



Center for High Energy Physics

ND Filter Transmission (T) Measurements 9/14/2016

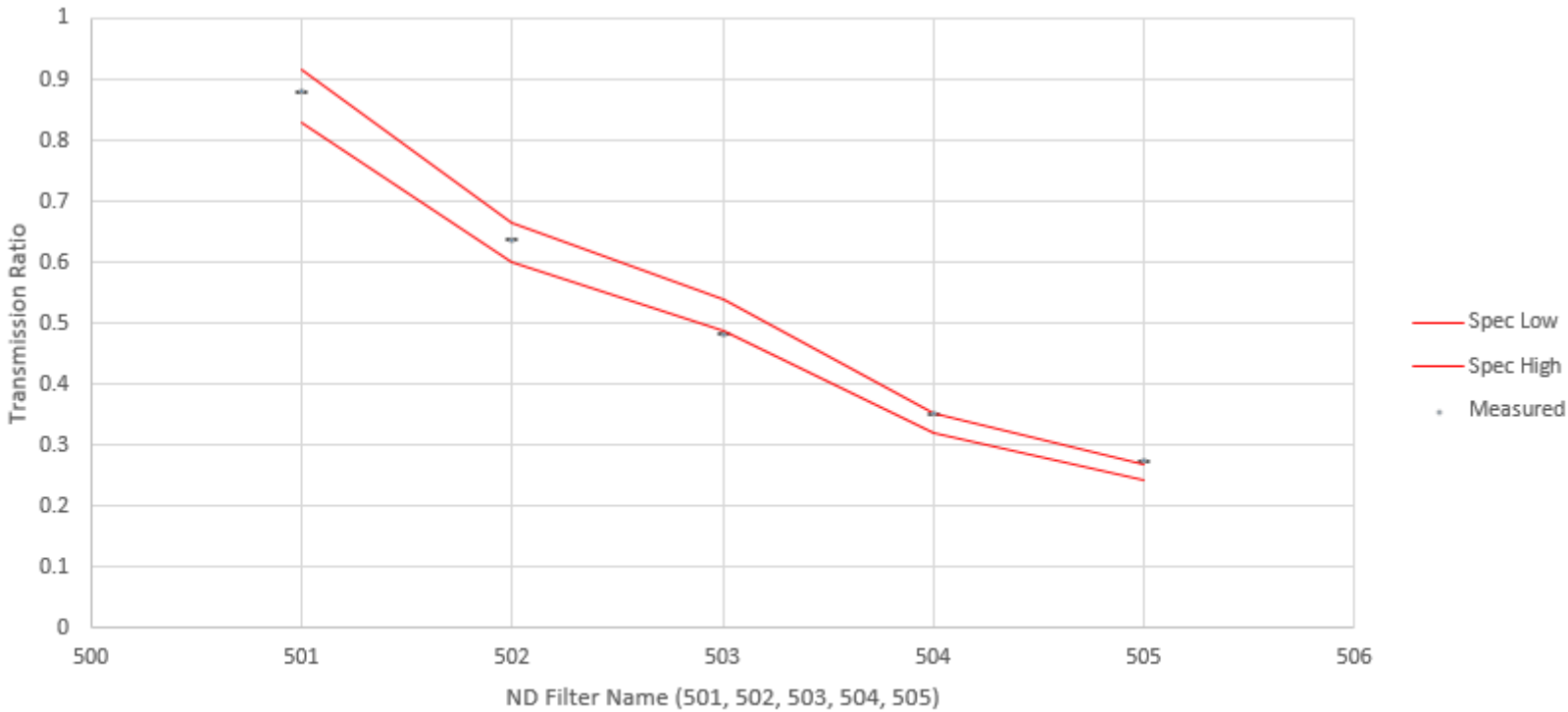
Craig Gallagher, University of Oregon



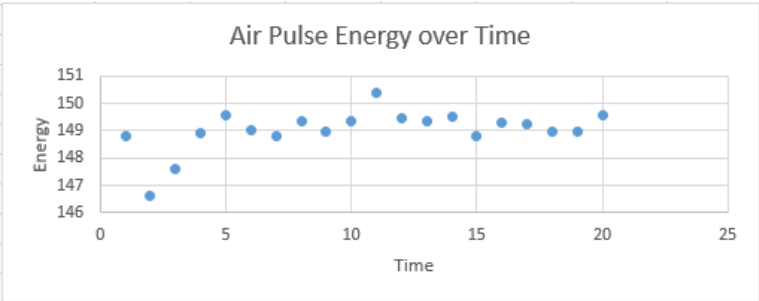
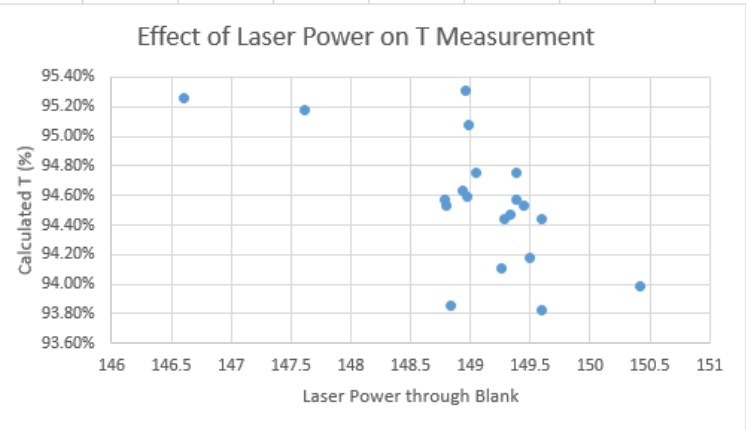
Neutral-Density Filter Transmission (T) Measurements

Filter	Expected T	Tolerance	Spec Low	Spec High	Measured T	Sigma	Measured Low	Measured High
Blank					0.9455	0.0009	0.9446	0.9464
501	0.873	0.044	0.829	0.917	0.8798	0.002	0.8778	0.8818
502	0.632	0.032	0.6	0.664	0.6368	0.0015	0.6353	0.6383
503	0.512	0.026	0.486	0.538	0.4818	0.0013	0.4805	0.4831
504	0.336	0.017	0.319	0.353	0.351	0.0013	0.3497	0.3523
505	0.256	0.013	0.243	0.269	0.275	0.0013	0.2737	0.2763

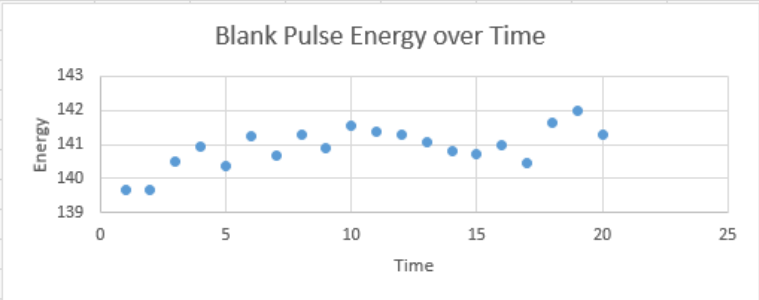
Measured Transmission Ratios of ND Filters



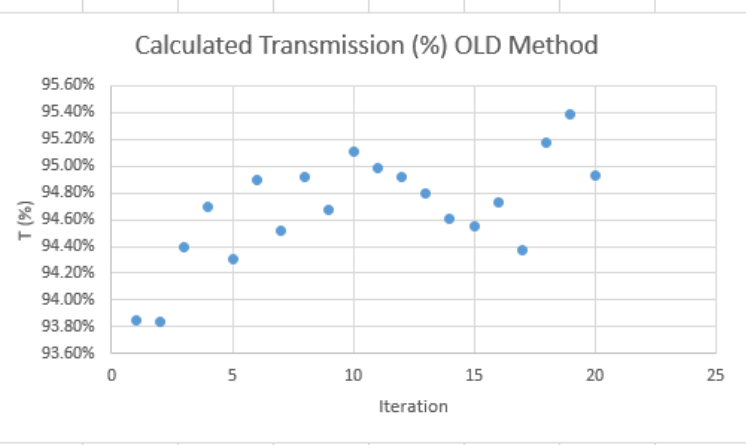
Blank - Charts



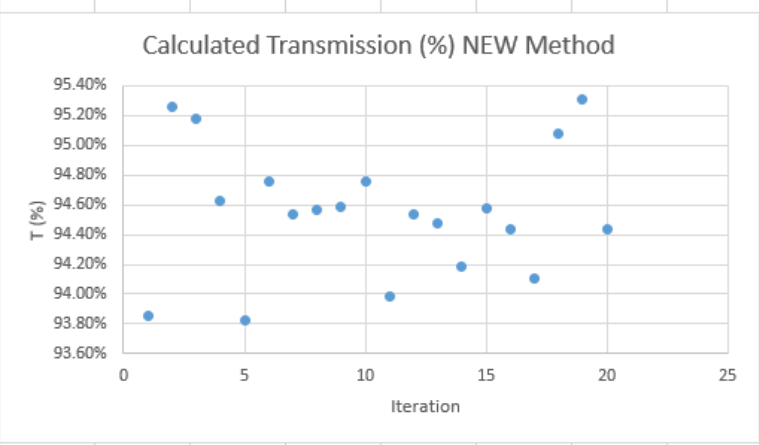
Mean	149.036
Sigma	0.8
Sigma%	0.5%



Mean	140.917
Sigma	0.6
Sigma%	0.4%

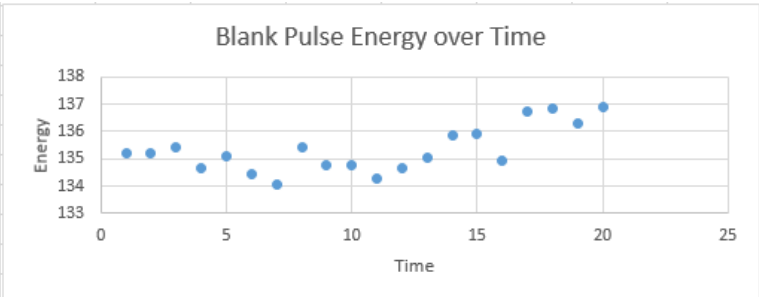
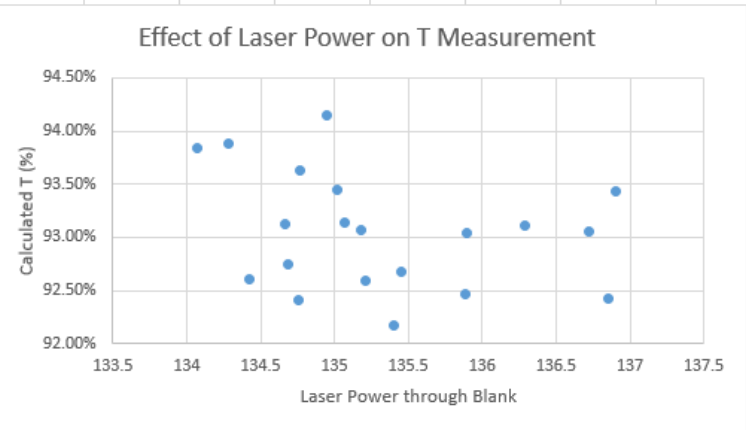


Mean	94.68%
Sigma	0.004
Sigma%	0.4%

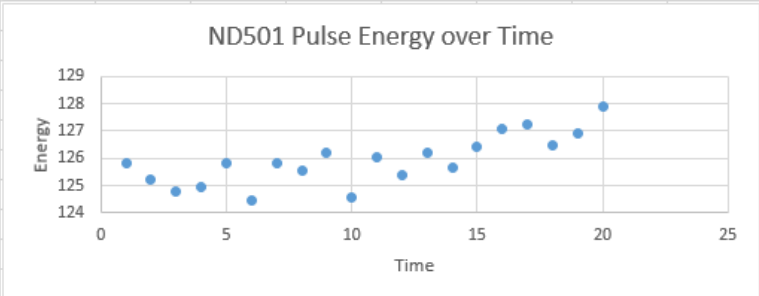


Mean	94.55%
Sigma	0.004
Sigma%	0.4%

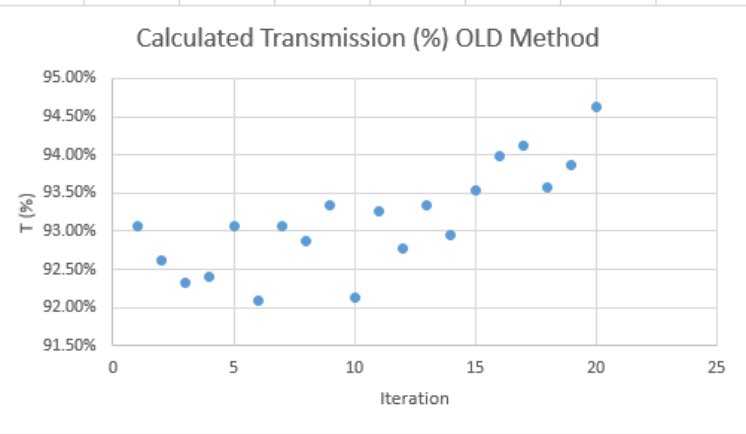
ND501 - Charts



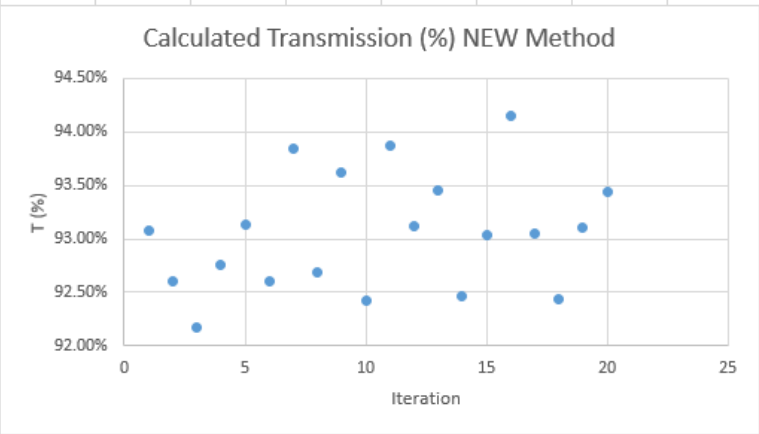
Mean	135.323
Sigma	0.8
Sigma%	0.6%



Mean	125.920
Sigma	0.9
Sigma%	0.7%

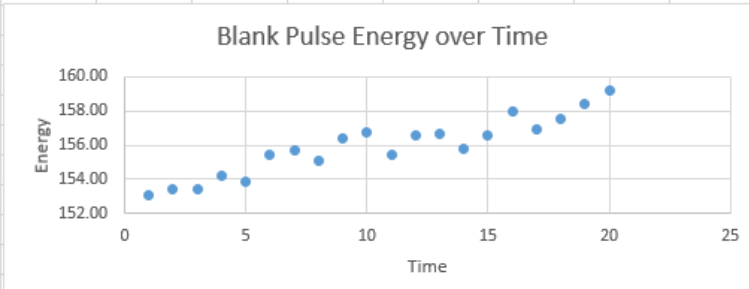
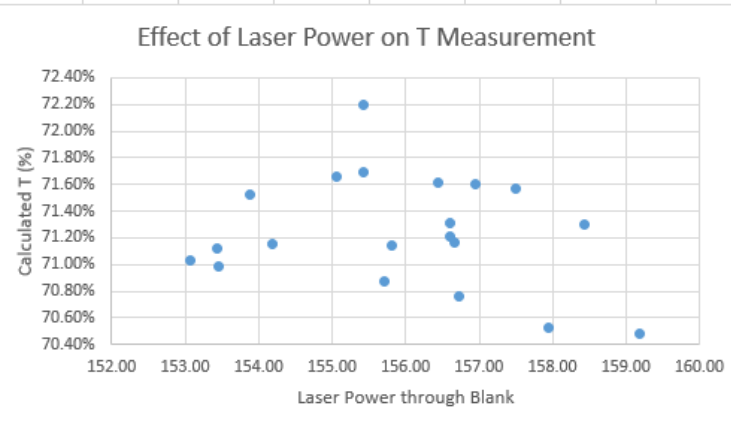


Mean	93.15%
Sigma	0.007
Sigma%	0.7%

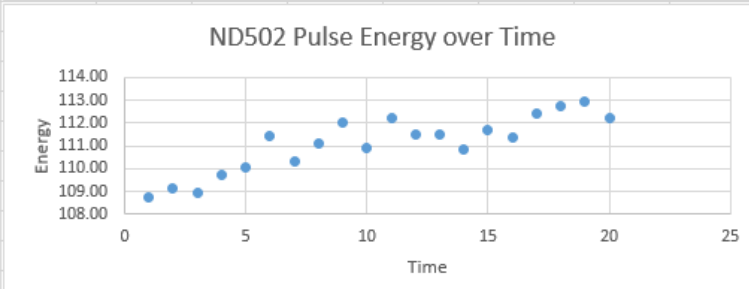


Mean	93.05%
Sigma	0.005
Sigma%	0.6%

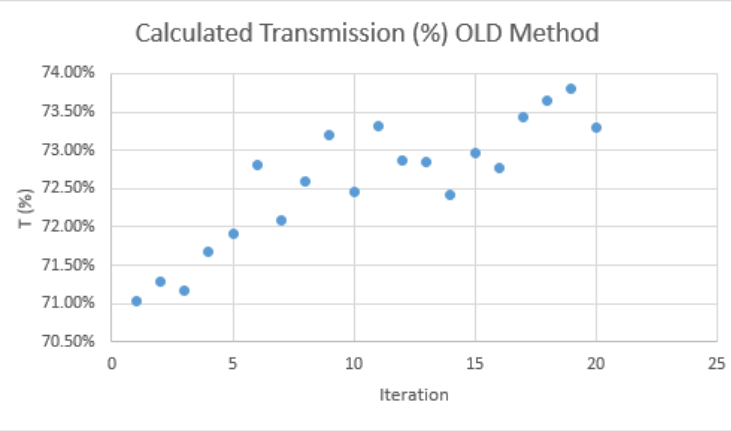
ND502 - Charts



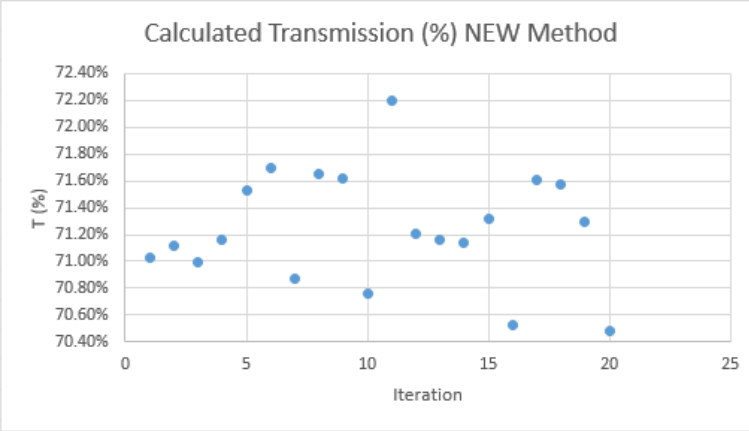
Mean	155.927
Sigma	1.7
Sigma%	1.1%



Mean	111.091
Sigma	1.2
Sigma%	1.1%

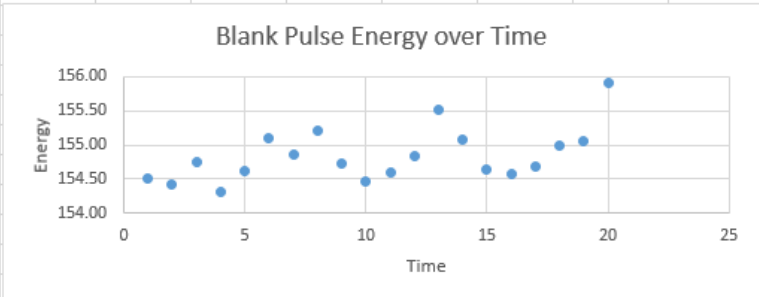
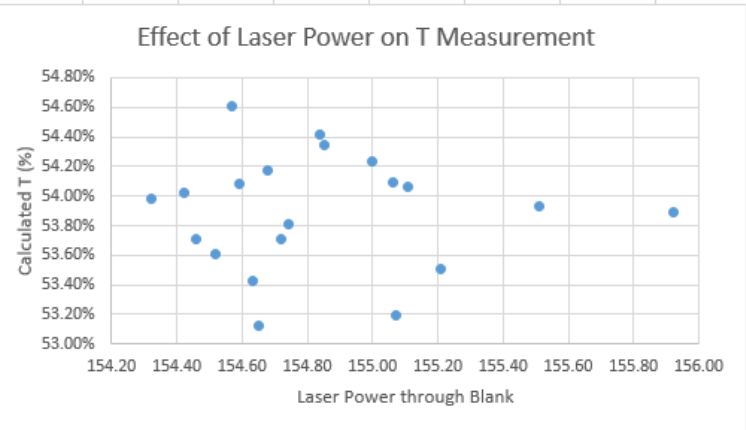


Mean	72.58%
Sigma	0.008
Sigma%	1.1%

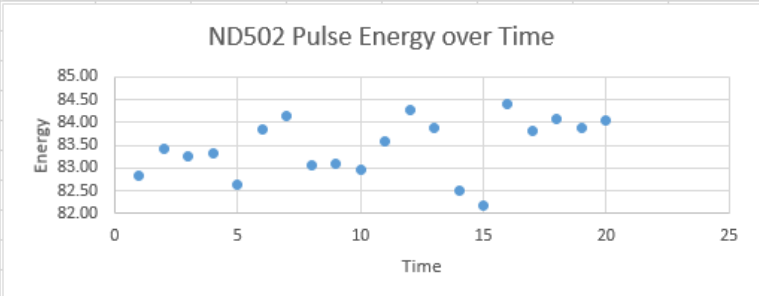


Mean	71.25%
Sigma	0.004
Sigma%	0.6%

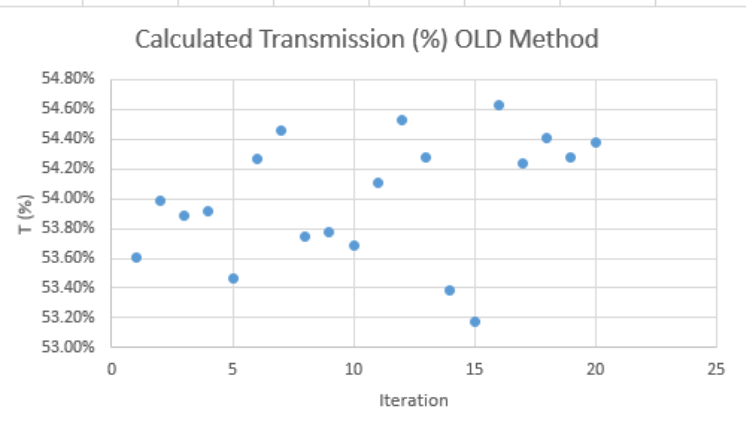
ND503 - Charts



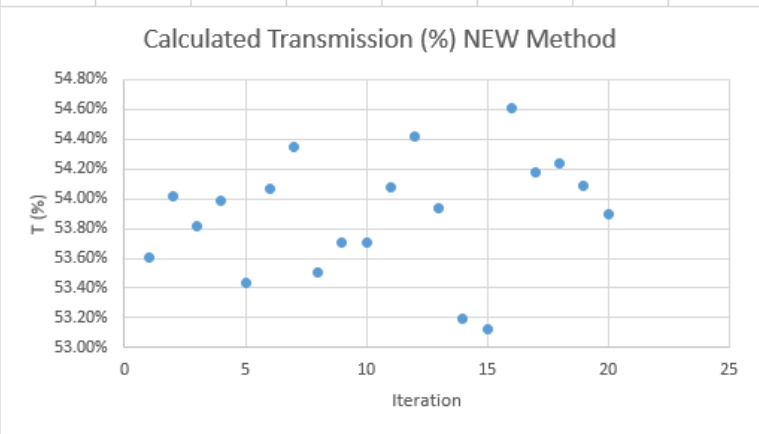
Mean	154.844
Sigma	0.4
Sigma%	0.2%



Mean	83.457
Sigma	0.6
Sigma%	0.7%

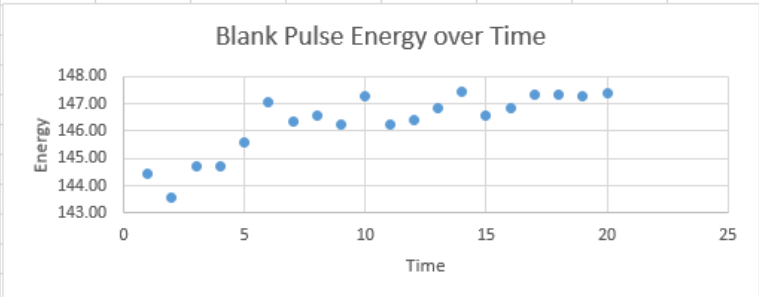
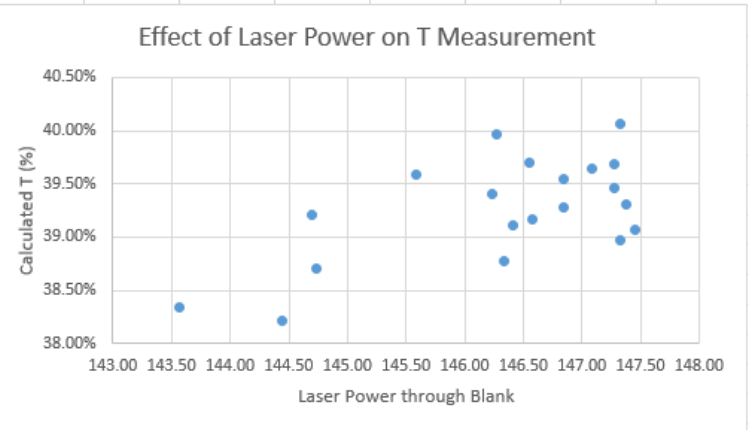


Mean	54.01%
Sigma	0.004
Sigma%	0.7%

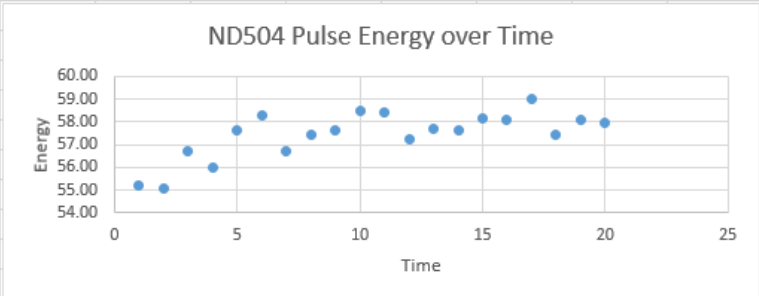


Mean	53.90%
Sigma	0.004
Sigma%	0.7%

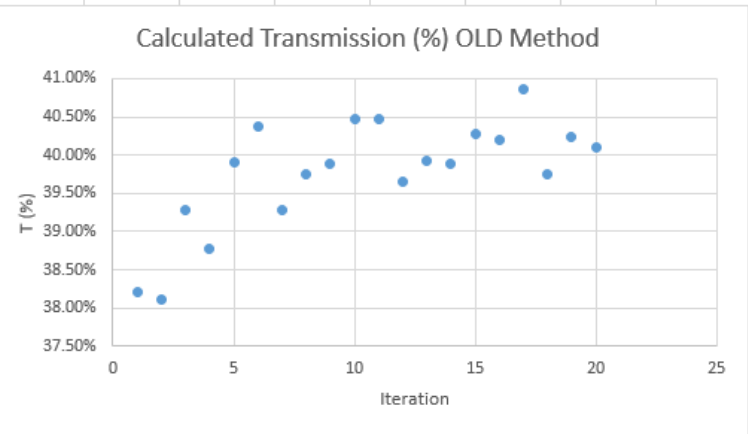
ND504 - Charts



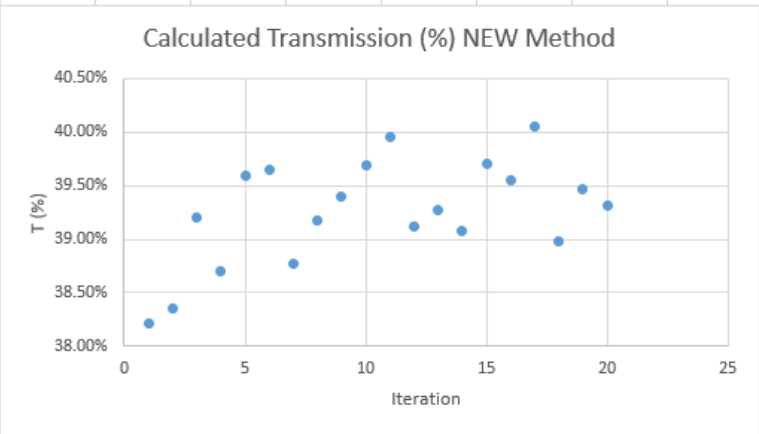
Mean	146.310
Sigma	1.1
Sigma%	0.8%



Mean	57.446
Sigma	1.0
Sigma%	1.8%

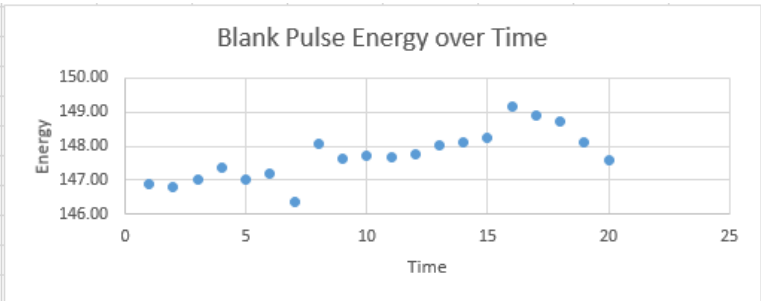
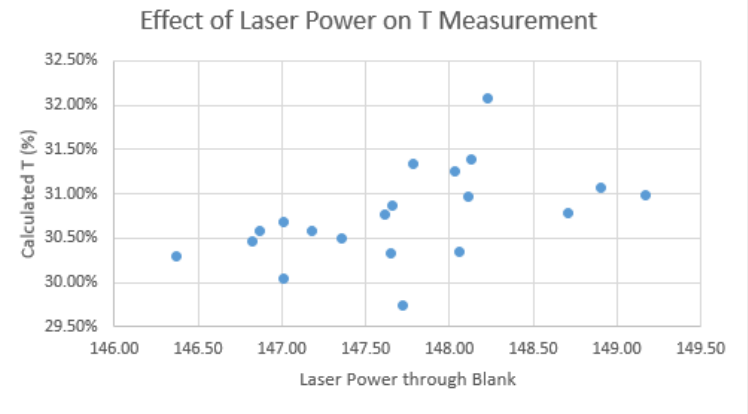


Mean	39.77%
Sigma	0.007
Sigma%	1.8%

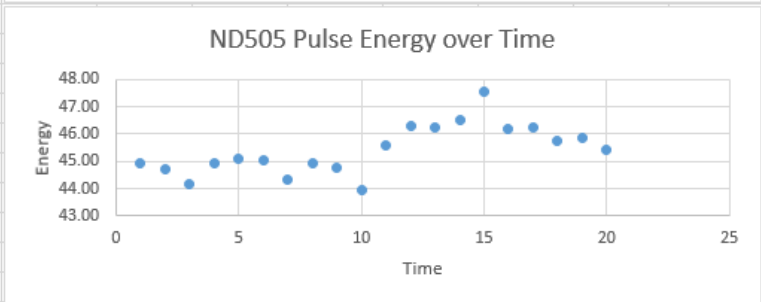


Mean	39.26%
Sigma	0.005
Sigma%	1.2%

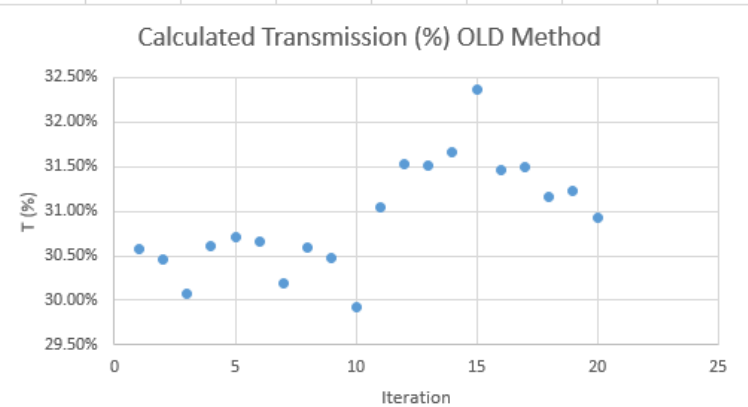
ND505 - Charts



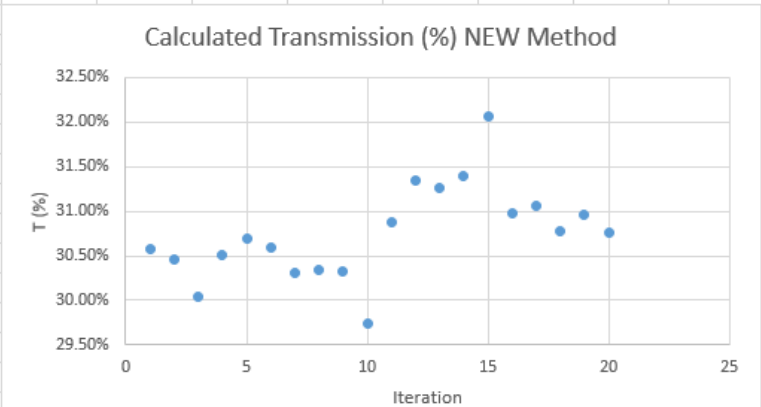
Mean	147.719
Sigma	0.7
Sigma%	0.5%



Mean	45.429
Sigma	0.9
Sigma%	1.9%



Mean	30.93%
Sigma	0.006
Sigma%	1.9%



Mean	30.75%
Sigma	0.005
Sigma%	1.7%