

NIST Decision Tree Report

Summary

Include	Laboratory	Result	Uncertainty	DegreesOfFreedom
TRUE	IRMM	34.30	1.03	60
TRUE	KRISS	32.90	0.69	4
TRUE	NARL	34.53	0.83	18
TRUE	NIST	32.42	0.29	2
TRUE	NMIJ	31.90	0.40	13
TRUE	NRC	35.80	0.38	60

Date: 2023-06-26

Version Number: 1.0.2

Type of DoE: Degrees of Equivalence Recognizing Dark Uncertainty

Selected Procedure: Weighted Median

Consensus estimate: 32.16

Standard uncertainty: 0.3388

95% coverage interval: (31.78, 34.59)

Decision Tree Hypothesis test results

Cochran's test for Homogeneity:

p-value: $p < 0.001$

$Q = 68.22$ (Reference Distribution: Chi-Square with 5 Degrees of Freedom)

tau est. = 1.711

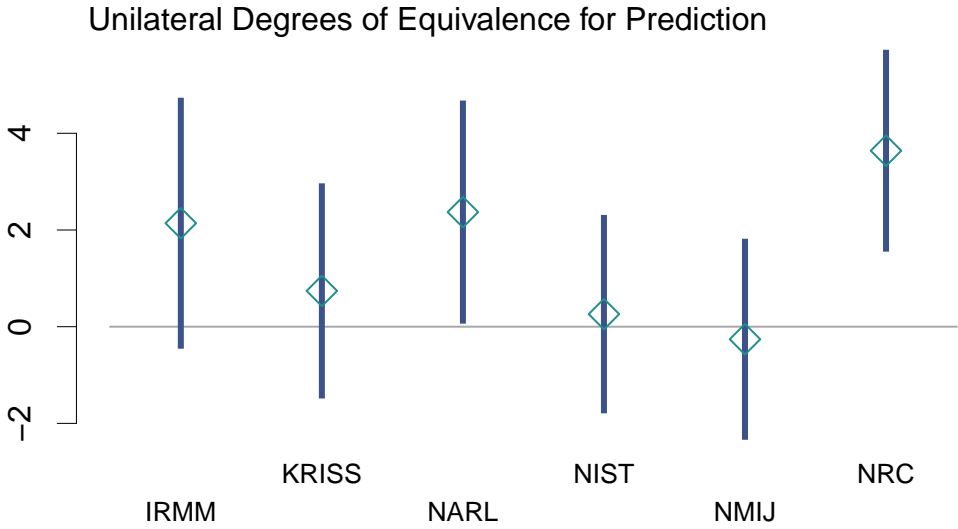
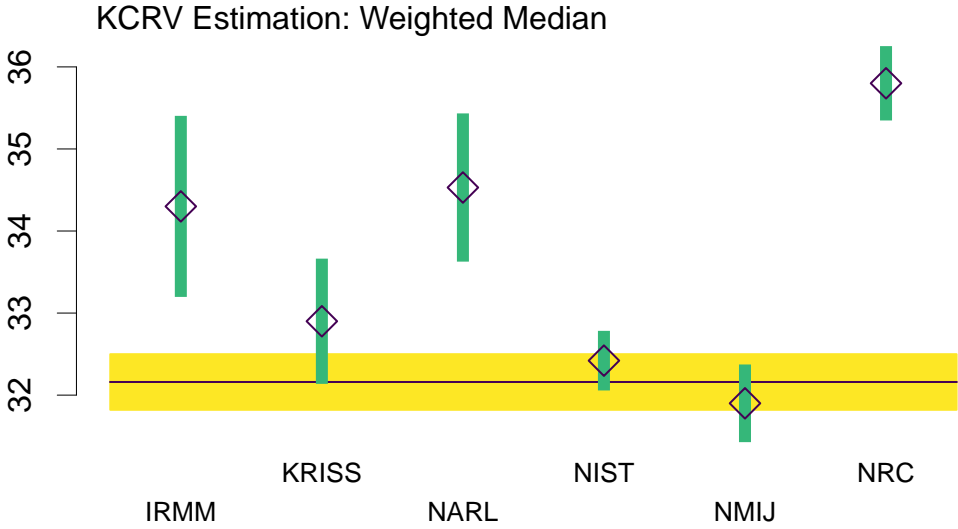
tau/median(x) = 0.05093

tau/median(u) = 3.14

Shapiro-Wilk test for Normality: $p = 0.5301$

Miao-Gel-Gastwirth test of Symmetry: $p = 0.944$

Plots



DoE Table

	Lab	DoE.x	DoE.U95	DoE.Lwr	DoE.Upr
IRMM	IRMM	2.14	2.533	-0.3932	4.673
KRISS	KRISS	0.74	2.163	-1.4230	2.903
NARL	NARL	2.37	2.246	0.1244	4.616
NIST	NIST	0.26	1.990	-1.7300	2.250
NMIJ	NMIJ	-0.26	2.017	-2.2770	1.757
NRC	NRC	3.64	2.026	1.6140	5.666

Lab Uncertainties Table

lab	x	u	nu	ut
IRMM	34.30	1.03	60	1.03
KRISS	32.90	0.69	4	0.69
NARL	34.53	0.83	18	0.83
NIST	32.42	0.29	2	0.29
NMIJ	31.90	0.40	13	0.40
NRC	35.80	0.38	60	0.38

lab	D	uDR	UDR	LwrR	UprR	uDI	UDI	LwrI	UprI
IRMM	2.14	1.2303	2.5990	-0.4590	4.7390	1.2303	2.5990	-0.4590	4.7390
KRISS	0.74	0.9643	2.1812	-1.4412	2.9212	0.9643	2.1812	-1.4412	2.9212
NARL	2.37	1.0862	2.3204	0.0496	4.6904	1.0862	2.3204	0.0496	4.6904
NIST	0.26	0.7372	1.9400	-1.6800	2.2000	0.7372	1.9400	-1.6800	2.2000
NMIJ	-0.26	0.7905	1.9674	-2.2274	1.7074	0.7905	1.9674	-2.2274	1.7074
NRC	3.64	0.7878	2.0217	1.6183	5.6617	0.7878	2.0217	1.6183	5.6617

MCMC Sampler Diagnostics Table (if applicable)

If one of the Bayesian models is run (Hierarchical Gauss-Gauss, Hierarchical Laplace-Gauss, or Hierarchical Skew-Student-t), then diagnostics for the MCMC sampler will be given below. As a general recommendation, if any of the R-hat values are greater than 1.05, then the sampler may not have reached equilibrium, and the “Total Number of MCMC Steps” should be increased, and the run repeated. The “Number of MCMC Warm-Up Steps” should be about half of the “Total Number of MCMC Steps.” The “Effective Sample Size” (n.eff) is approximately the size of the MCMC sample that the results are based on.