 0.83326 | 0.92396 | 0.99492 | 0.79424 | 0.53806 |
| 183 | 0.99959 | 0.94713 | 1.0407 | 0.96538 | 0.84214 |
| 184 | 0.74856 | 0.87316 | 1.08253 | 0.90069 | 1.12157 |
| 185 | 0.70129 | 0.90081 | 0.77259 | 0.93348 | 1.53726 |
| 186 | 0.742 | 1.15584 | 0.88254 | 1.02739 | 1.18094 |
| 187 | 0.60512 | 0.81084 | 0.93615 | 0.68725 | 1.66951 |
| 188 | 0.59764 | 1.08953 | 1.01095 | 0.97608 | 1.51454 |
| 189 | 0.58796 | 1.00119 | 1.17582 | 0.86985 | 0.73155 |
| 190 | 1.50266 | 0.94671 | 0.9195 | 0.84185 | 0.54606 |
| 191 | 0.98931 | 1.20989 | 0.96402 | 0.64175 | 0.97181 |
| 192 | 0.95827 | 1.16001 | 1.07911 | 1.05412 | 0.7195 |
| 193 | 0.97977 | 1.21444 | 1.14221 | 0.85932 | 0.63778 |
| 194 | 0.95078 | 0.92955 | 1.20214 | 0.85285 | 0.94837 |
| 195 | 0.67421 | 1.02826 | 0.88492 | 0.93796 | 1.64753 |
| 196 | 0.82511 | 1.00631 | 1.20845 | 0.87469 | 0.8773 |
| 197 | 0.88254 | 1.11216 | 0.91494 | 0.89375 | 1.0585 |
| 198 | 0.94771 | 0.95104 | 0.66419 | 0.93675 | 0.56207 |
| 199 | 0.99345 | 0.88664 | 0.97333 | 0.7859 | 1.16684 |
| 200 | 0.87607 | 1.26927 | 1.08639 | 0.98621 | 0.97227 |

Variate Data Table [3 of 6]

| Task # | d13 (v13\_QFBromleycorrelation) | d14 (v14\_Forslund\_RohsenoowFBcorrelation) | d15 (v15\_RefloodSuperheatedVaporcorrelation) | d16 (v16\_BreakCD) | d23 (v23\_DryWetCriteria) |
| --- | --- | --- | --- | --- | --- |
| 1 | 1.16464 | 1.0511 | 1.0713 | 1.0832 | 0.84605 |
| 2 | 1.00498 | 1.25896 | 1.58503 | 0.84952 | 0.60137 |
| 3 | 1.00272 | 0.87532 | 1.10081 | 1.07909 | 1.0474 |
| 4 | 1.18508 | 0.72756 | 1.44015 | 0.93278 | 1.27981 |
| 5 | 1.08248 | 0.8498 | 1.15353 | 0.78792 | 0.96716 |
| 6 | 1.02417 | 1.08489 | 0.76503 | 0.95998 | 0.82527 |
| 7 | 1.24413 | 0.53987 | 0.5927 | 0.86255 | 1.07636 |
| 8 | 0.84051 | 1.05224 | 1.25037 | 0.88348 | 0.90187 |
| 9 | 0.8162 | 0.87553 | 1.0617 | 0.80995 | 1.2462 |
| 10 | 0.86965 | 1.07692 | 1.23414 | 0.82152 | 1.05094 |
| 11 | 0.96713 | 0.63976 | 1.16119 | 0.85469 | 0.86511 |
| 12 | 0.95465 | 0.8097 | 0.87605 | 0.97386 | 1.30633 |
| 13 | 1.17582 | 0.94979 | 1.28427 | 0.86887 | 0.97124 |
| 14 | 0.95213 | 1.21374 | 1.25985 | 0.9499 | 0.81634 |
| 15 | 0.94905 | 1.08766 | 0.801 | 0.93429 | 1.14579 |
| 16 | 1.03026 | 0.88602 | 0.6843 | 0.80711 | 0.89699 |
| 17 | 0.88633 | 0.86073 | 0.65279 | 0.83928 | 1.03938 |
| 18 | 1.01899 | 0.7052 | 1.0756 | 0.77097 | 1.1682 |
| 19 | 1.06554 | 0.94295 | 1.19566 | 0.78485 | 1.1 |
| 20 | 0.8745 | 0.87959 | 1.07928 | 0.962 | 0.95114 |
| 21 | 0.83195 | 0.90799 | 1.3175 | 1.00576 | 0.76778 |
| 22 | 1.0004 | 1.16747 | 1.26259 | 0.968 | 0.74432 |
| 23 | 0.99946 | 0.84635 | 1.02088 | 0.8657 | 0.91507 |
| 24 | 0.97319 | 0.89809 | 0.77485 | 1.05118 | 0.92184 |
| 25 | 1.13206 | 1.35901 | 0.72239 | 0.92688 | 0.8754 |
| 26 | 1.02971 | 0.94917 | 0.85818 | 0.92331 | 1.07298 |
| 27 | 1.0951 | 0.86654 | 0.98438 | 0.93835 | 0.55615 |
| 28 | 1.14399 | 1.03181 | 1.15873 | 1.03419 | 0.99453 |
| 29 | 1.10359 | 0.7675 | 1.04122 | 1.03592 | 0.66328 |
| 30 | 1.17927 | 1.21395 | 0.89645 | 0.9535 | 1.16786 |
| 31 | 1.00046 | 1.03208 | 0.68276 | 0.95849 | 0.9796 |
| 32 | 1.00931 | 1.32261 | 1.13974 | 0.83816 | 1.07958 |
| 33 | 1.03503 | 0.959 | 0.93264 | 1.03602 | 1.05729 |
| 34 | 0.76665 | 0.91061 | 0.84074 | 1.01522 | 0.92807 |
| 35 | 0.84822 | 0.86047 | 0.50057 | 1.01576 | 0.83986 |
| 36 | 0.99124 | 1.31482 | 0.93427 | 1.00392 | 1.15821 |
| 37 | 1.00168 | 1.06041 | 1.33437 | 0.92978 | 0.80122 |
| 38 | 0.96858 | 1.34343 | 1.23034 | 0.89185 | 0.93248 |
| 39 | 0.7756 | 0.99867 | 0.94199 | 0.98282 | 0.97254 |
| 40 | 0.96543 | 0.81604 | 1.76923 | 0.9759 | 0.76125 |
| 41 | 0.94798 | 1.20935 | 1.43052 | 0.8267 | 1.2023 |
| 42 | 1.04297 | 1.01273 | 1.09527 | 0.92467 | 0.96905 |
| 43 | 1.11145 | 1.16055 | 0.91368 | 0.87304 | 0.80349 |
| 44 | 0.96848 | 1.20528 | 0.82122 | 0.79351 | 0.73567 |
| 45 | 1.00382 | 1.03441 | 0.83893 | 1.04568 | 0.82329 |
| 46 | 0.97525 | 0.86156 | 1.07289 | 1.0681 | 0.40127 |
| 47 | 1.01902 | 1.17573 | 1.26864 | 1.05776 | 0.90699 |
| 48 | 0.97297 | 1.23086 | 0.83297 | 1.01386 | 1.06201 |
| 49 | 1.03775 | 0.35068 | 0.71561 | 0.91456 | 0.9468 |
| 50 | 0.88558 | 1.16319 | 1.64169 | 0.89316 | 0.85808 |
| 51 | 1.01764 | 1.36068 | 0.61088 | 0.86721 | 1.04769 |
| 52 | 0.95057 | 0.89721 | 1.07069 | 0.89708 | 0.89963 |
| 53 | 0.874 | 1.26957 | 0.90311 | 0.85457 | 0.98838 |
| 54 | 1.16121 | 1.03084 | 0.95127 | 1.00719 | 0.7389 |
| 55 | 0.99485 | 0.89061 | 1.07873 | 0.92252 | 0.93571 |
| 56 | 1.11029 | 1.28112 | 1.23732 | 0.88572 | 0.9791 |
| 57 | 0.79735 | 1.02163 | 0.95302 | 0.8046 | 0.56775 |
| 58 | 0.90984 | 0.87778 | 0.66114 | 0.94633 | 0.9791 |
| 59 | 0.96418 | 1.31701 | 0.63748 | 0.99305 | 0.99832 |
| 60 | 0.92986 | 0.88747 | 0.66126 | 1.146 | 0.88621 |
| 61 | 1.03276 | 1.22164 | 0.53606 | 0.92306 | 0.82778 |
| 62 | 1.04712 | 0.95688 | 0.94803 | 0.93418 | 1.02321 |
| 63 | 1.2498 | 1.2296 | 0.86945 | 0.93641 | 1.11965 |
| 64 | 0.87451 | 1.06381 | 0.6492 | 0.89043 | 1.2378 |
| 65 | 1.12628 | 1.25974 | 0.79187 | 0.89235 | 0.82749 |
| 66 | 1.14218 | 0.61811 | 0.66772 | 0.84515 | 0.97156 |
| 67 | 0.84282 | 1.12921 | 1.10948 | 0.98197 | 0.92655 |
| 68 | 0.79499 | 0.64542 | 0.66422 | 0.90567 | 0.90569 |
| 69 | 1.0437 | 0.99126 | 1.26109 | 1.15862 | 0.85806 |
| 70 | 1.02829 | 0.83058 | 1.02513 | 0.99824 | 0.77857 |
| 71 | 0.97546 | 1.006 | 1.5558 | 0.91512 | 0.8735 |
| 72 | 0.99959 | 1.09316 | 0.81816 | 1.02854 | 1.0157 |
| 73 | 1.04288 | 0.95005 | 0.96308 | 0.97127 | 0.99294 |
| 74 | 0.9754 | 0.92904 | 1.07166 | 1.03525 | 0.84007 |
| 75 | 1.07924 | 1.04452 | 1.2916 | 0.85984 | 1.07987 |
| 76 | 0.95806 | 1.02228 | 0.97323 | 0.93442 | 1.17203 |
| 77 | 0.85174 | 1.11059 | 1.08843 | 0.87976 | 1.10418 |
| 78 | 0.88607 | 1.16828 | 1.18573 | 1.00511 | 1.01102 |
| 79 | 0.98319 | 1.21697 | 1.08386 | 1.05289 | 0.92074 |
| 80 | 0.9302 | 0.98952 | 0.85624 | 0.94219 | 1.08103 |
| 81 | 0.92119 | 0.90977 | 1.22683 | 0.94974 | 0.923 |
| 82 | 1.13911 | 0.95368 | 0.96008 | 0.93192 | 0.88875 |
| 83 | 1.06501 | 1.2255 | 0.4379 | 0.84092 | 0.95306 |
| 84 | 1.11464 | 0.77502 | 0.86552 | 0.95639 | 1.06923 |
| 85 | 1.05066 | 0.63495 | 1.44041 | 0.89019 | 1.01989 |
| 86 | 1.13943 | 1.21904 | 0.99143 | 0.98314 | 0.82412 |
| 87 | 1.05521 | 1.26862 | 0.28748 | 0.95706 | 0.78049 |
| 88 | 1.20681 | 1.08967 | 0.77346 | 0.95175 | 0.66551 |
| 89 | 1.06145 | 0.60406 | 1.21188 | 1.04177 | 1.01633 |
| 90 | 1.0514 | 0.54539 | 0.73933 | 1.01794 | 0.94573 |
| 91 | 1.03317 | 1.21671 | 0.8263 | 0.94732 | 0.65396 |
| 92 | 1.33777 | 0.99817 | 1.09268 | 0.92639 | 1.08686 |
| 93 | 1.03123 | 1.12472 | 1.01977 | 1.05233 | 0.89542 |
| 94 | 1.12687 | 0.77806 | 1.28919 | 1.10444 | 0.92116 |
| 95 | 1.11581 | 0.80516 | 0.95173 | 0.89789 | 0.66223 |
| 96 | 1.02403 | 0.47023 | 1.29363 | 1.11864 | 0.77083 |
| 97 | 1.12546 | 0.6113 | 1.33597 | 0.97504 | 1.10668 |
| 98 | 1.04896 | 0.84126 | 1.02615 | 1.1078 | 1.24185 |
| 99 | 1.10299 | 1.09205 | 1.11615 | 0.99307 | 1.12564 |
| 100 | 0.99941 | 1.24226 | 1.0712 | 0.97574 | 0.98932 |
| 101 | 0.91405 | 1.09578 | 0.54986 | 1.00022 | 0.93515 |
| 102 | 0.90027 | 1.11917 | 1.35109 | 0.94582 | 1.16412 |
| 103 | 0.9555 | 0.78476 | 0.65469 | 0.80798 | 0.66683 |
| 104 | 0.86195 | 1.19657 | 1.18523 | 0.82585 | 0.89903 |
| 105 | 0.63153 | 1.14949 | 1.04913 | 0.68776 | 1.03413 |
| 106 | 0.65311 | 1.24466 | 1.12939 | 0.85552 | 0.7139 |
| 107 | 1.1239 | 0.98031 | 1.10373 | 0.85788 | 0.95871 |
| 108 | 1.03111 | 1.11216 | 0.65046 | 1.22022 | 0.96811 |
| 109 | 0.81974 | 0.58787 | 1.27439 | 0.96419 | 1.28684 |
| 110 | 1.24299 | 1.18726 | 1.18977 | 1.09443 | 0.76719 |
| 111 | 1.04961 | 0.94064 | 1.65388 | 0.87042 | 0.87087 |
| 112 | 0.88766 | 1.14892 | 0.51552 | 0.95639 | 0.66855 |
| 113 | 0.95781 | 0.7173 | 1.33385 | 0.98547 | 0.92948 |
| 114 | 0.78232 | 1.15947 | 1.18735 | 1.04844 | 0.82664 |
| 115 | 0.93201 | 0.71391 | 1.1802 | 0.86475 | 0.70121 |
| 116 | 0.98032 | 0.63443 | 1.34983 | 0.97927 | 0.92995 |
| 117 | 0.86925 | 0.85476 | 0.69934 | 0.98075 | 0.91853 |
| 118 | 1.16071 | 1.054 | 1.06337 | 0.91332 | 0.81494 |
| 119 | 0.83791 | 0.9446 | 1.04708 | 0.9755 | 0.94633 |
| 120 | 1.11196 | 1.30185 | 0.85608 | 0.96765 | 0.86899 |
| 121 | 1.04432 | 1.02569 | 0.97145 | 0.81142 | 1.08837 |
| 122 | 1.18518 | 0.92468 | 1.1847 | 0.89304 | 1.00672 |
| 123 | 0.92143 | 1.24795 | 0.56117 | 0.91712 | 0.74171 |
| 124 | 0.74377 | 0.92514 | 1.41736 | 0.85284 | 0.84079 |
| 125 | 0.92253 | 0.89611 | 0.87564 | 0.87187 | 1.18399 |
| 126 | 1.21027 | 0.96053 | 1.41249 | 0.87836 | 0.65925 |
| 127 | 1.07461 | 1.40983 | 1.0327 | 0.959 | 1.15856 |
| 128 | 1.1013 | 0.98182 | 0.71909 | 0.96031 | 0.84679 |
| 129 | 1.09595 | 1.29271 | 1.2896 | 1.04437 | 0.95224 |
| 130 | 1.05982 | 1.06117 | 1.01135 | 0.84636 | 0.77697 |
| 131 | 1.09081 | 0.67442 | 0.47789 | 0.87206 | 0.83321 |
| 132 | 1.00404 | 0.53727 | 0.91002 | 0.89132 | 1.09786 |
| 133 | 0.96289 | 1.15031 | 0.77815 | 0.9934 | 0.91797 |
| 134 | 1.09236 | 0.88226 | 1.22124 | 0.9338 | 1.07894 |
| 135 | 1.14497 | 0.8072 | 0.84895 | 0.9835 | 0.82411 |
| 136 | 0.93924 | 1.18226 | 0.73263 | 1.02056 | 1.02531 |
| 137 | 0.98631 | 1.13711 | 0.95907 | 0.83512 | 0.9461 |
| 138 | 1.0847 | 1.06673 | 1.18179 | 0.95177 | 0.99639 |
| 139 | 1.29158 | 1.25809 | 1.19248 | 0.91937 | 1.00669 |
| 140 | 0.90243 | 0.62421 | 0.84083 | 1.03432 | 1.0183 |
| 141 | 1.05089 | 0.994 | 1.13305 | 0.97335 | 0.441 |
| 142 | 0.86011 | 0.89829 | 1.12864 | 0.97443 | 1.05056 |
| 143 | 0.82525 | 0.75988 | 1.14148 | 1.09892 | 0.7432 |
| 144 | 1.18927 | 0.81039 | 0.89392 | 0.97767 | 0.95114 |
| 145 | 0.74365 | 1.50872 | 1.20284 | 0.97628 | 0.95654 |
| 146 | 1.12636 | 0.91265 | 1.10186 | 0.88334 | 1.07953 |
| 147 | 1.20983 | 1.11245 | 0.70184 | 0.97255 | 1.09122 |
| 148 | 1.01798 | 0.40208 | 0.27838 | 0.94485 | 1.03685 |
| 149 | 1.07655 | 1.15014 | 1.34539 | 0.97059 | 0.73731 |
| 150 | 0.95175 | 0.85399 | 0.80328 | 1.111 | 1.05814 |
| 151 | 0.96722 | 0.84711 | 0.7504 | 0.85074 | 0.8169 |
| 152 | 1.02838 | 0.90635 | 0.76394 | 0.96126 | 0.88152 |
| 153 | 0.94663 | 0.72369 | 1.3584 | 0.92204 | 0.55911 |
| 154 | 1.03139 | 0.78142 | 0.83774 | 0.80132 | 0.612 |
| 155 | 1.21672 | 0.9915 | 1.22886 | 0.90615 | 0.59386 |
| 156 | 0.87474 | 0.71809 | 0.79907 | 0.9575 | 0.76616 |
| 157 | 0.95739 | 0.88404 | 1.22256 | 0.81801 | 0.78136 |
| 158 | 1.04407 | 1.00638 | 1.16046 | 0.97745 | 0.88792 |
| 159 | 0.95232 | 0.87529 | 0.50698 | 0.84856 | 0.92666 |
| 160 | 1.21694 | 0.89297 | 0.71693 | 0.88708 | 0.68199 |
| 161 | 1.14935 | 0.64647 | 0.61176 | 0.84144 | 0.37599 |
| 162 | 0.99034 | 0.5008 | 0.4473 | 0.93964 | 0.79806 |
| 163 | 0.94653 | 0.932 | 1.01936 | 0.95291 | 0.99329 |
| 164 | 0.87778 | 0.788 | 1.12242 | 0.95233 | 0.7593 |
| 165 | 1.23847 | 1.23303 | 1.04103 | 0.86336 | 1.00487 |
| 166 | 1.0177 | 1.39967 | 1.04097 | 0.82189 | 0.85305 |
| 167 | 0.92243 | 1.29608 | 1.46067 | 0.96229 | 0.85358 |
| 168 | 1.00917 | 1.26591 | 1.10222 | 0.94757 | 0.96329 |
| 169 | 1.09909 | 1.26751 | 1.02768 | 0.91125 | 0.88847 |
| 170 | 0.87733 | 1.10902 | 0.97668 | 1.01694 | 1.13089 |
| 171 | 0.98592 | 0.84887 | 0.82725 | 0.9232 | 0.8867 |
| 172 | 1.02283 | 1.12483 | 0.92105 | 0.9626 | 0.6945 |
| 173 | 1.14569 | 0.66941 | 1.1534 | 0.95038 | 0.72756 |
| 174 | 1.07877 | 1.00981 | 1.15401 | 0.96897 | 0.87429 |
| 175 | 0.88367 | 1.32228 | 0.79418 | 0.97113 | 0.87584 |
| 176 | 0.98873 | 0.85337 | 1.33916 | 0.93888 | 0.74296 |
| 177 | 1.00314 | 1.26029 | 1.62575 | 0.91447 | 0.73013 |
| 178 | 1.13582 | 1.30997 | 1.1249 | 0.93405 | 1.31721 |
| 179 | 0.88673 | 1.15188 | 1.13246 | 1.01414 | 0.80534 |
| 180 | 0.8495 | 0.91731 | 0.98673 | 1.04909 | 1.15507 |
| 181 | 1.0901 | 1.10367 | 0.73857 | 1.03392 | 0.89617 |
| 182 | 0.98459 | 1.04378 | 0.6646 | 0.92866 | 0.79983 |
| 183 | 0.92693 | 0.69638 | 1.39084 | 0.99566 | 0.84962 |
| 184 | 1.00198 | 0.73315 | 0.72802 | 0.91916 | 0.88818 |
| 185 | 0.92283 | 0.85206 | 0.92261 | 0.87456 | 1.01085 |
| 186 | 0.99853 | 1.05193 | 1.12125 | 1.01123 | 1.11285 |
| 187 | 0.86756 | 0.83986 | 1.07276 | 0.86973 | 0.78535 |
| 188 | 1.20035 | 0.86522 | 1.46754 | 0.97407 | 1.06219 |
| 189 | 0.97138 | 1.46947 | 0.43483 | 0.9533 | 0.89643 |
| 190 | 0.93922 | 0.88768 | 0.43446 | 0.89861 | 0.85573 |
| 191 | 0.90673 | 1.05035 | 0.88866 | 0.9376 | 0.86936 |
| 192 | 0.90616 | 1.31429 | 1.09307 | 1.0742 | 0.76587 |
| 193 | 1.12543 | 1.18396 | 0.93288 | 0.96746 | 1.01438 |
| 194 | 0.86506 | 1.26181 | 0.54201 | 0.9932 | 0.79728 |
| 195 | 0.85923 | 0.85339 | 0.92641 | 0.95485 | 0.89695 |
| 196 | 0.98814 | 1.29665 | 0.74282 | 0.87259 | 0.56368 |
| 197 | 1.14932 | 1.19388 | 1.0446 | 0.88174 | 1.05405 |
| 198 | 1.08405 | 1.28354 | 0.43089 | 0.99034 | 1.04692 |
| 199 | 0.93117 | 0.75117 | 0.90768 | 0.93268 | 0.93445 |
| 200 | 0.95895 | 0.64014 | 0.80308 | 0.91226 | 1.26973 |

Variate Data Table [4 of 6]

| Task # | d24 (v24\_WeberNumber) | d25 (v25\_DropletInterfacialHeatTransfer) | d28 (v28\_OxidationDial) | d12 (v12\_WesimannTBcorrelation) | d01 (v01\_GapConductance) |
| --- | --- | --- | --- | --- | --- |
| 1 | 0.29342 | 1.00051 | 0.99377 | 1.10415 | 1.2405 |
| 2 | 0.45694 | 1.41915 | 1.00362 | 1.2133 | 0.99975 |
| 3 | 0.84635 | 1.34983 | 0.99407 | 0.87839 | 1.23219 |
| 4 | 0.13668 | 1.12756 | 1.00286 | 1.06386 | 1.42426 |
| 5 | 0.14601 | 1.46908 | 0.96012 | 0.83476 | 1.01442 |
| 6 | 0.60939 | 0.79807 | 1.02374 | 1.03183 | 1.27338 |
| 7 | 0.20659 | 1.18376 | 0.99089 | 0.96059 | 0.6858 |
| 8 | 1.03336 | 1.199 | 0.98294 | 0.89191 | 0.776 |
| 9 | -0.15399 | 1.1088 | 0.98653 | 1.08856 | 0.93443 |
| 10 | 0.59641 | 1.23733 | 1.00265 | 1.08734 | 0.83146 |
| 11 | 0.15655 | 1.24589 | 1.0091 | 1.30707 | 1.47656 |
| 12 | 0.86782 | 1.71272 | 0.97923 | 1.0362 | 1.04029 |
| 13 | 0.558 | 1.19741 | 1.0008 | 0.83661 | 0.42569 |
| 14 | 0.22616 | 1.59802 | 1.014 | 0.97994 | 0.85552 |
| 15 | 0.75806 | 1.31847 | 1.00379 | 1.12772 | 1.47203 |
| 16 | 0.58092 | 1.62147 | 1.02035 | 0.97815 | 0.90981 |
| 17 | 0.40719 | 1.7482 | 1.01294 | 1.00656 | 0.80648 |
| 18 | 0.44207 | 0.72028 | 1.01369 | 0.89996 | 1.14158 |
| 19 | 0.72509 | 1.45231 | 0.98952 | 0.78468 | 1.3487 |
| 20 | 0.5522 | 1.22536 | 0.99355 | 1.00036 | 1.11319 |
| 21 | 0.14786 | 0.90718 | 1.00729 | 0.87755 | 0.62222 |
| 22 | 0.18614 | 1.0805 | 0.99232 | 1.09978 | 1.43678 |
| 23 | -0.43051 | 1.09314 | 0.99693 | 0.87071 | 0.55413 |
| 24 | 0.16647 | 1.26909 | 0.9983 | 0.85506 | 1.28991 |
| 25 | 0.54757 | 1.39252 | 0.99266 | 1.21019 | 0.59395 |
| 26 | 0.57848 | 1.59022 | 1.0125 | 0.76864 | 1.44991 |
| 27 | 0.8072 | 1.09136 | 0.99477 | 0.70243 | 1.2381 |
| 28 | 0.73663 | 1.49917 | 0.99338 | 0.92276 | 1.2254 |
| 29 | 0.38556 | 1.60831 | 1.01129 | 1.21108 | 0.79735 |
| 30 | 9.51747E-2 | 1.39357 | 0.99619 | 1.00503 | 1.32294 |
| 31 | 0.34779 | 0.86987 | 1.01081 | 1.07421 | 0.6965 |
| 32 | 0.31938 | 1.23597 | 1.00781 | 1.05112 | 0.71943 |
| 33 | 0.16216 | 0.98227 | 1.02068 | 0.95392 | 1.08968 |
| 34 | 9.88682E-2 | 1.53845 | 1.01048 | 1.0103 | 0.92843 |
| 35 | 0.427 | 1.05438 | 0.9871 | 1.03791 | 0.73024 |
| 36 | 0.94219 | 0.78983 | 1.01205 | 1.03995 | 0.6729 |
| 37 | 0.28734 | 0.86405 | 0.98984 | 0.96906 | 1.26916 |
| 38 | 0.67505 | 1.47714 | 0.98448 | 1.17006 | 0.86361 |
| 39 | 1.10032 | 1.20209 | 0.99303 | 0.90532 | 1.24776 |
| 40 | 7.46041E-2 | 1.12707 | 0.99632 | 0.90842 | 1.3547 |
| 41 | -0.49817 | 1.32263 | 1.00824 | 0.99991 | 1.33905 |
| 42 | 0.2741 | 0.82501 | 1.0011 | 1.10487 | 1.3069 |
| 43 | 0.28399 | 0.9445 | 0.98295 | 0.93793 | 0.44905 |
| 44 | 0.52573 | 1.06241 | 1.00718 | 1.19205 | 1.45917 |
| 45 | -0.66975 | 1.37238 | 1.01184 | 1.20997 | 0.63149 |
| 46 | -8.48229E-2 | 1.86975 | 0.98543 | 0.84797 | 0.94303 |
| 47 | 0.38294 | 1.32362 | 0.99096 | 0.71875 | 0.51125 |
| 48 | 0.41453 | 1.09938 | 1.00531 | 1.13239 | 1.3083 |
| 49 | 0.43456 | 0.73281 | 1.01211 | 1.07568 | 1.04289 |
| 50 | -1.46558E-3 | 1.16498 | 1.00716 | 0.93629 | 0.40942 |
| 51 | 0.63309 | 0.97226 | 1.00443 | 0.99032 | 0.73288 |
| 52 | 0.23249 | 1.30333 | 0.99948 | 1.27391 | 0.92703 |
| 53 | 0.90349 | 1.02359 | 1.00833 | 1.30529 | 0.65182 |
| 54 | 0.87272 | 1.03616 | 1.03106 | 1.13505 | 0.75016 |
| 55 | 0.66126 | 1.07982 | 0.98049 | 0.86577 | 1.43717 |
| 56 | -0.19061 | 1.26159 | 0.98504 | 1.32859 | 0.9215 |
| 57 | 0.10388 | 1.40752 | 0.99292 | 0.92676 | 1.45274 |
| 58 | 0.89281 | 1.38634 | 0.99582 | 1.0843 | 0.6029 |
| 59 | 0.1372 | 0.92267 | 0.98164 | 1.08277 | 1.19983 |
| 60 | 0.68391 | 1.53479 | 0.99545 | 1.20667 | 0.56581 |
| 61 | -6.80231E-2 | 0.79735 | 1.00474 | 0.77485 | 1.39513 |
| 62 | -2.65119E-2 | 1.78571 | 1.01603 | 0.84556 | 0.60742 |
| 63 | 0.17786 | 1.25363 | 0.98494 | 1.2001 | 1.47466 |
| 64 | 9.38347E-2 | 0.33434 | 0.99042 | 0.89541 | 0.46699 |
| 65 | 0.24156 | 1.36593 | 0.99726 | 0.83386 | 1.10535 |
| 66 | 0.33772 | 1.06057 | 0.99967 | 1.35961 | 0.43786 |
| 67 | 0.28024 | 0.77842 | 1.01125 | 0.82151 | 0.43405 |
| 68 | -0.15692 | 1.25271 | 0.9807 | 1.05013 | 1.37568 |
| 69 | -1.85435E-2 | 0.78413 | 0.98189 | 0.96065 | 1.41367 |
| 70 | 0.3808 | 1.42868 | 0.99313 | 0.82395 | 0.44985 |
| 71 | 0.5955 | 1.19654 | 0.99962 | 1.3276 | 0.61352 |
| 72 | -0.1989 | 1.34114 | 1.02264 | 0.93477 | 1.06636 |
| 73 | 0.70453 | 1.21505 | 1.0147 | 0.76125 | 0.82666 |
| 74 | 0.36788 | 0.97231 | 1.00064 | 1.12627 | 1.36368 |
| 75 | -0.12826 | 1.53855 | 1.00375 | 0.81778 | 0.54643 |
| 76 | 0.68924 | 1.69422 | 0.98478 | 1.16734 | 1.2093 |
| 77 | 3.01048E-2 | 1.02332 | 0.97974 | 1.06748 | 0.52356 |
| 78 | 4.39174E-2 | 1.29075 | 0.98029 | 0.99752 | 0.51608 |
| 79 | 0.41272 | 1.53529 | 0.98657 | 1.00089 | 0.43828 |
| 80 | 1.13119 | 1.4716 | 1.00251 | 1.14434 | 0.63402 |
| 81 | -0.1967 | 1.09875 | 1.0011 | 1.07856 | 0.65468 |
| 82 | 4.1297E-2 | 1.92925 | 1.00009 | 1.06689 | 0.50421 |
| 83 | 0.1415 | 1.11258 | 1.00778 | 0.97481 | 0.84467 |
| 84 | -0.13881 | 1.40348 | 1.01233 | 0.93134 | 1.48748 |
| 85 | 0.4323 | 1.12617 | 1.00379 | 1.15765 | 1.14892 |
| 86 | 0.28358 | 1.44987 | 0.9987 | 0.92383 | 1.48167 |
| 87 | -0.16772 | 1.44979 | 0.98587 | 0.83878 | 0.90989 |
| 88 | 0.73867 | 1.27971 | 0.99904 | 0.85133 | 0.73129 |
| 89 | 0.25905 | 1.53819 | 1.00421 | 1.01688 | 1.18619 |
| 90 | 0.68889 | 0.52657 | 1.01992 | 0.94464 | 1.10803 |
| 91 | -0.41592 | 1.26977 | 0.99305 | 0.95942 | 1.36527 |
| 92 | 0.8668 | 1.38866 | 0.99681 | 1.09399 | 1.29381 |
| 93 | 0.50652 | 1.19686 | 1.001 | 0.94571 | 0.90424 |
| 94 | 0.30132 | 1.47065 | 1.00013 | 1.25942 | 1.20982 |
| 95 | 0.91056 | 1.01132 | 0.97824 | 1.31031 | 0.75683 |
| 96 | 0.58315 | 2.18379 | 0.98706 | 1.02493 | 1.35086 |
| 97 | -0.46373 | 1.23267 | 1.00779 | 1.171 | 0.4686 |
| 98 | 0.31611 | 1.3369 | 0.99977 | 1.21957 | 0.45325 |
| 99 | -1.1261E-2 | 1.5836 | 0.99552 | 1.01421 | 0.54735 |
| 100 | 0.38092 | 1.18758 | 1.00089 | 1.01624 | 1.33144 |
| 101 | 0.25199 | 0.66128 | 0.98857 | 1.07109 | 0.61988 |
| 102 | 1.09281 | 1.43838 | 0.98852 | 0.60823 | 0.88559 |
| 103 | -0.13095 | 0.9848 | 1.00276 | 0.83583 | 1.16761 |
| 104 | -7.23791E-2 | 1.4172 | 0.98889 | 1.12957 | 0.44942 |
| 105 | 0.48359 | 1.77746 | 0.98773 | 0.87663 | 1.47084 |
| 106 | 0.39072 | 1.01415 | 1.04108 | 0.9899 | 0.83022 |
| 107 | 0.61583 | 1.45431 | 1.01064 | 0.86127 | 1.10569 |
| 108 | -0.30276 | 1.61141 | 1.00653 | 0.96087 | 0.69427 |
| 109 | 0.49036 | 1.49882 | 0.99986 | 0.87385 | 0.50234 |
| 110 | 1.00358 | 1.61293 | 1.00459 | 1.06488 | 0.69736 |
| 111 | 0.13793 | 1.25278 | 1.00357 | 1.08428 | 0.49111 |
| 112 | 1.20079 | 1.69907 | 0.98089 | 0.87177 | 0.87878 |
| 113 | 0.2338 | 1.13173 | 0.98849 | 1.012 | 1.04886 |
| 114 | 0.18397 | 1.06728 | 1.00486 | 0.88733 | 1.48509 |
| 115 | -7.9772E-2 | 1.14222 | 0.9892 | 1.57358 | 0.49858 |
| 116 | 0.60394 | 0.91195 | 1.00844 | 1.08145 | 0.75454 |
| 117 | -0.18952 | 1.19123 | 0.99031 | 0.64934 | 1.0175 |
| 118 | 0.2768 | 1.16693 | 1.01008 | 1.14779 | 1.21107 |
| 119 | -0.41286 | 1.33501 | 1.01351 | 1.2465 | 1.40891 |
| 120 | 0.29583 | 1.17441 | 0.99955 | 0.88491 | 0.71325 |
| 121 | 0.40915 | 1.2317 | 1.01325 | 1.37183 | 0.87225 |
| 122 | 0.70799 | 1.16665 | 1.01915 | 1.04651 | 1.36742 |
| 123 | 6.20357E-2 | 1.52308 | 0.97928 | 0.95738 | 1.02364 |
| 124 | 0.97419 | 1.42085 | 0.99833 | 1.0253 | 0.88505 |
| 125 | 0.60286 | 1.39597 | 0.99515 | 1.28867 | 0.99096 |
| 126 | 0.77932 | 1.01874 | 1.00187 | 1.04743 | 0.73666 |
| 127 | 7.80701E-2 | 1.60342 | 0.97842 | 1.24093 | 0.82003 |
| 128 | 0.4711 | 1.23494 | 1.01627 | 0.80605 | 0.46917 |
| 129 | -0.63779 | 1.593 | 1.01737 | 1.31499 | 1.08709 |
| 130 | 0.37181 | 1.29772 | 0.98175 | 1.04922 | 0.73101 |
| 131 | 0.62325 | 1.16407 | 0.98967 | 0.89009 | 0.40469 |
| 132 | -0.40138 | 1.47169 | 0.99427 | 0.9033 | 0.62656 |
| 133 | 2.10871E-2 | 0.69422 | 1.00439 | 0.88435 | 0.94228 |
| 134 | 0.61694 | 1.28059 | 0.99352 | 1.07007 | 0.45689 |
| 135 | 0.50814 | 1.55985 | 0.9933 | 1.00592 | 1.13411 |
| 136 | 9.4849E-2 | 0.90459 | 1.00336 | 0.99599 | 0.86948 |
| 137 | -5.27942E-2 | 1.411 | 1.00542 | 1.29015 | 1.18291 |
| 138 | 0.23962 | 1.49453 | 0.98573 | 0.87614 | 0.76092 |
| 139 | -0.37046 | 1.054 | 1.00284 | 1.00468 | 0.82458 |
| 140 | 0.8111 | 1.02659 | 0.99978 | 1.01725 | 0.84455 |
| 141 | 0.11607 | 0.76155 | 0.99803 | 0.95282 | 0.66163 |
| 142 | 0.36882 | 1.46978 | 1.01562 | 0.95282 | 1.03752 |
| 143 | 0.43356 | 0.94225 | 1.00612 | 1.12067 | 1.04654 |
| 144 | 0.56874 | 1.50708 | 1.00175 | 0.98215 | 0.7082 |
| 145 | 0.36838 | 1.70798 | 1.02727 | 0.72312 | 0.65694 |
| 146 | 0.19972 | 1.05324 | 0.99243 | 0.74805 | 0.72365 |
| 147 | 0.47644 | 1.39772 | 1.01319 | 0.68296 | 1.49679 |
| 148 | 0.15455 | 1.67301 | 1.00914 | 1.04012 | 0.75006 |
| 149 | 0.60163 | 1.64361 | 1.01008 | 1.14957 | 0.85714 |
| 150 | 0.5064 | 1.47363 | 1.0081 | 1.23587 | 0.91692 |
| 151 | -2.52312E-2 | 1.05651 | 1.00803 | 0.85893 | 0.448 |
| 152 | 2.45404E-2 | 1.63663 | 1.00788 | 1.13793 | 1.20093 |
| 153 | 0.28496 | 1.52022 | 0.99658 | 1.08758 | 1.16696 |
| 154 | 5.39943E-3 | 1.56069 | 0.99401 | 0.95809 | 1.36295 |
| 155 | 0.44103 | 1.45337 | 1.00592 | 0.86688 | 0.50386 |
| 156 | 0.44708 | 1.10743 | 0.98106 | 1.00433 | 1.09439 |
| 157 | 0.50975 | 1.3644 | 1.00746 | 0.91212 | 1.12672 |
| 158 | -0.38223 | 1.509 | 1.00896 | 0.77053 | 1.03398 |
| 159 | 0.2398 | 1.48712 | 1.00549 | 1.02552 | 0.92044 |
| 160 | 0.36312 | 1.13339 | 0.9964 | 1.27603 | 1.30517 |
| 161 | 0.19359 | 0.9976 | 1.00965 | 1.0354 | 0.63593 |
| 162 | -3.5968E-2 | 1.55269 | 0.99764 | 1.09223 | 0.75801 |
| 163 | 0.65281 | 1.55569 | 1.0007 | 1.23133 | 1.07859 |
| 164 | -0.20835 | 1.45421 | 0.99838 | 1.02636 | 0.73427 |
| 165 | 0.25544 | 1.55897 | 0.99264 | 1.0514 | 0.73671 |
| 166 | 0.47213 | 1.21294 | 1.02356 | 1.04883 | 0.5123 |
| 167 | 0.51631 | 1.42427 | 1.00117 | 0.95527 | 0.46981 |
| 168 | 0.56453 | 1.05402 | 0.99712 | 0.99495 | 1.06474 |
| 169 | 0.2656 | 1.54246 | 1.00313 | 0.91805 | 0.85547 |
| 170 | 0.54428 | 0.85328 | 0.99577 | 1.13099 | 1.27593 |
| 171 | 0.33316 | 1.7408 | 0.98341 | 0.927 | 0.63339 |
| 172 | -4.68107E-2 | 1.613 | 0.99747 | 1.2948 | 1.17457 |
| 173 | 0.5902 | 1.06225 | 0.98726 | 1.10324 | 1.33122 |
| 174 | 1.23762 | 1.03966 | 1.01004 | 0.93468 | 0.86157 |
| 175 | 0.43629 | 1.42105 | 1.01097 | 1.06617 | 0.51223 |
| 176 | -0.1157 | 0.89914 | 0.97133 | 0.7565 | 1.22356 |
| 177 | -9.69126E-3 | 0.5627 | 0.99548 | 1.09106 | 1.3601 |
| 178 | 0.17458 | 1.34863 | 0.99648 | 1.00167 | 0.96533 |
| 179 | 3.28967E-2 | 1.16868 | 1.01765 | 1.02202 | 0.60909 |
| 180 | 0.25852 | 1.00066 | 0.99182 | 1.01391 | 1.40463 |
| 181 | 0.33251 | 1.38367 | 0.98394 | 0.9107 | 0.75664 |
| 182 | -0.17775 | 1.33596 | 0.98648 | 1.08539 | 0.84933 |
| 183 | 1.03267 | 0.97012 | 0.99743 | 1.1463 | 0.40769 |
| 184 | 0.64957 | 1.19017 | 1.02248 | 1.00901 | 1.27703 |
| 185 | 0.78179 | 1.6884 | 0.99939 | 1.052 | 1.12176 |
| 186 | -8.73716E-2 | 0.90428 | 0.99761 | 1.31456 | 1.07075 |
| 187 | -0.22502 | 1.70499 | 1.03203 | 0.99261 | 0.61953 |
| 188 | 5.08305E-3 | 0.92838 | 0.98546 | 0.93893 | 0.4047 |
| 189 | 0.23586 | 1.42088 | 0.97753 | 1.40707 | 0.77462 |
| 190 | 0.57226 | 1.17312 | 1.00968 | 1.3048 | 0.61218 |
| 191 | 0.52824 | 1.64328 | 1.02005 | 1.07293 | 0.68544 |
| 192 | 0.46447 | 1.54032 | 1.0075 | 1.15173 | 1.43007 |
| 193 | 0.13633 | 0.98539 | 0.99362 | 0.90901 | 0.50145 |
| 194 | 0.39036 | 1.11985 | 0.99774 | 0.96789 | 1.14128 |
| 195 | 0.43239 | 1.52217 | 1.00071 | 1.16594 | 0.71777 |
| 196 | 0.97202 | 0.92149 | 1.00195 | 1.06447 | 1.08136 |
| 197 | 0.3836 | 1.52191 | 1.02594 | 0.93229 | 1.40433 |
| 198 | 0.18613 | 0.86853 | 0.99877 | 1.02909 | 0.71857 |
| 199 | 0.25331 | 1.35742 | 1.00052 | 1.15915 | 1.2259 |
| 200 | -0.12123 | 0.91424 | 1.00619 | 0.88279 | 1.08882 |

Variate Data Table [5 of 6]

| Task # | d17 (v17\_Pump2pHead) | d18 (v18\_Pump2pTorque) | d19 (v19\_SITpressure pa) | d20 (v20\_SITinventory\_level) | d21 (v21\_SITtemperature K) |
| --- | --- | --- | --- | --- | --- |
| 1 | 0.62712 | 5.16727E-2 | 4.20887E6 | 0.98096 | 305.07829 |
| 2 | 0.71029 | 0.74025 | 4.42335E6 | 0.86526 | 308.92447 |
| 3 | 0.4012 | 0.52125 | 4.34047E6 | 0.86211 | 298.45716 |
| 4 | 0.52563 | 0.93951 | 4.31597E6 | 0.86809 | 294.65186 |
| 5 | 0.7846 | 0.14357 | 4.29518E6 | 0.87054 | 321.28595 |
| 6 | 0.82946 | 9.14467E-2 | 4.15022E6 | 0.94541 | 304.4175 |
| 7 | 0.52693 | 0.92357 | 4.42913E6 | 0.99582 | 312.9859 |
| 8 | 0.9812 | 0.2122 | 4.3903E6 | 0.93122 | 317.80935 |
| 9 | 0.26226 | 7.29622E-3 | 4.29845E6 | 0.99819 | 297.4726 |
| 10 | 0.19654 | 0.87509 | 4.19581E6 | 0.9998 | 316.43408 |
| 11 | 0.15235 | 0.35661 | 4.13773E6 | 0.93821 | 307.26196 |
| 12 | 0.42866 | 0.67528 | 4.26631E6 | 0.89882 | 319.18702 |
| 13 | 1.67608E-2 | 0.95753 | 4.42276E6 | 0.92437 | 313.5549 |
| 14 | 0.93864 | 0.76299 | 4.4168E6 | 0.94111 | 317.17368 |
| 15 | 0.49689 | 0.35904 | 4.39304E6 | 0.9583 | 321.8757 |
| 16 | 0.92175 | 0.39771 | 4.17397E6 | 1.01827 | 314.57852 |
| 17 | 0.75075 | 0.2496 | 4.28335E6 | 1.01367 | 306.41019 |
| 18 | 0.32861 | 0.28781 | 4.34323E6 | 1.03294 | 303.56991 |
| 19 | 0.11262 | 0.39045 | 4.34248E6 | 0.91657 | 303.44529 |
| 20 | 0.34486 | 0.49785 | 4.29691E6 | 0.93521 | 309.10317 |
| 21 | 0.85138 | 0.89439 | 4.21728E6 | 0.8701 | 303.44054 |
| 22 | 0.65312 | 5.44387E-2 | 4.25194E6 | 0.89299 | 316.20474 |
| 23 | 0.64957 | 0.98926 | 4.26674E6 | 0.99183 | 316.40715 |
| 24 | 0.90639 | 1.85998E-2 | 4.06178E6 | 0.96196 | 297.37123 |
| 25 | 0.5038 | 0.90531 | 4.2447E6 | 0.86595 | 307.21468 |
| 26 | 8.94444E-2 | 0.91075 | 4.22333E6 | 0.98899 | 304.79969 |
| 27 | 0.61064 | 0.30448 | 4.29403E6 | 0.94642 | 310.09671 |
| 28 | 0.93831 | 2.57993E-3 | 4.29299E6 | 0.87909 | 319.58453 |
| 29 | 0.91934 | 7.69893E-2 | 4.17603E6 | 1.02899 | 299.05495 |
| 30 | 0.47522 | 0.12591 | 4.1939E6 | 0.98505 | 315.8822 |
| 31 | 5.55232E-2 | 0.55691 | 4.17049E6 | 0.9431 | 320.57654 |
| 32 | 0.16575 | 0.94768 | 4.19693E6 | 0.93698 | 301.45935 |
| 33 | 0.98226 | 0.61099 | 4.40112E6 | 1.0069 | 299.85989 |
| 34 | 0.54204 | 0.34535 | 4.12047E6 | 0.90877 | 321.30184 |
| 35 | 0.2575 | 0.89559 | 4.32426E6 | 0.93566 | 304.13356 |
| 36 | 0.48084 | 0.27498 | 4.368E6 | 0.91538 | 297.25671 |
| 37 | 0.16454 | 0.82322 | 4.38342E6 | 1.00396 | 305.40215 |
| 38 | 0.55935 | 0.36614 | 4.34808E6 | 1.00789 | 304.22659 |
| 39 | 0.98962 | 0.63907 | 4.20893E6 | 1.02139 | 305.49 |
| 40 | 0.49414 | 0.43175 | 4.1291E6 | 0.93619 | 301.39888 |
| 41 | 0.72862 | 0.13728 | 4.22595E6 | 1.03232 | 301.73321 |
| 42 | 0.23224 | 0.43916 | 4.45891E6 | 0.9008 | 311.04181 |
| 43 | 0.65336 | 0.40251 | 4.12442E6 | 0.87246 | 309.26627 |
| 44 | 0.94586 | 0.57471 | 4.12472E6 | 0.97048 | 296.34741 |
| 45 | 0.28825 | 0.18928 | 4.30376E6 | 0.87859 | 294.70989 |
| 46 | 0.91089 | 0.25929 | 4.4495E6 | 0.99264 | 308.50236 |
| 47 | 0.29675 | 0.10342 | 4.07223E6 | 0.95527 | 314.78664 |
| 48 | 0.20338 | 1.02268E-2 | 4.38972E6 | 0.87589 | 315.69398 |
| 49 | 0.52771 | 5.20785E-2 | 4.12063E6 | 0.92394 | 321.87557 |
| 50 | 0.51421 | 0.25162 | 4.45336E6 | 0.88304 | 298.6255 |
| 51 | 0.84982 | 1.15078E-2 | 4.18726E6 | 0.95438 | 316.74651 |
| 52 | 0.93996 | 0.84829 | 4.34822E6 | 0.96195 | 315.59684 |
| 53 | 0.57102 | 0.21164 | 4.22989E6 | 0.95521 | 313.66662 |
| 54 | 0.24106 | 0.91308 | 4.37991E6 | 1.036 | 302.0308 |
| 55 | 0.93207 | 0.60919 | 4.22932E6 | 0.93661 | 316.75766 |
| 56 | 0.7452 | 0.30748 | 4.10451E6 | 0.92561 | 305.75112 |
| 57 | 2.8322E-2 | 0.71074 | 4.24195E6 | 0.8692 | 306.90425 |
| 58 | 0.17533 | 0.80001 | 4.16527E6 | 1.00167 | 310.49079 |
| 59 | 0.37741 | 0.89341 | 4.35719E6 | 0.89305 | 296.45707 |
| 60 | 0.29073 | 0.45536 | 4.20473E6 | 0.9436 | 294.13264 |
| 61 | 0.72899 | 0.8602 | 4.31018E6 | 0.91202 | 302.8142 |
| 62 | 0.2005 | 0.89942 | 4.2208E6 | 1.02543 | 315.31222 |
| 63 | 0.30729 | 0.51203 | 4.30636E6 | 1.00032 | 300.39457 |
| 64 | 0.81973 | 0.74864 | 4.2661E6 | 0.87099 | 302.07237 |
| 65 | 0.44258 | 6.4771E-2 | 4.22033E6 | 1.00793 | 301.76086 |
| 66 | 0.56722 | 6.99679E-2 | 4.32431E6 | 0.91944 | 313.14485 |
| 67 | 4.03104E-2 | 1.75537E-2 | 4.37745E6 | 0.98451 | 301.9657 |
| 68 | 0.59581 | 0.76009 | 4.08735E6 | 1.00989 | 299.92548 |
| 69 | 0.32664 | 0.91685 | 4.16191E6 | 0.94897 | 313.7108 |
| 70 | 0.74395 | 0.41088 | 4.2331E6 | 0.98591 | 302.6484 |
| 71 | 0.24437 | 0.63268 | 4.43318E6 | 0.9241 | 319.46351 |
| 72 | 0.86846 | 0.62953 | 4.35305E6 | 0.89416 | 314.04413 |
| 73 | 0.77332 | 0.42775 | 4.43716E6 | 0.95318 | 315.73642 |
| 74 | 0.91513 | 0.6471 | 4.43747E6 | 1.03399 | 319.08268 |
| 75 | 0.97354 | 0.80878 | 4.12046E6 | 0.87383 | 295.13625 |
| 76 | 0.18223 | 0.91574 | 4.24706E6 | 1.02803 | 297.28488 |
| 77 | 0.7783 | 0.65376 | 4.18475E6 | 0.8908 | 302.6355 |
| 78 | 0.29988 | 0.89201 | 4.18871E6 | 1.01008 | 306.95776 |
| 79 | 0.81366 | 0.3105 | 4.17646E6 | 0.8704 | 316.61269 |
| 80 | 0.70423 | 0.44851 | 4.22822E6 | 0.95548 | 294.27415 |
| 81 | 0.56437 | 0.15784 | 4.08518E6 | 0.93123 | 313.49959 |
| 82 | 0.1139 | 7.17668E-2 | 4.25904E6 | 0.9348 | 299.22713 |
| 83 | 0.39144 | 0.90358 | 4.24771E6 | 0.88231 | 313.93596 |
| 84 | 0.37607 | 0.62893 | 4.03396E6 | 0.90214 | 314.79273 |
| 85 | 0.34762 | 0.24106 | 4.14387E6 | 0.86458 | 302.1133 |
| 86 | 0.29769 | 0.80043 | 4.03898E6 | 0.96626 | 309.54727 |
| 87 | 3.63605E-2 | 0.32741 | 4.09833E6 | 0.92022 | 301.61912 |
| 88 | 0.52731 | 0.66736 | 4.1823E6 | 0.86379 | 304.19361 |
| 89 | 0.55146 | 0.67019 | 4.24723E6 | 0.89189 | 315.26692 |
| 90 | 0.55102 | 0.54932 | 4.4342E6 | 1.00347 | 299.22931 |
| 91 | 0.53094 | 0.62116 | 4.41627E6 | 1.02796 | 299.97648 |
| 92 | 0.48883 | 0.61471 | 4.04734E6 | 0.86335 | 305.89969 |
| 93 | 0.97045 | 6.36817E-2 | 4.22604E6 | 0.89024 | 312.73044 |
| 94 | 0.62062 | 0.80659 | 4.35375E6 | 0.93014 | 304.28982 |
| 95 | 0.11626 | 0.32425 | 4.17416E6 | 0.97086 | 295.84721 |
| 96 | 0.81204 | 5.91256E-2 | 4.11077E6 | 0.98614 | 321.18513 |
| 97 | 5.63135E-2 | 9.32106E-3 | 4.17535E6 | 0.88402 | 317.4674 |
| 98 | 0.24874 | 0.67013 | 4.31685E6 | 1.01735 | 320.04719 |
| 99 | 0.1017 | 8.31939E-2 | 4.4468E6 | 0.97057 | 314.55486 |
| 100 | 0.38898 | 0.40909 | 4.25083E6 | 0.93705 | 308.44383 |
| 101 | 0.22606 | 8.6435E-2 | 4.1282E6 | 0.96798 | 317.26086 |
| 102 | 7.91748E-2 | 0.98037 | 4.18802E6 | 0.91578 | 299.42496 |
| 103 | 0.23185 | 0.43137 | 4.30394E6 | 0.99321 | 309.27673 |
| 104 | 0.16524 | 0.64647 | 4.38789E6 | 0.96535 | 306.85313 |
| 105 | 0.57237 | 0.28095 | 4.2024E6 | 0.99349 | 294.54596 |
| 106 | 0.22313 | 0.18288 | 4.105E6 | 0.8645 | 304.75328 |
| 107 | 0.89521 | 0.54902 | 4.27523E6 | 0.98182 | 315.0332 |
| 108 | 0.53243 | 2.30977E-2 | 4.44811E6 | 0.86117 | 310.14449 |
| 109 | 0.61816 | 0.94982 | 4.10397E6 | 0.9016 | 318.10962 |
| 110 | 5.66365E-2 | 0.10553 | 4.19472E6 | 1.03494 | 300.97923 |
| 111 | 0.92392 | 1.37902E-2 | 4.3442E6 | 1.00622 | 304.53437 |
| 112 | 0.62062 | 0.60881 | 4.3455E6 | 0.89072 | 312.64441 |
| 113 | 0.63855 | 6.72996E-2 | 4.13254E6 | 0.87805 | 294.38479 |
| 114 | 0.32091 | 0.44923 | 4.27458E6 | 0.89576 | 309.00678 |
| 115 | 0.49056 | 0.10605 | 4.45423E6 | 0.9173 | 301.33274 |
| 116 | 0.36757 | 0.56188 | 4.3593E6 | 1.01452 | 302.64123 |
| 117 | 0.81865 | 0.71319 | 4.12087E6 | 0.9988 | 316.11928 |
| 118 | 0.37661 | 0.86373 | 4.08892E6 | 0.94422 | 300.45588 |
| 119 | 0.43659 | 0.45855 | 4.12011E6 | 0.98593 | 316.52887 |
| 120 | 0.84948 | 0.49028 | 4.18943E6 | 1.02315 | 310.92424 |
| 121 | 0.99317 | 0.92166 | 4.14545E6 | 0.89921 | 295.49939 |
| 122 | 0.66614 | 0.38186 | 4.44894E6 | 0.92059 | 302.1571 |
| 123 | 0.89761 | 0.52921 | 4.29701E6 | 1.00002 | 303.78171 |
| 124 | 6.33622E-3 | 0.42011 | 4.09858E6 | 0.88896 | 302.044 |
| 125 | 0.46608 | 0.52461 | 4.15024E6 | 0.90425 | 312.25645 |
| 126 | 0.37958 | 0.79748 | 4.39413E6 | 0.86699 | 311.44875 |
| 127 | 0.6711 | 3.68128E-2 | 4.3478E6 | 0.96831 | 309.03657 |
| 128 | 0.14352 | 0.71992 | 4.31016E6 | 0.9485 | 313.33583 |
| 129 | 0.11118 | 0.79326 | 4.13431E6 | 0.92459 | 305.65299 |
| 130 | 0.98351 | 0.74818 | 4.13878E6 | 0.99671 | 319.78411 |
| 131 | 0.98458 | 0.84031 | 4.24133E6 | 0.97791 | 297.06371 |
| 132 | 0.51564 | 7.56325E-2 | 4.33434E6 | 1.01083 | 302.25044 |
| 133 | 0.35296 | 7.3747E-2 | 4.16799E6 | 0.87481 | 310.22282 |
| 134 | 0.63952 | 0.8125 | 4.19096E6 | 0.98246 | 299.2288 |
| 135 | 0.27037 | 0.77951 | 4.40547E6 | 1.01619 | 301.54613 |
| 136 | 0.77775 | 0.79162 | 4.28343E6 | 0.93078 | 309.47868 |
| 137 | 0.86561 | 0.19766 | 4.22022E6 | 0.89772 | 314.66944 |
| 138 | 8.24233E-2 | 0.68703 | 4.23971E6 | 0.92629 | 313.0845 |
| 139 | 0.85634 | 0.58309 | 4.17213E6 | 1.01257 | 319.33755 |
| 140 | 0.69458 | 0.62319 | 4.38368E6 | 0.93616 | 309.98589 |
| 141 | 0.7724 | 0.3601 | 4.04516E6 | 1.02199 | 294.5042 |
| 142 | 0.80345 | 5.41996E-2 | 4.15227E6 | 0.95042 | 302.93072 |
| 143 | 0.35411 | 0.48636 | 4.29856E6 | 0.98726 | 314.55075 |
| 144 | 0.1149 | 0.76448 | 4.16924E6 | 0.93402 | 313.38831 |
| 145 | 0.11937 | 0.61629 | 4.26378E6 | 0.92526 | 302.36749 |
| 146 | 0.73092 | 0.82338 | 4.25291E6 | 1.01041 | 298.46685 |
| 147 | 0.76642 | 0.53175 | 4.32501E6 | 0.86109 | 294.65714 |
| 148 | 0.11354 | 0.79965 | 4.32108E6 | 0.88059 | 311.70539 |
| 149 | 0.37695 | 0.56298 | 4.05032E6 | 1.02303 | 309.09219 |
| 150 | 0.13968 | 0.42968 | 4.11089E6 | 0.90484 | 296.10313 |
| 151 | 0.83193 | 0.20066 | 4.19211E6 | 0.99345 | 296.09774 |
| 152 | 0.78141 | 0.97596 | 4.27757E6 | 0.92578 | 295.38272 |
| 153 | 0.4858 | 0.99664 | 4.21644E6 | 0.89137 | 316.54236 |
| 154 | 0.20475 | 1.63657E-2 | 4.41074E6 | 0.95253 | 316.07918 |
| 155 | 0.70047 | 0.87802 | 4.31301E6 | 0.92627 | 301.52058 |
| 156 | 0.63122 | 0.39198 | 4.11303E6 | 1.00262 | 310.88015 |
| 157 | 0.83834 | 0.19951 | 4.16143E6 | 0.93174 | 320.33903 |
| 158 | 0.92257 | 0.92691 | 4.33993E6 | 0.93249 | 321.69696 |
| 159 | 0.74042 | 0.26626 | 4.32202E6 | 0.8651 | 308.97291 |
| 160 | 0.41445 | 0.5023 | 4.04913E6 | 0.91002 | 314.32286 |
| 161 | 0.15657 | 0.55737 | 4.19241E6 | 0.89817 | 315.63568 |
| 162 | 0.93181 | 0.40087 | 4.43776E6 | 0.90567 | 306.89731 |
| 163 | 0.31947 | 8.61917E-2 | 4.23117E6 | 0.98578 | 302.74351 |
| 164 | 0.70398 | 0.96782 | 4.03461E6 | 0.93565 | 312.94317 |
| 165 | 0.55065 | 0.71691 | 4.38168E6 | 0.93083 | 312.96908 |
| 166 | 0.45526 | 0.2309 | 4.34051E6 | 0.94604 | 321.69212 |
| 167 | 0.91487 | 0.95834 | 4.36742E6 | 0.91602 | 321.7815 |
| 168 | 0.43739 | 0.47258 | 4.26509E6 | 1.03508 | 296.92166 |
| 169 | 0.10012 | 0.11823 | 4.35762E6 | 0.93757 | 320.88659 |
| 170 | 0.77361 | 0.51661 | 4.42613E6 | 0.96157 | 318.67701 |
| 171 | 0.58722 | 0.31617 | 4.3772E6 | 0.96637 | 318.54965 |
| 172 | 0.65753 | 0.89486 | 4.40474E6 | 0.86203 | 298.42537 |
| 173 | 0.47734 | 0.67021 | 4.20436E6 | 0.90009 | 319.28678 |
| 174 | 0.87229 | 0.5246 | 4.19032E6 | 0.92327 | 315.52274 |
| 175 | 0.34217 | 0.22238 | 4.07239E6 | 0.99065 | 317.52814 |
| 176 | 3.43573E-2 | 3.89786E-3 | 4.39228E6 | 0.90373 | 307.88018 |
| 177 | 0.42932 | 0.70349 | 4.28036E6 | 1.02792 | 321.29078 |
| 178 | 0.94765 | 0.36107 | 4.05969E6 | 0.88793 | 317.68342 |
| 179 | 0.77764 | 0.9406 | 4.14164E6 | 0.92835 | 312.92873 |
| 180 | 0.3585 | 0.98614 | 4.43781E6 | 0.94709 | 313.49361 |
| 181 | 0.17256 | 0.31349 | 4.21928E6 | 0.9625 | 301.09932 |
| 182 | 0.16754 | 0.80386 | 4.45754E6 | 0.98392 | 307.90015 |
| 183 | 0.66089 | 0.36073 | 4.1902E6 | 0.91258 | 304.33583 |
| 184 | 0.10297 | 0.70358 | 4.20937E6 | 0.96498 | 320.59824 |
| 185 | 0.40321 | 1.31873E-2 | 4.38373E6 | 1.03219 | 308.01834 |
| 186 | 0.96021 | 0.66416 | 4.37012E6 | 1.02528 | 298.64411 |
| 187 | 0.21985 | 0.63407 | 4.35886E6 | 1.00633 | 300.13059 |
| 188 | 0.47867 | 0.90528 | 4.2065E6 | 0.94474 | 300.66954 |
| 189 | 0.20265 | 0.94147 | 4.18407E6 | 0.93764 | 320.8962 |
| 190 | 0.74945 | 0.76331 | 4.26032E6 | 0.91646 | 321.63524 |
| 191 | 0.63936 | 0.1919 | 4.10956E6 | 0.9427 | 307.60411 |
| 192 | 0.50762 | 0.98403 | 4.38029E6 | 1.02054 | 315.8362 |
| 193 | 5.93369E-2 | 0.41997 | 4.09304E6 | 1.03655 | 320.30364 |
| 194 | 0.45328 | 0.32361 | 4.45446E6 | 0.86876 | 296.32804 |
| 195 | 0.66913 | 0.5266 | 4.27635E6 | 0.89702 | 311.09516 |
| 196 | 1.71342E-3 | 0.58516 | 4.1713E6 | 0.92007 | 302.76901 |
| 197 | 0.67785 | 0.34433 | 4.42391E6 | 0.94686 | 300.54262 |
| 198 | 0.84254 | 0.68817 | 4.18961E6 | 0.96255 | 310.60328 |
| 199 | 0.58193 | 0.99073 | 4.18688E6 | 0.92758 | 304.67798 |
| 200 | 2.48216E-2 | 0.49542 | 4.31365E6 | 0.93662 | 317.32073 |

Variate Data Table [6 of 6]

| Task # | d22 (v22\_IRWSTtemperature K) | d26 (v26\_BurstTemperatureDial) | d27 (v27\_BurstStrainDial) | d29 (v01\_1\_OxideThickness m) |
| --- | --- | --- | --- | --- |
| 1 | 311.81449 | 1.09578 | 1.39645 | 3.37529E-5 |
| 2 | 298.08609 | 1.07798 | 0.85263 | 2.08206E-5 |
| 3 | 283.66957 | 0.99988 | 1.55052 | 3.01215E-5 |
| 4 | 289.08188 | 0.96314 | 0.87627 | 1.86535E-5 |
| 5 | 303.31683 | 1.01125 | 1.65856 | 3.34532E-5 |
| 6 | 304.66311 | 0.91041 | 0.53618 | 2.03356E-5 |
| 7 | 299.61429 | 0.93207 | 0.3056 | 1.42631E-5 |
| 8 | 316.94102 | 0.93652 | 1.16438 | 2.98663E-5 |
| 9 | 307.04449 | 0.91854 | 0.5535 | 2.33078E-5 |
| 10 | 309.20746 | 1.03241 | 0.88166 | 2.7639E-5 |
| 11 | 319.03854 | 0.95465 | 0.69218 | 1.6519E-5 |
| 12 | 288.23593 | 1.00698 | 0.53 | 9.8602E-6 |
| 13 | 294.63011 | 1.00908 | 1.26216 | 8.68775E-6 |
| 14 | 291.95386 | 1.04016 | 0.87331 | 2.27133E-5 |
| 15 | 283.7181 | 0.95626 | 1.30658 | 9.30544E-6 |
| 16 | 314.70763 | 0.97393 | 0.91866 | 1.54221E-5 |
| 17 | 303.56999 | 1.01752 | 0.55045 | 7.09839E-6 |
| 18 | 312.67863 | 0.99667 | 1.60284 | 1.29983E-5 |
| 19 | 306.97108 | 0.99114 | 0.88355 | 3.59228E-5 |
| 20 | 286.5594 | 1.08683 | 1.29045 | 1.67052E-5 |
| 21 | 305.12043 | 1.0381 | 0.93765 | 2.5919E-5 |
| 22 | 314.20113 | 1.01929 | 1.60443 | 3.54946E-5 |
| 23 | 311.50729 | 1.05207 | 0.62289 | 1.73193E-5 |
| 24 | 300.29822 | 1.09908 | 1.65421 | 1.67552E-5 |
| 25 | 315.84097 | 1.01023 | 0.7328 | 1.27241E-5 |
| 26 | 317.53565 | 0.97107 | 0.33345 | 1.22441E-5 |
| 27 | 300.26961 | 0.98869 | 1.2229 | 1.4865E-5 |
| 28 | 290.38119 | 0.90477 | 1.42652 | 1.48253E-5 |
| 29 | 319.61562 | 0.9026 | 0.73333 | 1.1129E-5 |
| 30 | 286.38421 | 1.09636 | 1.29089 | 8.7478E-6 |
| 31 | 311.52816 | 0.9528 | 1.56732 | 2.0207E-6 |
| 32 | 314.38031 | 1.09541 | 0.9432 | 1.9254E-5 |
| 33 | 309.16899 | 1.04634 | 0.38141 | 3.21024E-5 |
| 34 | 288.36178 | 1.04238 | 0.72979 | 6.35568E-6 |
| 35 | 320.59048 | 1.06265 | 1.29176 | 3.67897E-5 |
| 36 | 293.88328 | 0.92421 | 0.73542 | 3.2193E-5 |
| 37 | 297.92127 | 0.96195 | 0.46199 | 2.74869E-5 |
| 38 | 291.14209 | 0.91809 | 0.87241 | 7.11654E-6 |
| 39 | 320.51471 | 1.09642 | 0.9109 | 1.65216E-5 |
| 40 | 305.8366 | 1.00196 | 1.5132 | 4.67149E-6 |
| 41 | 291.19003 | 1.06897 | 0.6064 | 2.43925E-6 |
| 42 | 304.69405 | 1.0527 | 0.66726 | 2.66907E-5 |
| 43 | 290.26285 | 1.09305 | 0.65149 | 2.69622E-5 |
| 44 | 291.36881 | 1.01299 | 1.16129 | 3.48899E-5 |
| 45 | 311.79322 | 0.96303 | 0.9683 | 1.91158E-5 |
| 46 | 309.63378 | 0.94251 | 0.62868 | 8.03647E-6 |
| 47 | 293.46952 | 0.90441 | 1.10503 | 2.15951E-5 |
| 48 | 314.25297 | 0.98524 | 0.39373 | 1.95679E-5 |
| 49 | 299.98066 | 1.05625 | 0.54725 | 3.04332E-5 |
| 50 | 319.30115 | 0.93642 | 0.9295 | 2.88749E-5 |
| 51 | 305.67721 | 1.02767 | 1.03311 | 2.30426E-5 |
| 52 | 320.86852 | 0.93157 | 1.4822 | 3.37065E-5 |
| 53 | 296.21618 | 0.91681 | 1.43274 | 1.74004E-6 |
| 54 | 291.38465 | 1.03193 | 1.57071 | 3.48983E-5 |
| 55 | 305.08193 | 1.00308 | 1.48823 | 1.99152E-5 |
| 56 | 297.09229 | 0.97923 | 0.38103 | 2.63811E-5 |
| 57 | 292.09025 | 0.96183 | 1.47876 | 1.06399E-5 |
| 58 | 293.72498 | 0.9321 | 0.38814 | 2.51975E-5 |
| 59 | 305.73238 | 0.95126 | 0.37861 | 2.73951E-5 |
| 60 | 312.10363 | 1.08956 | 1.4063 | 2.88542E-5 |
| 61 | 291.94833 | 1.03906 | 1.69883 | 7.79979E-6 |
| 62 | 295.42528 | 0.90516 | 0.82647 | 1.81412E-5 |
| 63 | 310.60087 | 0.93954 | 1.44442 | 3.64029E-5 |
| 64 | 294.80037 | 1.0221 | 0.49185 | 2.41903E-5 |
| 65 | 318.87028 | 1.01864 | 0.35905 | 3.66501E-6 |
| 66 | 308.70179 | 0.91771 | 0.38392 | 2.90795E-5 |
| 67 | 301.17953 | 1.04989 | 0.36109 | 2.6695E-5 |
| 68 | 302.69566 | 0.97503 | 1.27816 | 2.64785E-5 |
| 69 | 298.00893 | 0.95612 | 0.30037 | 3.04997E-6 |
| 70 | 299.07847 | 1.00348 | 0.95346 | 3.261E-5 |
| 71 | 294.11428 | 1.04893 | 0.64941 | 3.33931E-5 |
| 72 | 284.2119 | 1.08499 | 0.68861 | 6.95705E-6 |
| 73 | 305.48539 | 0.95554 | 0.42409 | 2.62246E-5 |
| 74 | 288.10765 | 1.02294 | 0.69105 | 1.35784E-5 |
| 75 | 292.26896 | 1.06228 | 0.85392 | 8.84209E-6 |
| 76 | 283.63327 | 0.96476 | 1.66873 | 1.61081E-5 |
| 77 | 296.23623 | 0.97454 | 0.99352 | 3.35418E-6 |
| 78 | 294.71795 | 0.91272 | 1.42244 | 2.74677E-5 |
| 79 | 314.7028 | 1.06531 | 0.40739 | 2.06817E-5 |
| 80 | 284.06494 | 1.07385 | 0.89792 | 1.75166E-5 |
| 81 | 283.13933 | 0.95409 | 0.84196 | 1.21922E-5 |
| 82 | 296.40651 | 1.0843 | 1.01253 | 2.45465E-5 |
| 83 | 303.22151 | 0.94327 | 1.69041 | 6.34587E-6 |
| 84 | 321.72008 | 1.0831 | 1.02319 | 3.57283E-5 |
| 85 | 284.24829 | 0.91915 | 1.36088 | 1.10037E-5 |
| 86 | 291.62357 | 1.0314 | 0.44796 | 1.47091E-5 |
| 87 | 290.1513 | 1.04322 | 0.76799 | 3.72818E-5 |
| 88 | 284.58267 | 0.98025 | 0.45944 | 1.36044E-5 |
| 89 | 310.94828 | 1.02812 | 1.47327 | 3.66287E-5 |
| 90 | 301.14497 | 1.03191 | 1.43572 | 3.38193E-6 |
| 91 | 286.71211 | 0.92194 | 0.79178 | 2.77318E-5 |
| 92 | 306.73886 | 0.95671 | 0.88441 | 3.24127E-7 |
| 93 | 309.2795 | 0.98204 | 0.89042 | 1.64592E-5 |
| 94 | 318.16045 | 1.00011 | 1.06816 | 2.07203E-6 |
| 95 | 284.22632 | 0.94663 | 0.57659 | 2.28918E-5 |
| 96 | 292.47184 | 1.04357 | 0.82437 | 3.11333E-5 |
| 97 | 284.9178 | 1.0866 | 1.47894 | 3.44345E-5 |
| 98 | 291.31489 | 0.97944 | 1.25355 | 2.03652E-5 |
| 99 | 304.12815 | 1.04297 | 1.39161 | 5.32359E-6 |
| 100 | 301.25399 | 0.9005 | 1.65257 | 1.98424E-5 |
| 101 | 313.96607 | 0.99806 | 0.54617 | 1.66769E-5 |
| 102 | 310.2686 | 1.03978 | 0.7125 | 3.3662E-5 |
| 103 | 294.42309 | 0.94047 | 1.22092 | 9.69455E-6 |
| 104 | 321.77624 | 0.98736 | 1.5375 | 2.24607E-5 |
| 105 | 315.21091 | 1.04477 | 1.33306 | 3.45406E-5 |
| 106 | 298.91345 | 0.90664 | 1.38189 | 3.60726E-5 |
| 107 | 298.05996 | 1.0869 | 1.27984 | 2.97795E-5 |
| 108 | 312.94384 | 1.03809 | 1.4168 | 7.38237E-6 |
| 109 | 301.72639 | 0.97265 | 0.94111 | 2.81145E-5 |
| 110 | 297.41507 | 0.99434 | 1.35448 | 1.27263E-5 |
| 111 | 311.99136 | 0.95436 | 0.96048 | 2.75259E-5 |
| 112 | 296.90261 | 1.01988 | 1.6622 | 1.5374E-5 |
| 113 | 305.10297 | 1.01486 | 1.43919 | 1.38272E-5 |
| 114 | 291.19436 | 0.91914 | 1.29585 | 2.40103E-5 |
| 115 | 295.8322 | 1.01436 | 1.20784 | 1.70481E-5 |
| 116 | 309.35167 | 1.08125 | 1.6632 | 9.5719E-7 |
| 117 | 294.47849 | 0.91334 | 1.15806 | 2.58841E-5 |
| 118 | 320.69254 | 0.99367 | 1.53646 | 1.95548E-5 |
| 119 | 306.21208 | 1.0634 | 0.68743 | 1.59289E-5 |
| 120 | 321.77542 | 1.04489 | 0.45411 | 9.0174E-6 |
| 121 | 292.7214 | 1.03146 | 0.63616 | 1.05793E-5 |
| 122 | 303.70643 | 1.07724 | 0.59177 | 3.02472E-5 |
| 123 | 303.57251 | 1.08567 | 1.49454 | 4.50142E-6 |
| 124 | 311.33805 | 1.0795 | 0.94556 | 2.43803E-5 |
| 125 | 311.84768 | 0.96163 | 0.62011 | 5.85917E-7 |
| 126 | 301.92876 | 1.04352 | 1.24187 | 1.09616E-5 |
| 127 | 317.87478 | 0.92564 | 1.54559 | 5.08514E-6 |
| 128 | 291.37314 | 0.96336 | 0.72134 | 3.53931E-5 |
| 129 | 318.22525 | 0.98447 | 1.30711 | 2.20123E-5 |
| 130 | 307.105 | 1.0015 | 1.59095 | 3.35756E-5 |
| 131 | 284.8219 | 1.03663 | 1.10774 | 1.06935E-5 |
| 132 | 285.39072 | 1.01664 | 0.58579 | 3.3912E-5 |
| 133 | 304.48778 | 0.94116 | 1.05619 | 9.33787E-6 |
| 134 | 318.6429 | 1.06519 | 1.54503 | 3.08127E-5 |
| 135 | 313.38477 | 1.0341 | 0.83126 | 1.16008E-5 |
| 136 | 310.10435 | 0.90706 | 1.30237 | 2.46705E-5 |
| 137 | 293.19505 | 1.04604 | 0.57402 | 3.5864E-5 |
| 138 | 320.70961 | 0.96428 | 0.67774 | 2.30716E-5 |
| 139 | 313.30929 | 1.06357 | 1.28827 | 3.02669E-5 |
| 140 | 318.90971 | 1.01918 | 0.34556 | 1.74267E-5 |
| 141 | 312.14528 | 0.99749 | 0.33057 | 5.65137E-6 |
| 142 | 295.679 | 0.92931 | 0.98047 | 1.41761E-5 |
| 143 | 284.53666 | 1.02026 | 1.18305 | 1.33202E-5 |
| 144 | 313.96328 | 1.05837 | 1.58075 | 2.85492E-5 |
| 145 | 308.57523 | 1.06433 | 0.44634 | 1.95223E-5 |
| 146 | 309.43948 | 0.96199 | 0.89904 | 2.6427E-6 |
| 147 | 318.29936 | 0.97899 | 0.56199 | 2.12678E-5 |
| 148 | 318.65427 | 0.94523 | 0.69611 | 2.8409E-5 |
| 149 | 317.60969 | 1.04079 | 0.98894 | 1.95037E-5 |
| 150 | 291.09114 | 1.03982 | 1.06929 | 2.14971E-5 |
| 151 | 288.95179 | 1.0336 | 1.67981 | 8.81562E-6 |
| 152 | 313.26381 | 0.90651 | 1.46578 | 3.65216E-5 |
| 153 | 297.80929 | 0.96195 | 0.79474 | 4.83715E-6 |
| 154 | 310.3836 | 0.9426 | 1.27571 | 1.92076E-5 |
| 155 | 298.40525 | 0.92708 | 1.05033 | 6.46377E-6 |
| 156 | 309.23276 | 1.08673 | 0.43917 | 4.10504E-6 |
| 157 | 300.01124 | 1.06246 | 0.95652 | 1.97899E-5 |
| 158 | 301.68368 | 0.91596 | 1.38173 | 1.98763E-5 |
| 159 | 296.4348 | 1.05176 | 0.32603 | 1.243E-5 |
| 160 | 287.8545 | 1.05056 | 0.58448 | 1.78091E-5 |
| 161 | 306.07873 | 1.08065 | 1.46441 | 2.65181E-5 |
| 162 | 302.20202 | 1.05849 | 1.60036 | 2.5765E-5 |
| 163 | 289.76444 | 1.00174 | 1.32416 | 1.3602E-5 |
| 164 | 288.60734 | 0.9591 | 0.38167 | 3.71494E-5 |
| 165 | 284.6889 | 1.06473 | 0.65279 | 2.83132E-5 |
| 166 | 316.0261 | 1.0598 | 1.06558 | 1.24679E-5 |
| 167 | 291.39397 | 1.05184 | 0.57489 | 9.31198E-6 |
| 168 | 305.09726 | 1.01381 | 1.12416 | 2.86505E-5 |
| 169 | 283.62497 | 0.99635 | 0.85459 | 2.52669E-5 |
| 170 | 317.55241 | 1.01536 | 0.8024 | 2.13253E-5 |
| 171 | 319.30359 | 1.07577 | 1.20293 | 3.18499E-6 |
| 172 | 294.33578 | 1.0715 | 0.86045 | 1.5711E-6 |
| 173 | 321.84578 | 0.90328 | 0.59932 | 1.39193E-5 |
| 174 | 299.90475 | 0.93092 | 1.24653 | 3.6903E-5 |
| 175 | 286.75899 | 1.04343 | 1.32497 | 1.08418E-5 |
| 176 | 303.50273 | 1.09615 | 0.63186 | 1.84471E-5 |
| 177 | 293.03946 | 1.05888 | 1.10077 | 1.04107E-5 |
| 178 | 321.35119 | 1.08507 | 1.54482 | 2.0115E-5 |
| 179 | 308.79494 | 1.02111 | 1.62558 | 1.1714E-5 |
| 180 | 301.85652 | 1.0117 | 1.61108 | 2.04208E-5 |
| 181 | 296.93679 | 0.93683 | 1.46789 | 3.91984E-6 |
| 182 | 302.79627 | 1.08724 | 1.1375 | 2.98197E-5 |
| 183 | 307.95817 | 1.07495 | 0.72714 | 1.30236E-5 |
| 184 | 315.25037 | 1.07728 | 0.85906 | 2.51817E-5 |
| 185 | 297.99898 | 1.01708 | 0.5572 | 2.96313E-5 |
| 186 | 298.06002 | 1.08145 | 1.05177 | 3.37007E-5 |
| 187 | 296.8174 | 0.97002 | 0.83872 | 9.68917E-6 |
| 188 | 300.64465 | 0.91343 | 1.52976 | 2.95339E-5 |
| 189 | 308.00734 | 0.95863 | 0.41832 | 1.83632E-5 |
| 190 | 295.0503 | 0.96388 | 1.54977 | 3.34269E-5 |
| 191 | 314.35617 | 0.91985 | 1.35239 | 1.0577E-5 |
| 192 | 288.31937 | 1.04562 | 0.55872 | 3.66434E-5 |
| 193 | 309.29345 | 1.05395 | 1.43837 | 2.53708E-5 |
| 194 | 319.88346 | 1.03708 | 1.24011 | 1.56427E-5 |
| 195 | 318.99667 | 0.95911 | 1.4331 | 2.28582E-5 |
| 196 | 304.70115 | 1.05758 | 1.25628 | 4.83539E-6 |
| 197 | 283.66678 | 0.96684 | 0.93771 | 2.63898E-5 |
| 198 | 285.4127 | 0.96978 | 1.6665 | 2.7788E-5 |
| 199 | 296.32752 | 1.06403 | 0.92335 | 2.49863E-6 |
| 200 | 317.97682 | 1.04156 | 1.55521 | 8.02319E-7 |

Response Data

| Task # | R\_critical | PCT |
| --- | --- | --- |
| 1 | 4.61824E-4 | 1237.92773 |
| 2 | 9.33134E-4 | 1199.35596 |
| 3 | 8.91988E-4 | 1196.70996 |
| 4 | 6.05799E-4 | 1186.75537 |
| 5 | 1.11386E-3 | 1174.61743 |
| 6 | 0.0 | 1156.81592 |
| 7 | 9.6478E-4 | 1184.31689 |
| 8 | 6.50567E-4 | 1188.28784 |
| 9 | 1.81326E-3 | 1163.12927 |
| 10 | 7.93693E-4 | 1150.71094 |
| 11 | 1.35144E-3 | 1209.53613 |
| 12 | 5.5241E-4 | 1253.06433 |
| 13 | 9.86234E-4 | 1329.60596 |
| 14 | 4.65125E-4 | 1213.88049 |
| 15 | 7.48402E-4 | 1188.06018 |
| 16 | 0.0 | 1132.42102 |
| 17 | 0.0 | 1148.88733 |
| 18 | 2.48085E-3 | 1162.02673 |
| 19 | 8.75122E-4 | 1062.79724 |
| 20 | 4.78685E-4 | 1200.29492 |
| 21 | 8.15416E-4 | 1269.35437 |
| 22 | 5.8569E-4 | 1151.27222 |
| 23 | 1.01164E-3 | 1188.88171 |
| 24 | 6.40759E-4 | 1250.72119 |
| 25 | 8.92631E-4 | 1238.88013 |
| 26 | 1.82998E-3 | 1162.21936 |
| 27 | 4.91961E-4 | 1220.45605 |
| 28 | 4.88245E-4 | 1226.06055 |
| 29 | 1.08628E-3 | 1274.2196 |
| 30 | 1.3864E-3 | 1142.06042 |
| 31 | 2.89825E-4 | 1216.29553 |
| 32 | 1.29907E-3 | 1167.65381 |
| 33 | 0.0 | 1185.0083 |
| 34 | 7.14848E-4 | 1241.15308 |
| 35 | 5.57514E-4 | 1293.80396 |
| 36 | 4.01126E-5 | 1198.77429 |
| 37 | 4.35178E-4 | 1178.57141 |
| 38 | 2.73237E-3 | 1175.21399 |
| 39 | 4.95033E-4 | 1224.09021 |
| 40 | 8.52067E-4 | 1217.99902 |
| 41 | 0.0 | 1153.12048 |
| 42 | 5.10267E-4 | 1177.23352 |
| 43 | 7.76324E-4 | 1237.4386 |
| 44 | 1.0795E-3 | 1113.1969 |
| 45 | 5.46428E-4 | 1260.40759 |
| 46 | 0.0 | 1207.97327 |
| 47 | 9.67734E-4 | 1300.47998 |
| 48 | 5.38064E-4 | 1194.97656 |
| 49 | 1.17172E-3 | 1218.6499 |
| 50 | 1.7971E-3 | 1271.51379 |
| 51 | 4.55351E-4 | 1193.07617 |
| 52 | 5.77425E-4 | 1231.47266 |
| 53 | 9.81708E-4 | 1196.27368 |
| 54 | 1.30354E-3 | 1246.12036 |
| 55 | 9.48294E-4 | 1136.87451 |
| 56 | 4.10348E-4 | 1255.64197 |
| 57 | 6.43563E-4 | 1154.56958 |
| 58 | 8.26784E-4 | 1204.03601 |
| 59 | 1.11767E-3 | 1227.39758 |
| 60 | 8.70652E-4 | 1273.60205 |
| 61 | 6.04936E-4 | 1241.35718 |
| 62 | 1.08492E-3 | 1229.15417 |
| 63 | 1.47884E-3 | 1146.46729 |
| 64 | 9.40907E-4 | 1397.23206 |
| 65 | 6.81437E-4 | 1199.77075 |
| 66 | 7.0377E-4 | 1317.13171 |
| 67 | 7.83817E-4 | 1220.53503 |
| 68 | 6.61939E-4 | 1159.59094 |
| 69 | 5.57553E-4 | 1218.61914 |
| 70 | 0.0 | 1238.55298 |
| 71 | 7.26559E-4 | 1256.87988 |
| 72 | 8.75727E-4 | 1250.00269 |
| 73 | 9.47522E-4 | 1203.72546 |
| 74 | 0.0 | 1202.82202 |
| 75 | 5.43167E-4 | 1237.3197 |
| 76 | 1.26347E-3 | 1220.67944 |
| 77 | 8.41481E-4 | 1296.16089 |
| 78 | 1.25191E-3 | 1253.50549 |
| 79 | 1.14048E-3 | 1331.65503 |
| 80 | 8.83267E-4 | 1244.62842 |
| 81 | 2.27664E-4 | 1190.62915 |
| 82 | 8.4034E-4 | 1248.6864 |
| 83 | 5.95778E-4 | 1244.54919 |
| 84 | 1.29364E-3 | 1367.68469 |
| 85 | 8.1783E-4 | 1140.29077 |
| 86 | 0.0 | 1124.849 |
| 87 | 7.82881E-4 | 1256.96448 |
| 88 | 9.26146E-4 | 1243.21057 |
| 89 | 1.47044E-4 | 1166.15955 |
| 90 | 5.66532E-4 | 1170.48291 |
| 91 | 9.38334E-4 | 1186.48755 |
| 92 | 5.06916E-4 | 1195.15344 |
| 93 | 0.0 | 1230.45557 |
| 94 | 6.53941E-4 | 1207.30457 |
| 95 | 1.62914E-3 | 1167.58801 |
| 96 | 0.0 | 1202.59485 |
| 97 | 9.17111E-4 | 1204.44873 |
| 98 | 9.46735E-4 | 1365.97729 |
| 99 | 5.74385E-4 | 1214.8042 |
| 100 | 5.18875E-4 | 1156.4762 |
| 101 | 8.41497E-4 | 1251.63379 |
| 102 | 6.05942E-4 | 1192.03674 |
| 103 | 1.53543E-3 | 1214.32361 |
| 104 | 6.38371E-4 | 1251.7948 |
| 105 | 0.0 | 1017.59058 |
| 106 | 4.69948E-4 | 1210.9032 |
| 107 | 5.02354E-4 | 1205.33838 |
| 108 | 0.0 | 1228.18555 |
| 109 | 9.21958E-4 | 1316.48975 |
| 110 | 3.31005E-3 | 1252.45166 |
| 111 | 0.0 | 1196.09546 |
| 112 | 8.48291E-4 | 1195.61877 |
| 113 | 1.02744E-3 | 1221.22839 |
| 114 | 9.19478E-4 | 1207.2406 |
| 115 | 8.9844E-4 | 1231.65454 |
| 116 | 0.0 | 1190.32043 |
| 117 | 7.3913E-4 | 1245.10229 |
| 118 | 4.6435E-4 | 1167.88672 |
| 119 | 9.1911E-4 | 1166.82715 |
| 120 | 7.8278E-4 | 1210.43616 |
| 121 | 7.57976E-4 | 1199.69897 |
| 122 | 1.09873E-4 | 1155.68323 |
| 123 | 8.5595E-4 | 1184.94763 |
| 124 | 5.13829E-4 | 1196.36096 |
| 125 | 5.45482E-4 | 1176.5022 |
| 126 | 1.23263E-3 | 1251.79834 |
| 127 | 8.31247E-4 | 1200.1322 |
| 128 | 8.37218E-4 | 1319.98022 |
| 129 | 5.86031E-4 | 1243.63159 |
| 130 | 1.06047E-3 | 1170.9823 |
| 131 | 7.05837E-4 | 1311.55676 |
| 132 | 1.10127E-3 | 1198.25208 |
| 133 | 5.55268E-4 | 1248.23608 |
| 134 | 1.18095E-3 | 1342.21033 |
| 135 | 1.36399E-3 | 1214.25867 |
| 136 | 3.96773E-4 | 1248.97021 |
| 137 | 5.41604E-4 | 1245.01282 |
| 138 | 1.35447E-3 | 1334.12305 |
| 139 | 1.21152E-3 | 1196.6897 |
| 140 | 6.04276E-4 | 1216.62537 |
| 141 | 5.82021E-4 | 1233.5907 |
| 142 | 4.74201E-4 | 1186.37708 |
| 143 | 1.1444E-3 | 1223.32935 |
| 144 | 8.82923E-4 | 1251.87292 |
| 145 | 3.01317E-4 | 1222.89319 |
| 146 | 8.24258E-4 | 1245.53381 |
| 147 | 3.22598E-4 | 1196.49414 |
| 148 | 1.08381E-3 | 1356.64478 |
| 149 | 1.21105E-3 | 1213.70959 |
| 150 | 1.05525E-3 | 1242.4093 |
| 151 | 0.0 | 1230.52625 |
| 152 | 1.37512E-3 | 1222.14453 |
| 153 | 5.7802E-4 | 1169.65808 |
| 154 | 7.06917E-4 | 1217.43811 |
| 155 | 5.35621E-4 | 1309.93811 |
| 156 | 0.0 | 1165.31885 |
| 157 | 2.35949E-3 | 1177.40479 |
| 158 | 0.0 | 1171.34851 |
| 159 | 1.16962E-3 | 1231.52466 |
| 160 | 8.56659E-4 | 1270.85449 |
| 161 | 8.55068E-4 | 1167.03491 |
| 162 | 8.18459E-4 | 1295.89197 |
| 163 | 8.98591E-4 | 1211.84692 |
| 164 | 8.97874E-4 | 1217.02661 |
| 165 | 7.14666E-4 | 1335.17664 |
| 166 | 7.8593E-4 | 1172.38855 |
| 167 | 6.85486E-4 | 1268.26343 |
| 168 | 6.16478E-4 | 1201.10938 |
| 169 | 5.93307E-4 | 1298.66492 |
| 170 | 0.0 | 1205.13354 |
| 171 | 9.42457E-4 | 1216.12292 |
| 172 | 5.655E-4 | 1198.922 |
| 173 | 8.46916E-4 | 1228.74548 |
| 174 | 5.43734E-4 | 1221.80396 |
| 175 | 9.5376E-4 | 1274.52869 |
| 176 | 5.81724E-4 | 1185.03491 |
| 177 | 2.67222E-3 | 1206.29175 |
| 178 | 6.78408E-4 | 1161.40918 |
| 179 | 6.50372E-4 | 1275.35059 |
| 180 | 5.78754E-4 | 1256.92786 |
| 181 | 0.0 | 1171.36816 |
| 182 | 9.18132E-4 | 1235.8219 |
| 183 | 4.11234E-4 | 1362.7981 |
| 184 | 8.17414E-4 | 1175.91321 |
| 185 | 8.59723E-4 | 1196.51392 |
| 186 | 0.0 | 1205.05322 |
| 187 | 7.3139E-4 | 1225.52087 |
| 188 | 9.65686E-4 | 1316.55164 |
| 189 | 1.17846E-3 | 1349.1449 |
| 190 | 3.48867E-3 | 1426.76099 |
| 191 | 5.1067E-4 | 1212.76025 |
| 192 | 8.40798E-4 | 1249.71863 |
| 193 | 2.59557E-3 | 1219.92334 |
| 194 | 9.06202E-4 | 1203.51758 |
| 195 | 5.63802E-4 | 1180.67261 |
| 196 | 2.50274E-4 | 1168.70581 |
| 197 | 4.87364E-4 | 1188.86951 |
| 198 | 1.8618E-3 | 1211.4071 |
| 199 | 6.20312E-4 | 1247.4707 |
| 200 | 1.91476E-3 | 1274.86389 |

1. DAKOTA Results

A second DAKOTA run was performed using the variate and extracted FOM values to obtain the statistical results and cumulative distribution functions for each FOM. DAKOTA also calculates the response correlations for each FOM. These indicate how each FOM correlates to each model variable and the other FOM.

* 1. R\_critical

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Statistical results based on 200 samples:

| Summary | Value | Task # |
| --- | --- | --- |
| Min Value | 0.0 | 6 |
| Max Value | 3.48867E-3 | 190 |
| Mean | 8.01131E-4 | - |
| Median | 7.6715E-4 | average of 121 and 43 |
| Standard Deviation | 5.5915E-4 | - |
| Coefficient of Variance | 1.70614 | - |

Response Correlations

|  | Simple | Partial | Simple Rank | Partial Rank |
| --- | --- | --- | --- | --- |
| d02 | -0.208156 | -0.242685 | -0.144234 | -0.185388 |
| d03 | 0.0986373 | 0.113787 | 0.0351317 | 0.0621655 |
| d04 | -0.0204365 | -0.00970225 | -0.0244843 | -0.0134085 |
| d05 | -0.0896355 | -0.110048 | -0.0472125 | -0.0464598 |
| d06 | 0.0969783 | 0.121489 | 0.0714671 | 0.0710261 |
| d07 | -0.0216912 | -0.0267691 | -0.0115314 | 0.0156632 |
| d08 | -0.136256 | -0.141442 | -0.193954 | -0.206201 |
| d09 | -0.001535 | 0.00560956 | 0.0508717 | 0.0751264 |
| d10 | -0.153803 | -0.189038 | -0.15171 | -0.166833 |
| d11 | -0.101668 | -0.115554 | -0.0901623 | -0.109727 |
| d13 | 0.10754 | 0.129178 | 0.0798091 | 0.0895498 |
| d14 | 0.0043398 | 0.00887466 | -0.0567297 | -0.0650982 |
| d15 | -0.0291518 | -0.032521 | -0.068875 | -0.090795 |
| d16 | -0.137201 | -0.16712 | -0.150307 | -0.178321 |
| d23 | 0.0291402 | 0.0321389 | 0.0285472 | 0.026405 |
| d24 | 0.023205 | 0.035337 | -0.0418767 | -0.0582517 |
| d25 | -0.0578515 | -0.0706435 | 0.0237518 | 0.0304073 |
| d28 | -0.0774822 | -0.0867345 | -0.118241 | -0.133299 |
| d12 | 0.10194 | 0.110041 | 0.0901218 | 0.0937429 |
| d01 | -0.0967847 | -0.10383 | -0.140504 | -0.150274 |
| d17 | -0.241395 | -0.269719 | -0.259212 | -0.27137 |
| d18 | 0.0742641 | 0.0680206 | 0.141989 | 0.146307 |
| d19 | -0.0479389 | -0.0637301 | -0.0433116 | -0.0599943 |
| d20 | 0.126803 | 0.16509 | 0.0889481 | 0.117182 |
| d21 | 0.0777259 | 0.11341 | 0.0561954 | 0.075131 |
| d22 | -0.0392794 | -0.0580741 | -0.0467547 | -0.0578247 |
| d26 | -0.0539447 | -0.048858 | -0.0307806 | -0.0320584 |
| d27 | 0.123249 | 0.145261 | 0.0777829 | 0.0921368 |
| d29 | 0.0585507 | 0.0624583 | 0.0999798 | 0.117893 |
| PCT | 0.218929 | - | 0.206388 | - |

Note: NaN values typically indicate an insufficient number of tasks were supplied to perform the analysis.

* 1. PCT

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Statistical results based on 200 samples:

| Summary | Value | Task # |
| --- | --- | --- |
| Min Value | 1017.59058 | 105 |
| Max Value | 1426.76099 | 190 |
| Mean | 1220.77693 | - |
| Median | 1214.29114 | average of 135 and 103 |
| Standard Deviation | 56.20222 | - |
| Coefficient of Variance | 0.58835 | - |

Response Correlations

|  | Simple | Partial | Simple Rank | Partial Rank |
| --- | --- | --- | --- | --- |
| d02 | -0.466054 | -0.716751 | -0.482036 | -0.723467 |
| d03 | 0.0631643 | 0.134475 | 0.0892147 | 0.173538 |
| d04 | 0.0427098 | 0.0980829 | 0.019055 | 0.0358795 |
| d05 | -0.00334671 | 0.0228675 | -0.0112368 | 0.0187667 |
| d06 | 0.0206757 | 0.0365037 | -0.00297757 | -0.014652 |
| d07 | -0.253253 | -0.508374 | -0.294664 | -0.507697 |
| d08 | -0.108096 | -0.24435 | -0.0863767 | -0.145237 |
| d09 | 6.52409E-4 | 0.0192402 | 0.0432266 | 0.0263707 |
| d10 | -0.213791 | -0.439393 | -0.190685 | -0.407937 |
| d11 | 0.00689 | 0.00658579 | 0.0235071 | 0.014642 |
| d13 | 0.0790895 | 0.142101 | 0.0177199 | 0.074856 |
| d14 | -0.0710776 | -0.157871 | -0.0282742 | -0.0825228 |
| d15 | -0.133241 | -0.275784 | -0.0920858 | -0.222391 |
| d16 | 0.27321 | 0.529768 | 0.283417 | 0.557918 |
| d23 | 0.0211953 | 0.0297748 | -0.0653116 | -0.124562 |
| d24 | -0.0646576 | -0.148237 | -0.118287 | -0.235781 |
| d25 | -0.0304169 | -0.0808653 | 0.0340089 | 0.0354794 |
| d28 | -0.0231935 | -0.0456761 | -0.0374184 | -0.0791632 |
| d12 | 0.0678836 | 0.120879 | 0.00837771 | 0.070825 |
| d01 | -0.505507 | -0.755219 | -0.494775 | -0.753097 |
| d17 | -0.0284247 | -0.0181728 | -0.0403915 | -0.0552425 |
| d18 | 0.190041 | 0.32794 | 0.171922 | 0.283866 |
| d19 | -0.00544973 | -0.0124085 | -0.0135138 | -0.0376183 |
| d20 | -0.182463 | -0.327403 | -0.171382 | -0.322444 |
| d21 | 0.110179 | 0.204919 | 0.0457571 | 0.0375749 |
| d22 | -0.0450428 | -0.0852622 | -0.0623326 | -0.124049 |
| d26 | -0.00599178 | 4.45087E-4 | 0.0180995 | 0.00465843 |
| d27 | -0.0410644 | -0.0918422 | -0.0171409 | -0.0771564 |
| d29 | 0.0603443 | 0.131787 | 0.0514678 | 0.105835 |
| R\_critical | 0.218929 | - | 0.206388 | - |

Note: NaN values typically indicate an insufficient number of tasks were supplied to perform the analysis.

* 1. DAKOTA Input File

The input file used in a -pre\_run DAKOTA invocation to generate the random variates.

method,

nond\_sampling,

samples = 200

# stub response levels

response\_levels = 0.0 1.0 0.0 1.0

sample\_type random

distribution cumulative

variables,

normal\_uncertain = 18

descriptors = 'd02' 'd03' 'd04' 'd05' 'd06'

'd07' 'd08' 'd09' 'd10' 'd11'

'd13' 'd14' 'd15' 'd16' 'd23'

'd24' 'd25' 'd28'

means = 1.0 1.0 1.0 0.998 0.995

0.985 1.0 1.004 0.947 1.0

1.0 1.0 1.0 0.947 0.91845

0.33605 1.26494 1.0

std\_deviations = 0.051 0.0068 0.022 0.1306 0.155

0.2715 0.1535 0.192 0.1306 0.31

0.125 0.25 0.25 0.0728 0.175293

0.3556 0.3058 0.0125

lower\_bounds = -1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308

-1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308

-1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308

-1.7976931348623157E308 -1.7976931348623157E308 -1.7976931348623157E308

upper\_bounds = 1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308

1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308

1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308

1.7976931348623157E308 1.7976931348623157E308 1.7976931348623157E308

lognormal\_uncertain = 1

descriptors = 'd12'

lambdas = 0.019802627

zetas = 0.16004258

lower\_bounds = 4.9E-324

upper\_bounds = 3.4028235E38

uniform\_uncertain = 10

descriptors = 'd01' 'd17' 'd18' 'd19' 'd20'

'd21' 'd22' 'd26' 'd27' 'd29'

lower\_bounds = 0.4 0.0 0.0 4030000.0 0.861

294.1 283.0 0.9 0.3 0.0

upper\_bounds = 1.5 1.0 1.0 4460000.0 1.037

321.9 321.89 1.1 1.7 3.7364E-5

interface,

direct

analysis\_driver = 'text\_book'

responses,

num\_response\_functions = 2

no\_gradients

no\_hessians