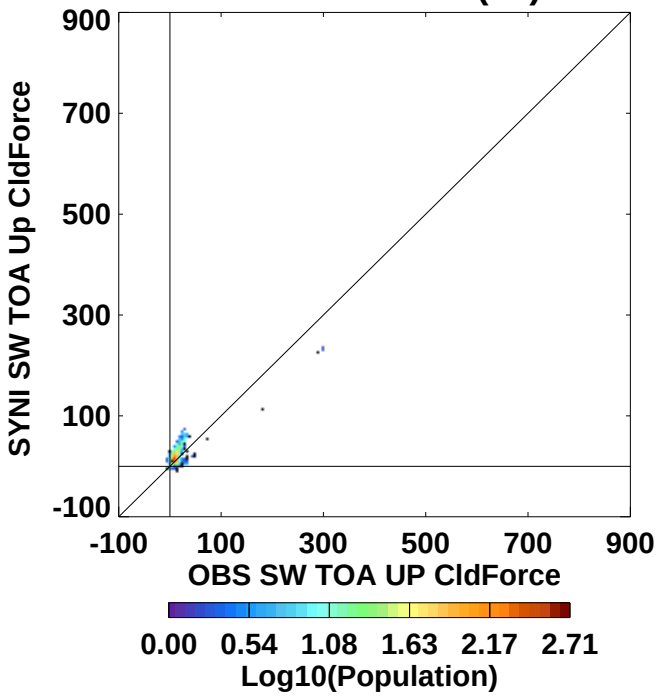
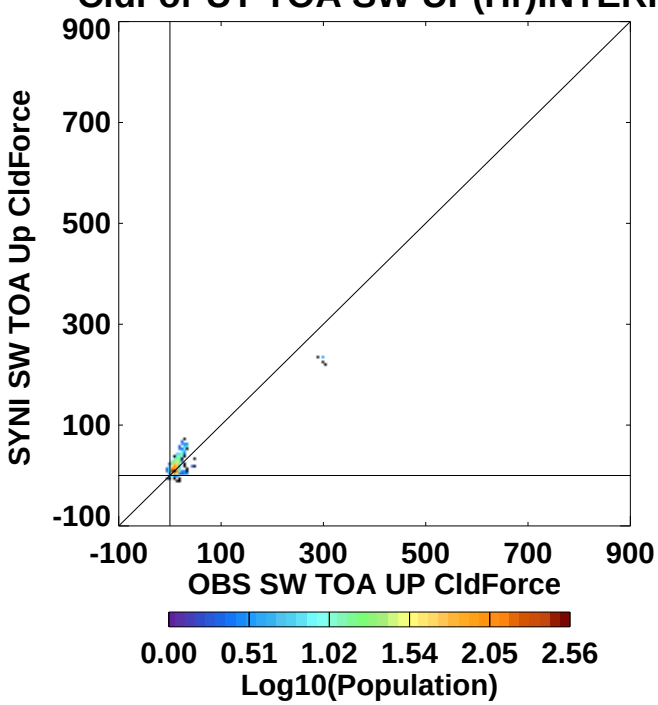
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## CldFor UT TOA SW UP(Hr)CERES



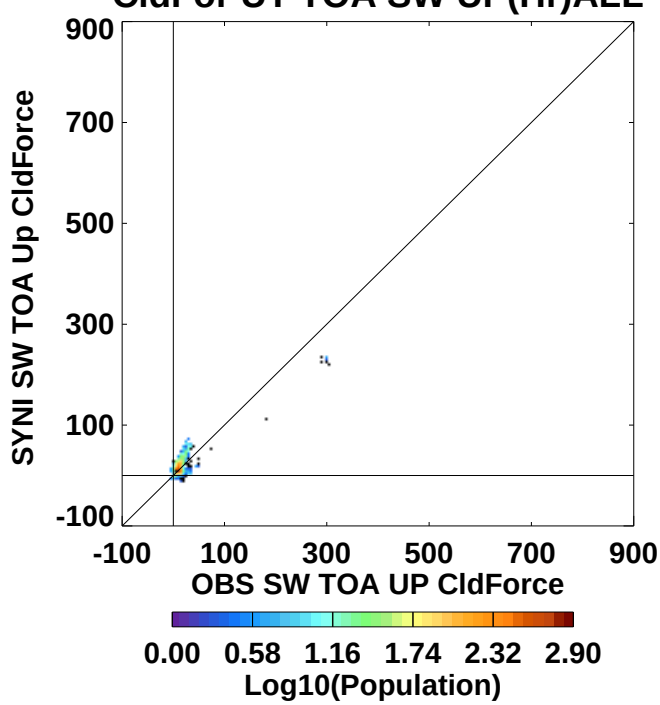

| N= 2285. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA UP CldForce | 4.13( | 15.60) |
| SYNI SW TOA Up CldForce | 10.64( | 15.88) |
| Y-X | 6.50( | 9.93) |
| RMS( | 11.87)..... | |

## CldFor UT TOA SW UP(Hr)INTERP




| N= 1947. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA UP CldForce | 4.21( | 17.30) |
| SYNI SW TOA Up CldForce | 8.98( | 16.55) |
| Y-X | 4.77( | 10.04) |
| RMS( | 11.11)..... | |

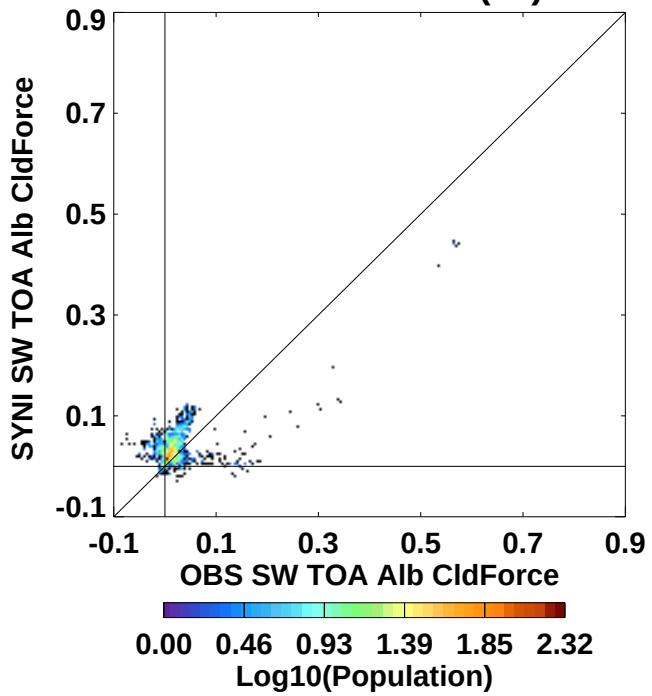
## CldFor UT TOA SW UP(Hr)ALL




| N= 4232. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA UP CldForce | 4.17( | 16.40) |
| SYNI SW TOA Up CldForce | 9.87( | 16.21) |
| Y-X | 5.71( | 10.02) |
| RMS( | 11.53)..... | |

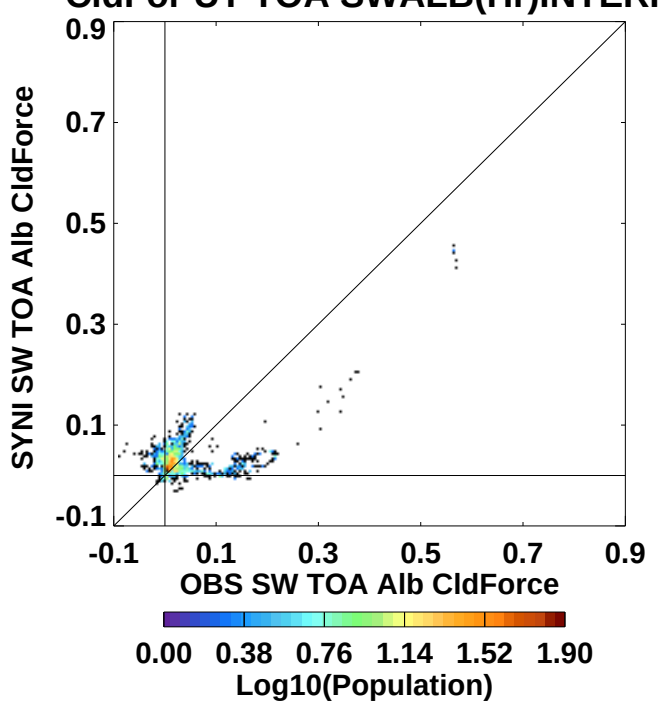
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## CldFor UT TOA SWALB(Hr)CERES



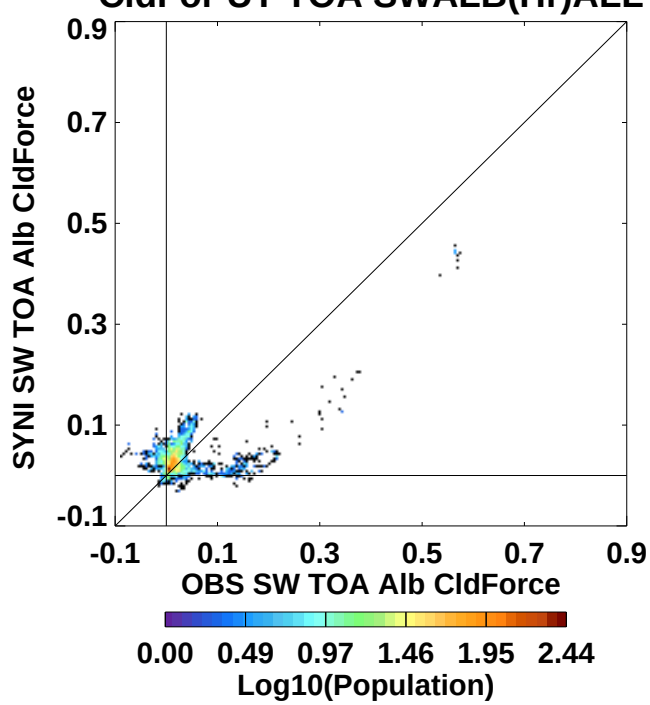

| N= 2284. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Alb CldForce | 0.011( | 0.041) |
| SYNI SW TOA Alb CldForce | 0.027( | 0.032) |
| Y-X | 0.016( | 0.034) |
| RMS( | 0.037)..... | |

## CldFor UT TOA SWALB(Hr)INTERP




| N= 1946. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Alb CldForce | 0.025( | 0.059) |
| SYNI SW TOA Alb CldForce | 0.024( | 0.034) |
| Y-X | -0.001( | 0.054) |
| RMS( | 0.054)..... | |

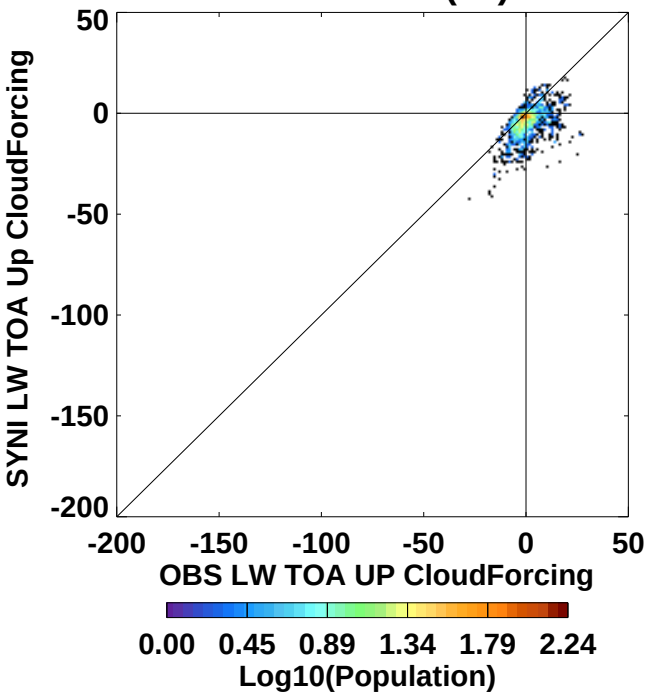
## CldFor UT TOA SWALB(Hr)ALL




| N= 4230. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Alb CldForce | 0.018( | 0.051) |
| SYNI SW TOA Alb CldForce | 0.026( | 0.033) |
| Y-X | 0.008( | 0.045) |
| RMS( | 0.046)..... | |

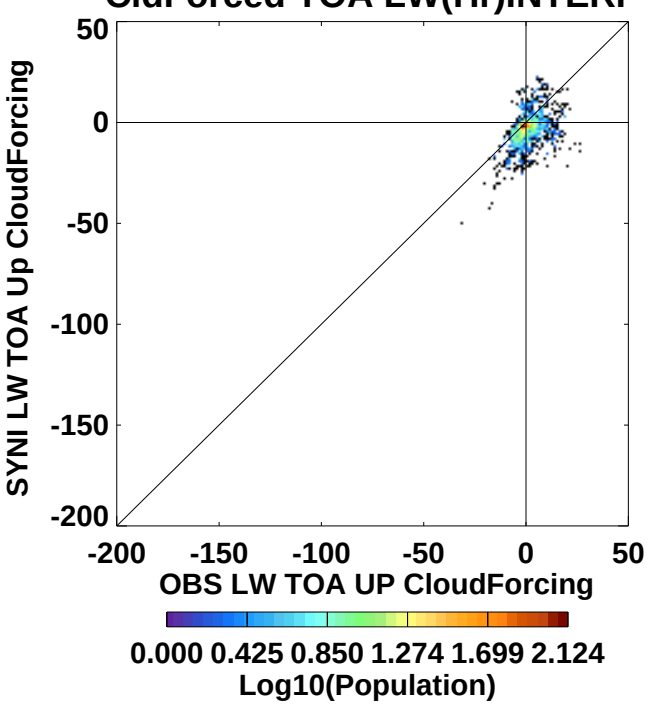
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## CldForced TOA LW(Hr)CERES



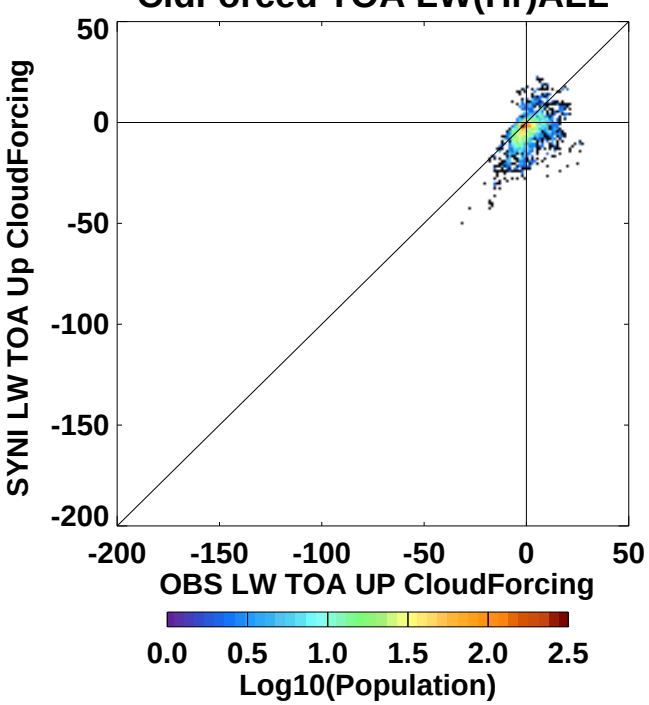

| N= 2205. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA UP CloudForcing | 1.66 | ( 5.75) |
| SYNI LW TOA Up CloudForcing | -2.90 | ( 6.58) |
| Y-X | -4.56 | ( 6.46) |
| RMS( | 7.90)..... | |

## CldForced TOA LW(Hr)INTERP




| N= 1900. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA UP CloudForcing | 2.02 | ( 5.61) |
| SYNI LW TOA Up CloudForcing | -1.82 | ( 7.14) |
| Y-X | -3.84 | ( 6.99) |
| RMS( | 7.97)..... | |

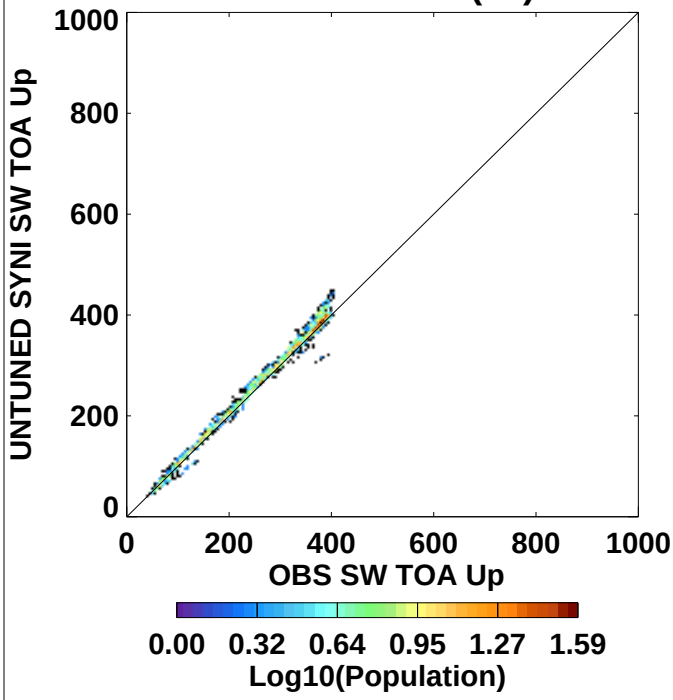
## CldForced TOA LW(Hr)ALL




| N= 4105. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA UP CloudForcing | 1.83 | ( 5.69) |
| SYNI LW TOA Up CloudForcing | -2.40 | ( 6.87) |
| Y-X | -4.23 | ( 6.72) |
| RMS( | 7.94)..... | |

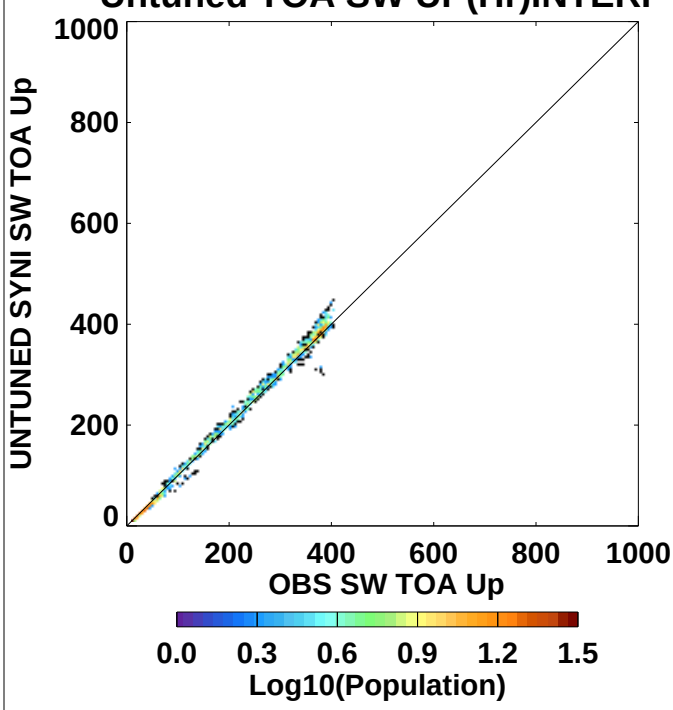
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## Untuned TOA SW UP(Hr)CERES



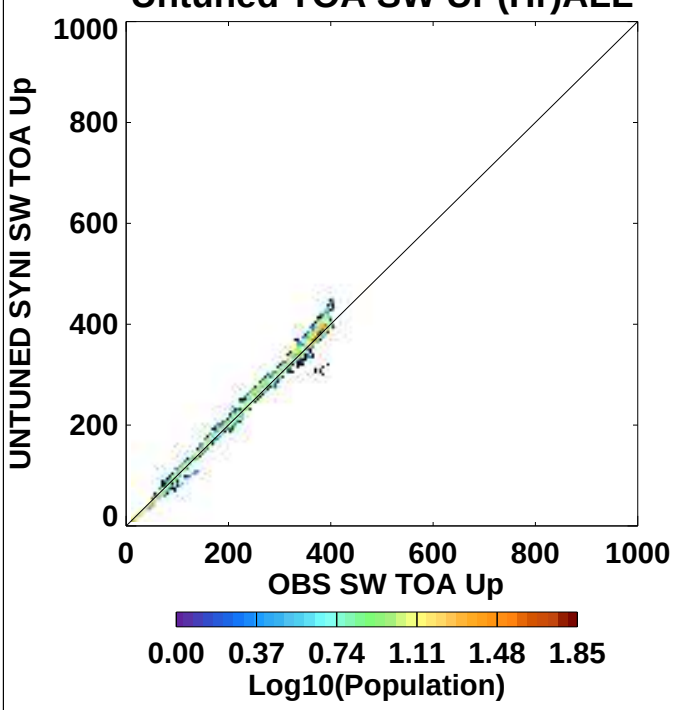

| N= 2299. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 262.5( | 105.4) |
| UNTUNED SYNI SW TOA Up | 269.1( | 108.2) |
| Y-X | 6.54( | 9.91) |
| RMS( | 11.87)..... | |

## Untuned TOA SW UP(Hr)INTERP




| N= 1957. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 227.6( | 129.4) |
| UNTUNED SYNI SW TOA Up | 232.4( | 133.4) |
| Y-X | 4.81( | 10.03) |
| RMS( | 11.12)..... | |

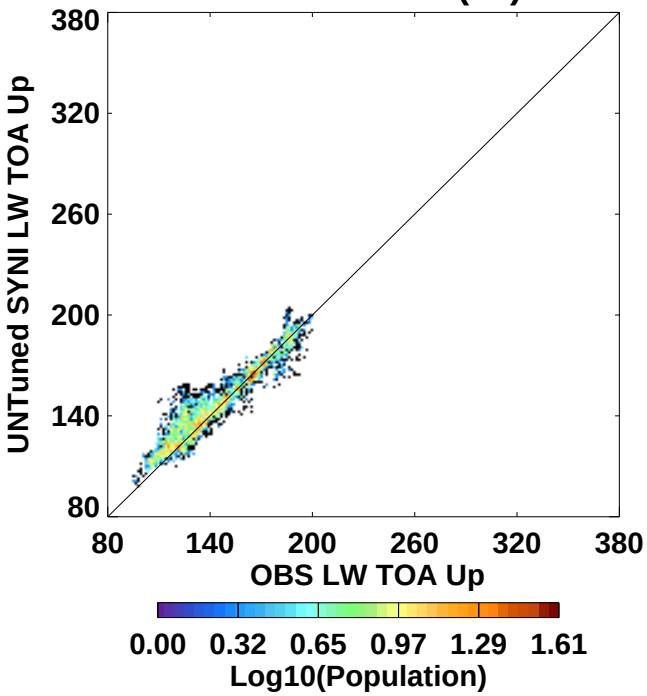
## Untuned TOA SW UP(Hr)ALL




| N= 4256. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 246.5( | 118.3) |
| UNTUNED SYNI SW TOA Up | 252.2( | 121.8) |
| Y-X | 5.74( | 10.00) |
| RMS( | 11.53)..... | |

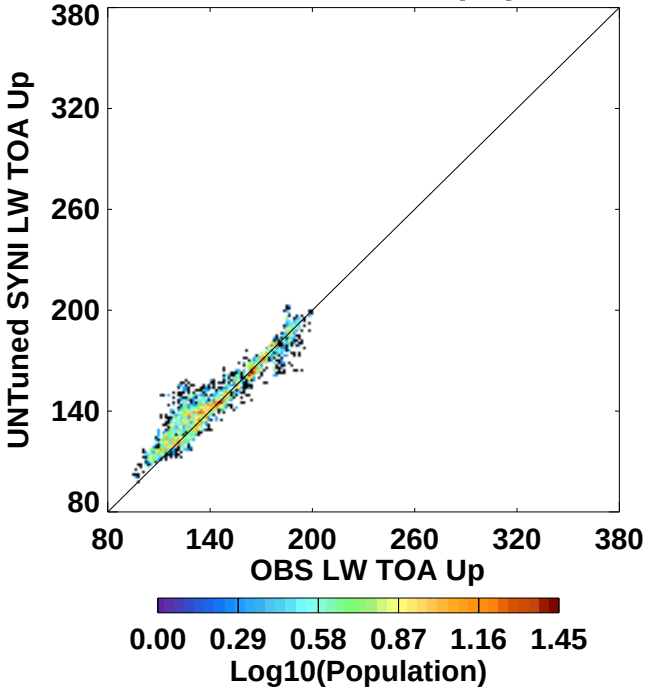
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## UNTuned TOA LW UP(Hr)CERES



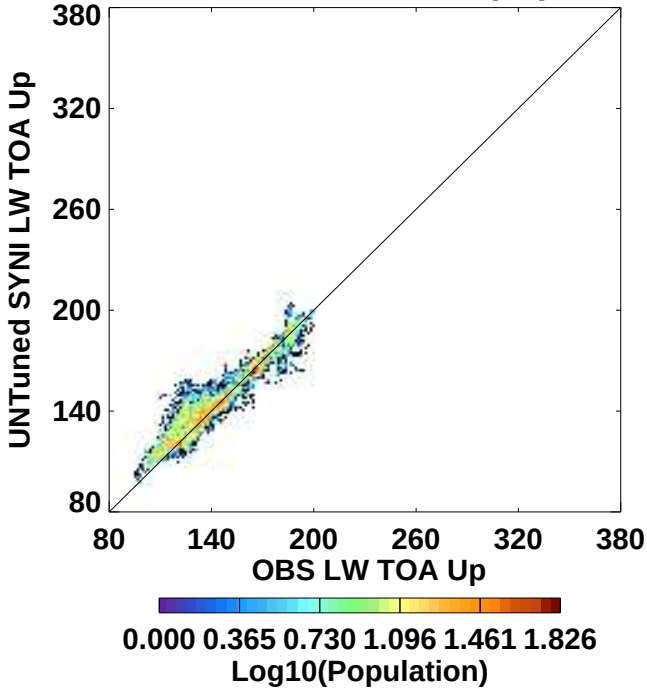

| N= 4991. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 142.2( | 24.65) |
| UNTuned SYNI LW TOA Up | 145.5( | 22.06) |
| Y-X | 3.23( | 7.53) |
| RMS( | 8.20)..... | |

## UNTuned TOA LW UP(Hr)INTERP




| N= 3739. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 142.2( | 24.04) |
| UNTuned SYNI LW TOA Up | 145.5( | 21.43) |
| Y-X | 3.28( | 7.27) |
| RMS( | 7.98)..... | |

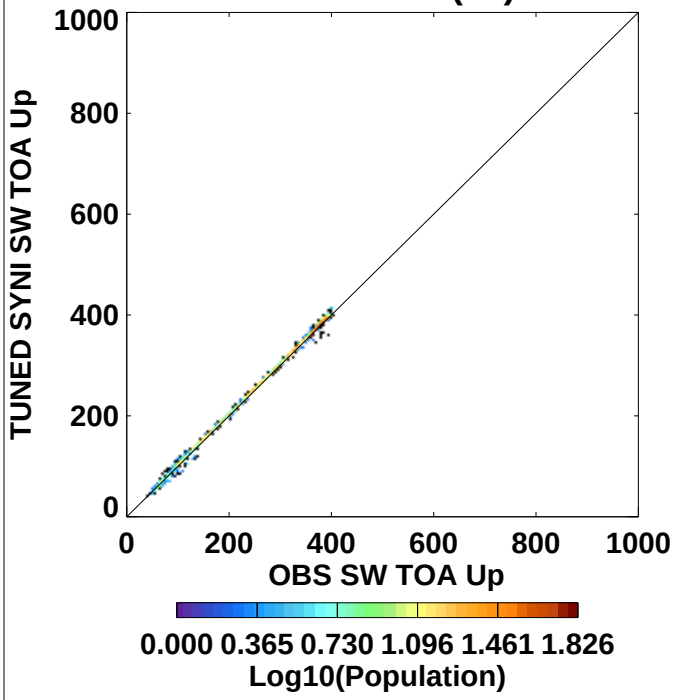
## UNTuned TOA LW UP(Hr)ALL




| N= 8730. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 142.2( | 24.39) |
| UNTuned SYNI LW TOA Up | 145.5( | 21.79) |
| Y-X | 3.25( | 7.42) |
| RMS( | 8.10)..... | |

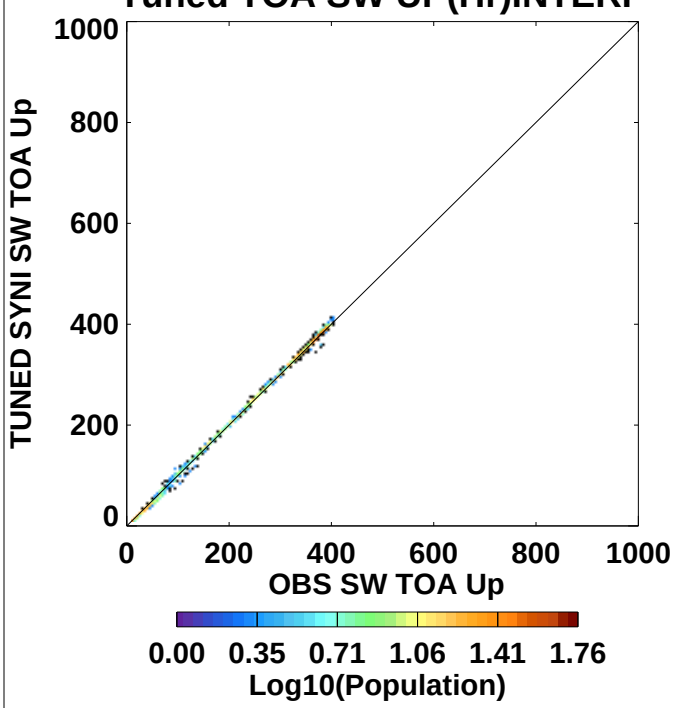
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## Tuned TOA SW UP(Hr)CERES



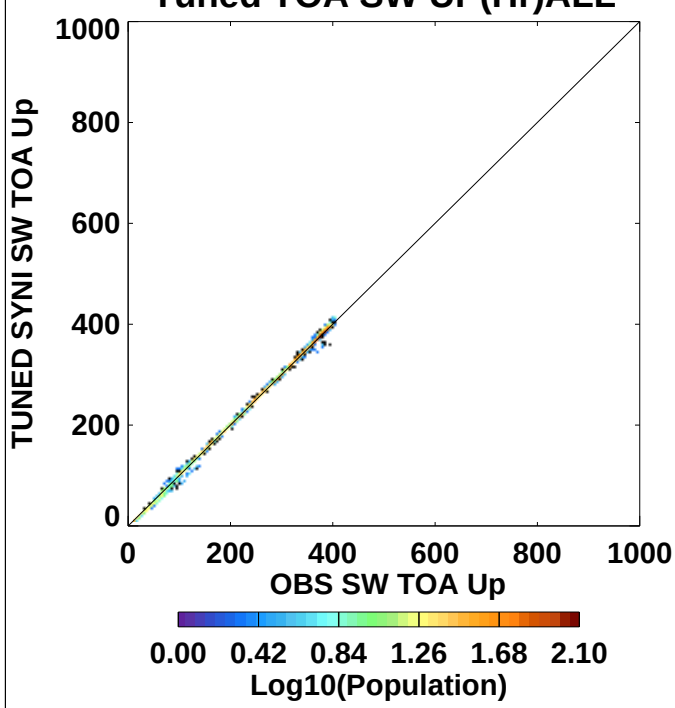

| N= 2299. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 262.5( | 105.4) |
| TUNED SYNI SW TOA Up | 264.5( | 105.9) |
| Y-X | 1.91( | 3.72) |
| RMS( | 4.19)..... | |

## Tuned TOA SW UP(Hr)INTERP




| N= 1957. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 227.6( | 129.4) |
| TUNED SYNI SW TOA Up | 228.7( | 130.7) |
| Y-X | 1.14( | 3.93) |
| RMS( | 4.09)..... | |

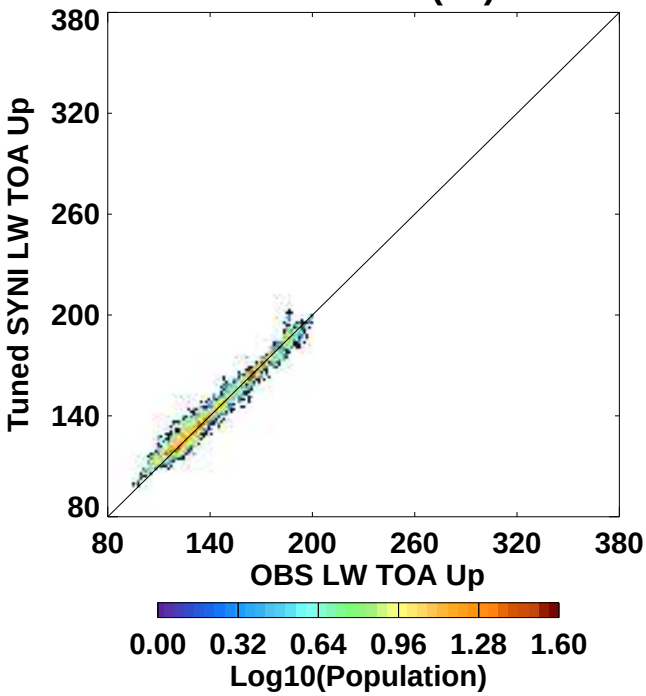
## Tuned TOA SW UP(Hr)ALL




| N= 4256. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 246.5( | 118.3) |
| TUNED SYNI SW TOA Up | 248.0( | 119.3) |
| Y-X | 1.56( | 3.84) |
| RMS( | 4.14)..... | |

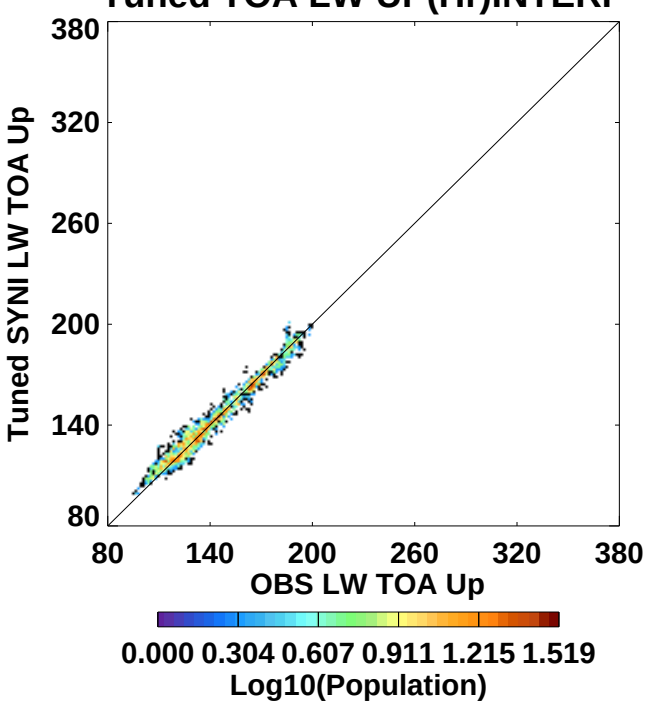
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## Tuned TOA LW UP(Hr)CERES



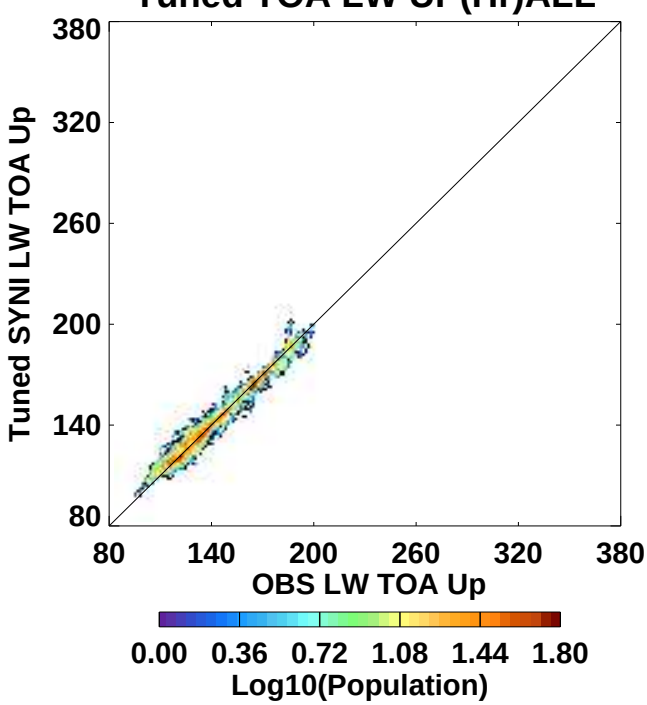

| N= 4991. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 142.2( | 24.65) |
| Tuned SYNI LW TOA Up | 142.9( | 23.48) |
| Y-X | 0.722( | 4.27) |
| RMS( | 4.33)..... | |

## Tuned TOA LW UP(Hr)INTERP




| N= 3739. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 142.2( | 24.04) |
| Tuned SYNI LW TOA Up | 143.0( | 22.87) |
| Y-X | 0.755( | 4.13) |
| RMS( | 4.19)..... | |

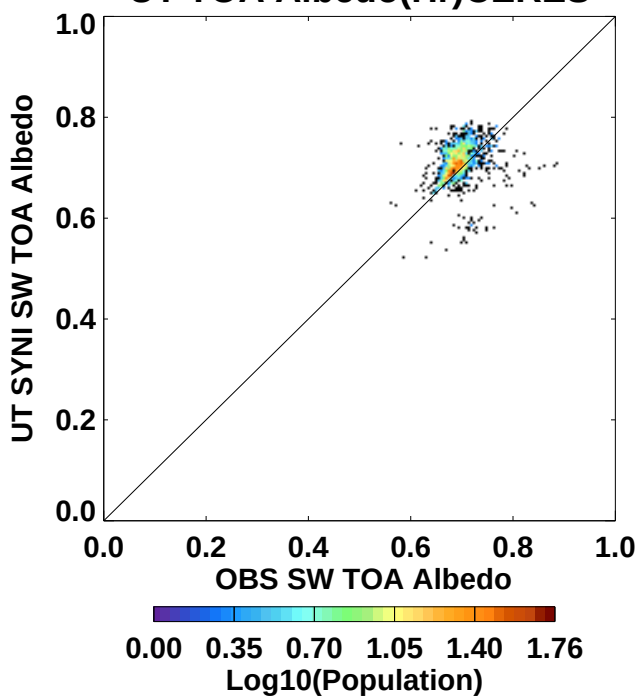
## Tuned TOA LW UP(Hr)ALL




| N= 8730. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 142.2( | 24.39) |
| Tuned SYNI LW TOA Up | 143.0( | 23.22) |
| Y-X | 0.736( | 4.21) |
| RMS( | 4.27)..... | |

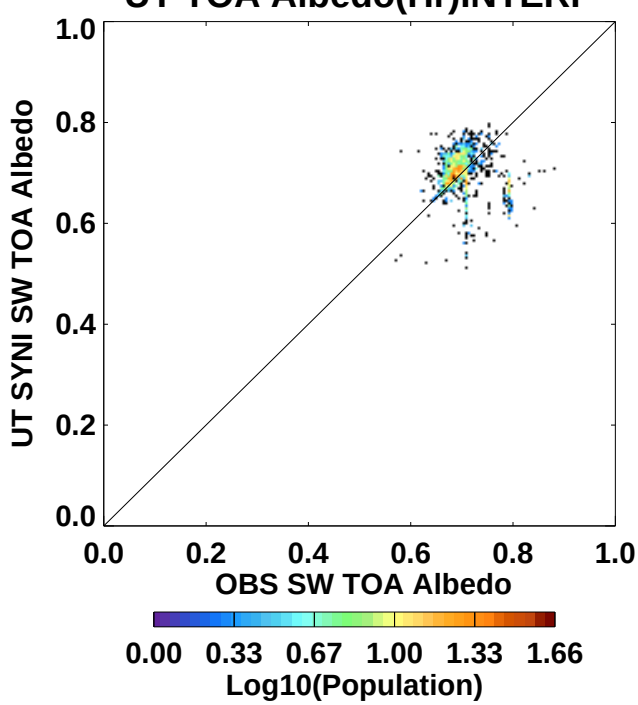
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## UT TOA Albedo(Hr)CERES



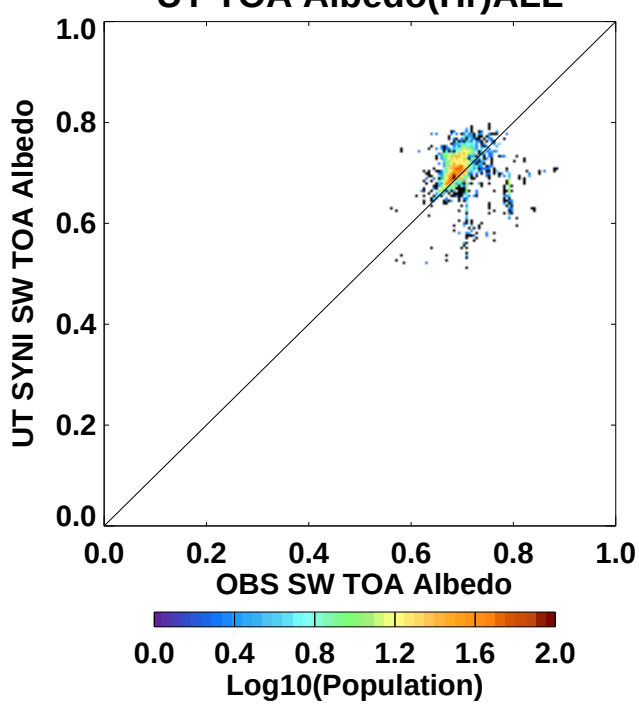

| N= 2299. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.697( | 0.026) |
| UT SYNI SW TOA Albedo | 0.712( | 0.031) |
| Y-X | 0.016( | 0.034) |
| RMS( | 0.038)..... | |

## UT TOA Albedo(Hr)INTERP




| N= 1957. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.704( | 0.036) |
| UT SYNI SW TOA Albedo | 0.704( | 0.036) |
| Y-X | -0.001( | 0.054) |
| RMS( | 0.054)..... | |

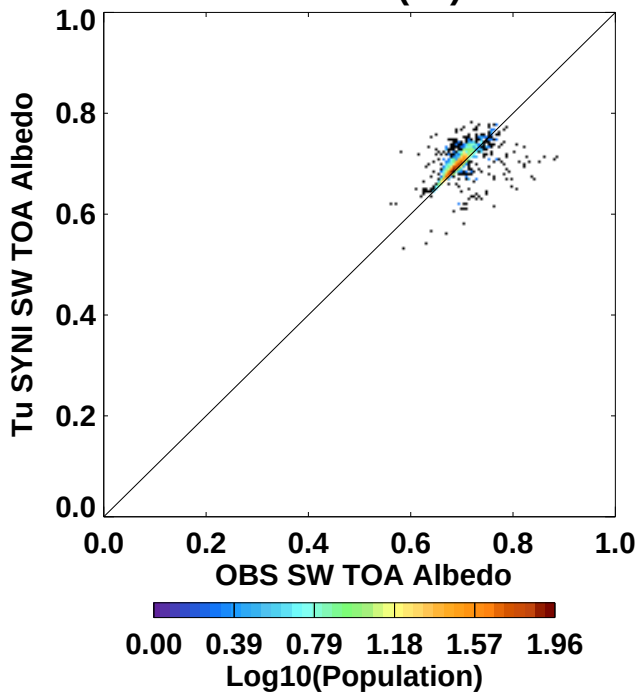
## UT TOA Albedo(Hr)ALL




| N= 4256. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.700( | 0.031) |
| UT SYNI SW TOA Albedo | 0.708( | 0.034) |
| Y-X | 0.008( | 0.045) |
| RMS( | 0.046)..... | |

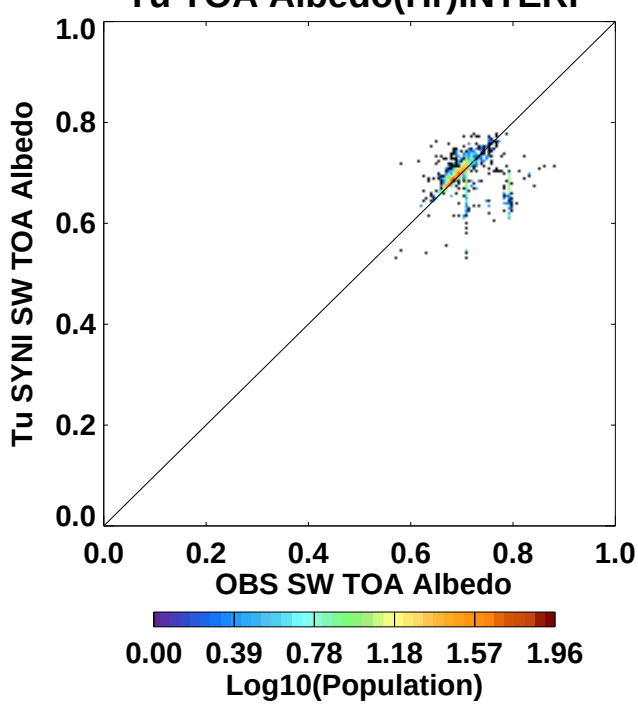
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) AllSky SPL

## Tu TOA Albedo(Hr)CERES



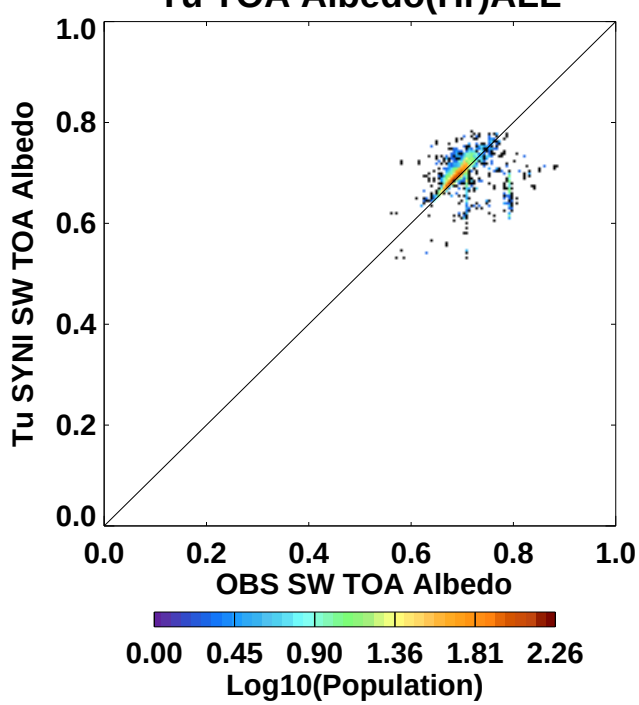

| N= 2299. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.697( | 0.026) |
| Tu SYNI SW TOA Albedo | 0.701( | 0.024) |
| Y-X | 0.005( | 0.022) |
| RMS( | 0.023)..... | |

## Tu TOA Albedo(Hr)INTERP




| N= 1957. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.704( | 0.036) |
| Tu SYNI SW TOA Albedo | 0.696( | 0.028) |
| Y-X | -0.009( | 0.044) |
| RMS( | 0.045)..... | |

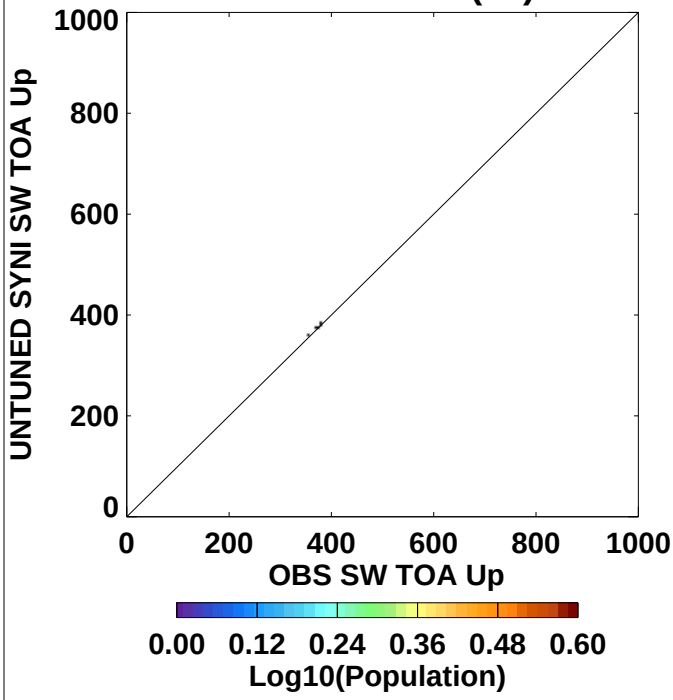
## Tu TOA Albedo(Hr)ALL




| N= 4256. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.700( | 0.031) |
| Tu SYNI SW TOA Albedo | 0.699( | 0.026) |
| Y-X | -0.001( | 0.035) |
| RMS( | 0.035)..... | |

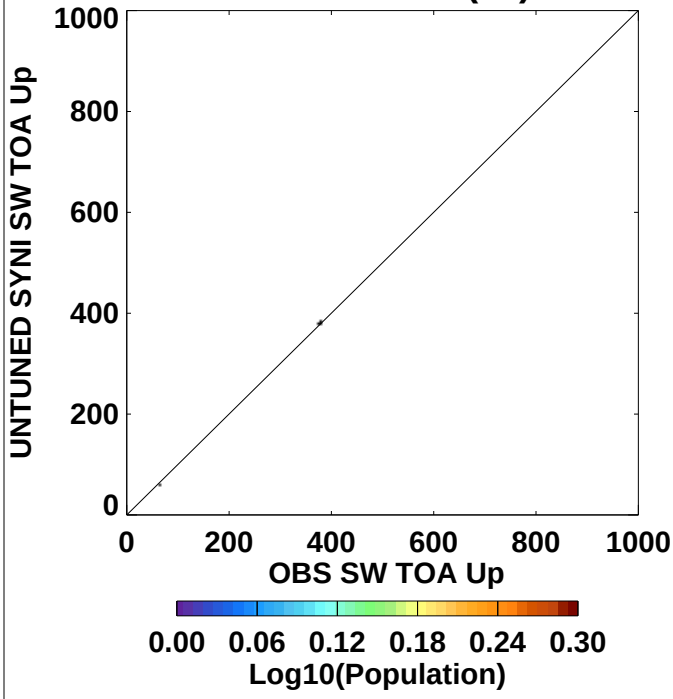
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) ClearSky 1% SPL

## Untuned TOA SW UP(Hr)CERES



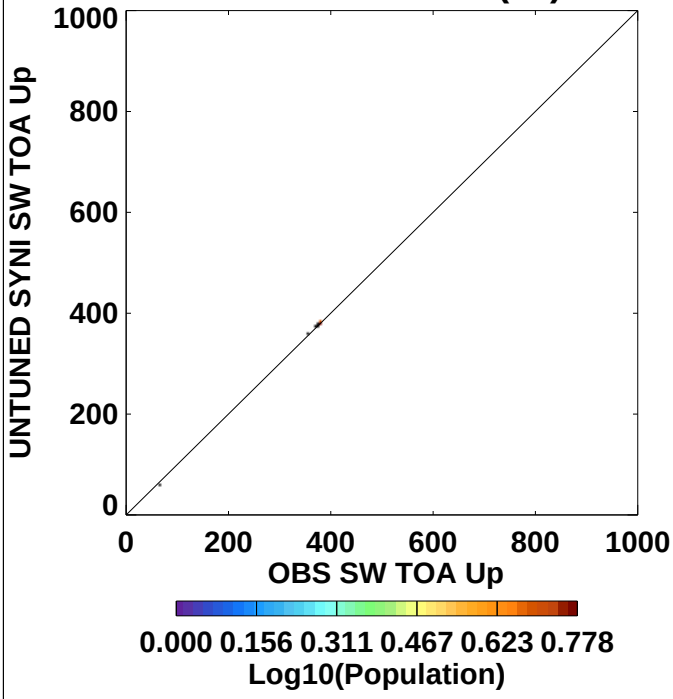

| N= 11. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 373.5( | 7.21) |
| UNTUNED SYNI SW TOA Up | 376.4( | 7.16) |
| Y-X | 2.93( | 0.087) |
| RMS( | 2.93)..... | |

## Untuned TOA SW UP(Hr)INTERP




| N= 5. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 312.0( | 143.7) |
| UNTUNED SYNI SW TOA Up | 314.0( | 145.8) |
| Y-X | 1.95( | 2.12) |
| RMS( | 2.72)..... | |

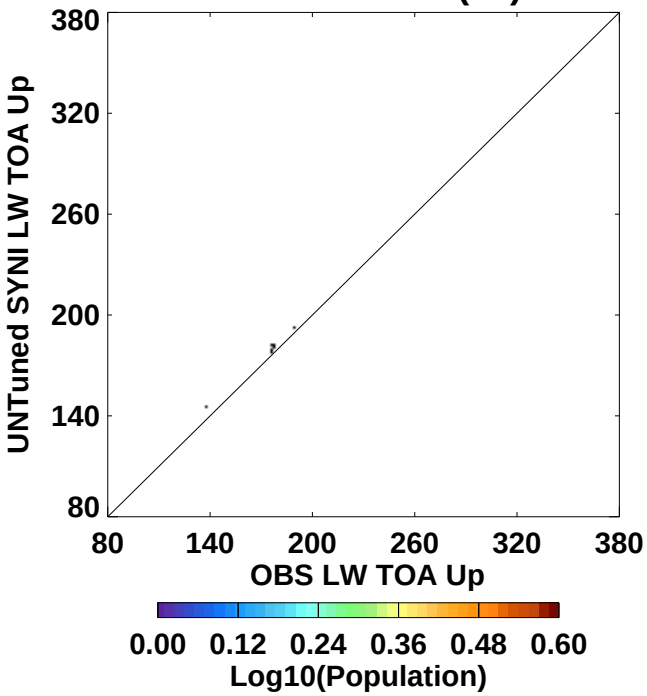
## Untuned TOA SW UP(Hr)ALL




| N= 16. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 354.3( | 80.04) |
| UNTUNED SYNI SW TOA Up | 356.9( | 81.22) |
| Y-X | 2.63( | 1.19) |
| RMS( | 2.87)..... | |

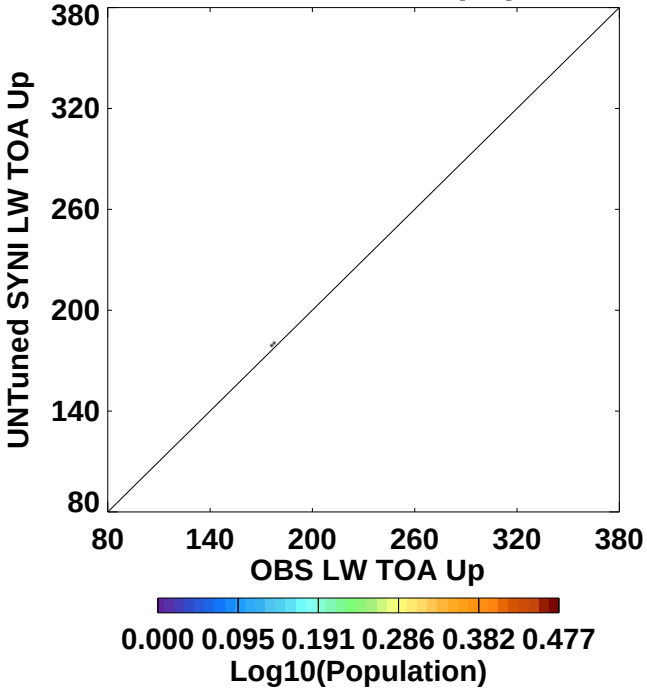
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) ClearSky 1% SPL

## UNTuned TOA LW UP(Hr)CERES



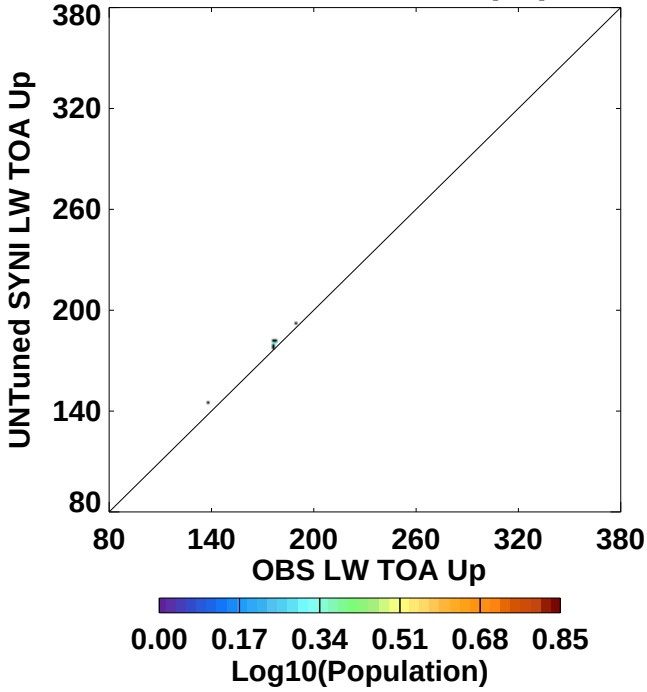

| N= 12. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 173.5( | 12.37) |
| UNTuned SYNI LW TOA Up | 177.0( | 11.05) |
| Y-X | 3.52( | 1.76) |
| RMS( | 3.91)..... | |

## UNTuned TOA LW UP(Hr)INTERP




| N= 4. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 175.7( | 0.260) |
| UNTuned SYNI LW TOA Up | 178.6( | 1.02) |
| Y-X | 2.95( | 0.814) |
| RMS( | 3.03)..... | |

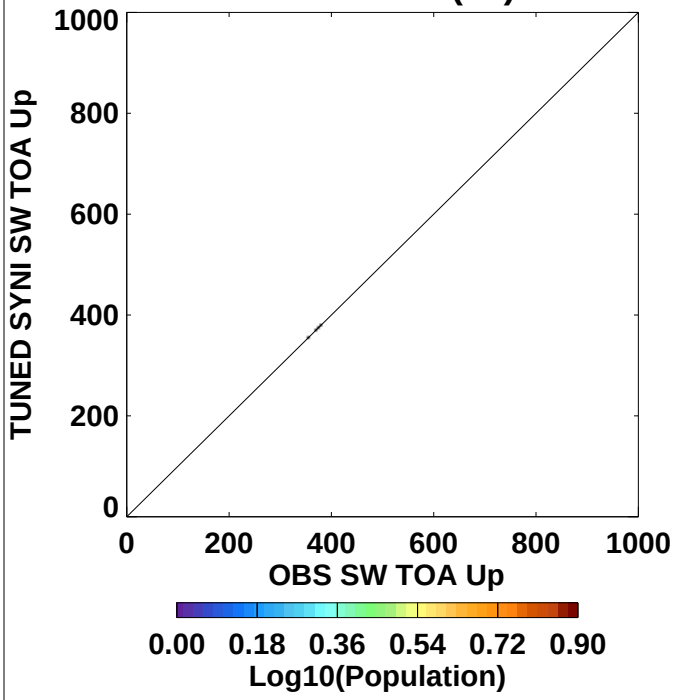
## UNTuned TOA LW UP(Hr)ALL




| N= 16. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 174.0( | 10.64) |
| UNTuned SYNI LW TOA Up | 177.4( | 9.50) |
| Y-X | 3.38( | 1.57) |
| RMS( | 3.71)..... | |

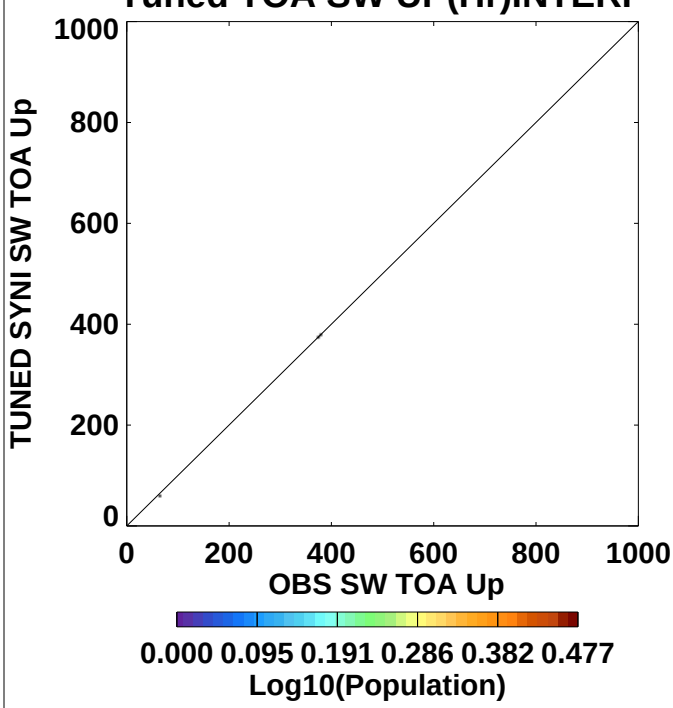
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) ClearSky 1% SPL

## Tuned TOA SW UP(Hr)CERES



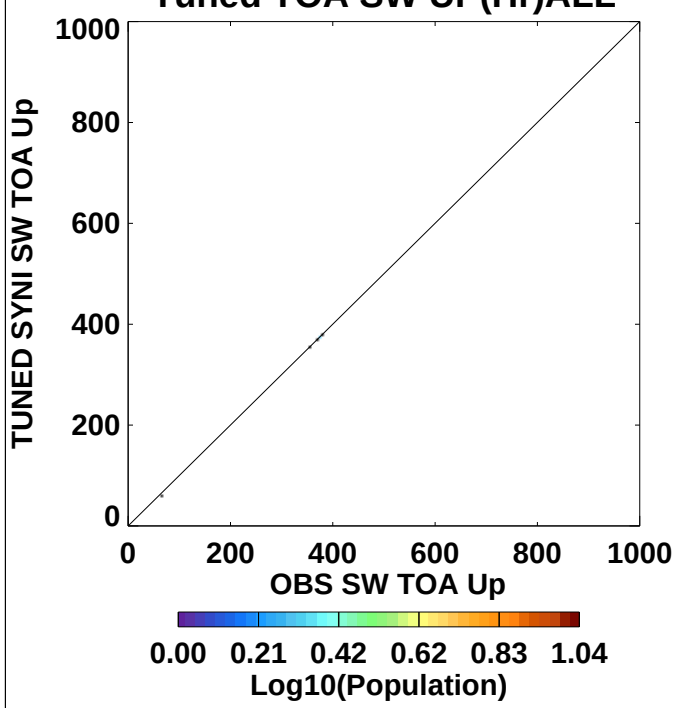

| N= 11. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 373.5( | 7.21) |
| TUNED SYNI SW TOA Up | 374.1( | 7.21) |
| Y-X | 0.606( | 0.016) |
| RMS( | 0.606)..... | |

## Tuned TOA SW UP(Hr)INTERP




| N= 5. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 312.0( | 143.7) |
| TUNED SYNI SW TOA Up | 312.2( | 144.6) |
| Y-X | 0.171( | 0.967) |
| RMS( | 0.882)..... | |

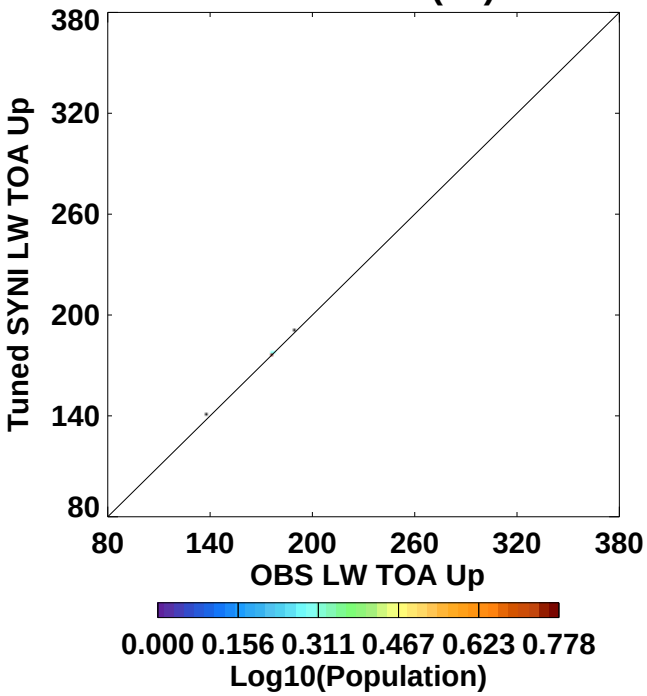
## Tuned TOA SW UP(Hr)ALL




| N= 16. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Up | 354.3( | 80.04) |
| TUNED SYNI SW TOA Up | 354.8( | 80.58) |
| Y-X | 0.470( | 0.541) |
| RMS( | 0.704)..... | |

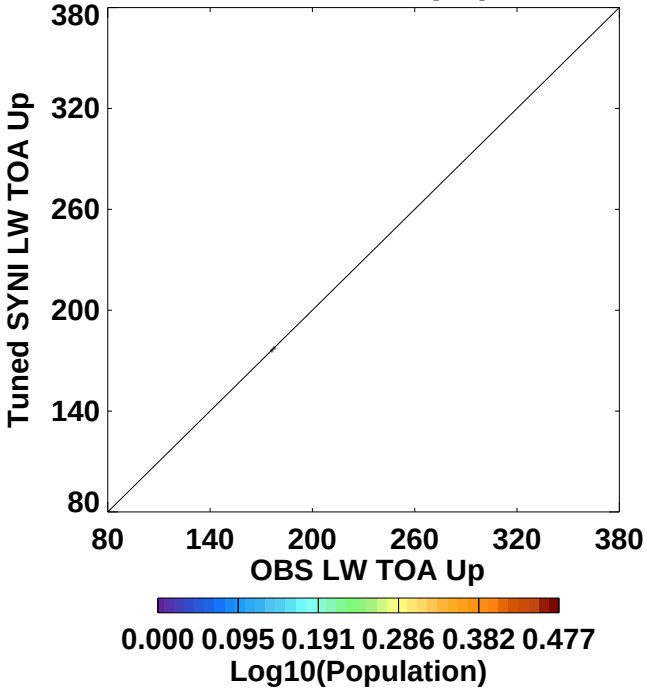
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) ClearSky 1% SPL

## Tuned TOA LW UP(Hr)CERES



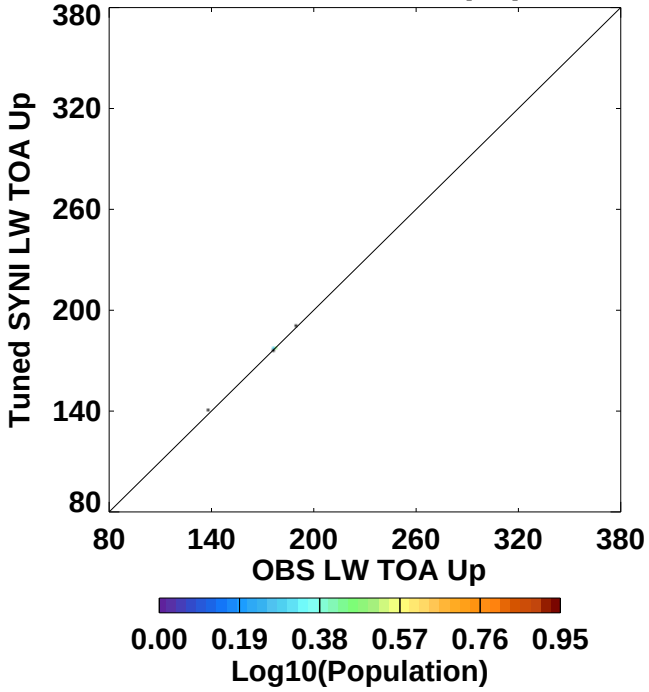

| N= 12. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 173.5( | 12.37) |
| Tuned SYNI LW TOA Up | 174.0( | 11.85) |
| Y-X | 0.525( | 0.654) |
| RMS( | 0.817)..... | |

## Tuned TOA LW UP(Hr)INTERP




| N= 4. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 175.7( | 0.260) |
| Tuned SYNI LW TOA Up | 175.9( | 0.264) |
| Y-X | 0.242( | 0.178) |
| RMS( | 0.287)..... | |

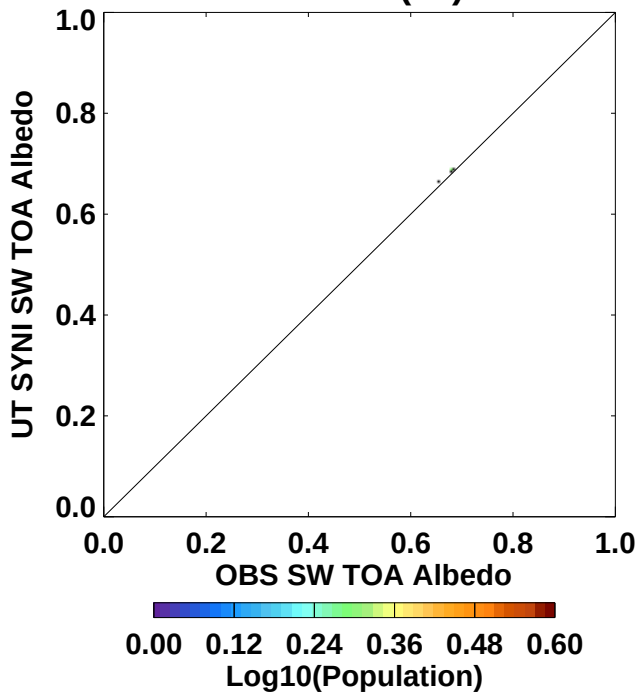
## Tuned TOA LW UP(Hr)ALL




| N= 16. | Mean | ( StdDev) |
|---|---|---|
| OBS LW TOA Up | 174.0( | 10.64) |
| Tuned SYNI LW TOA Up | 174.5( | 10.18) |
| Y-X | 0.454( | 0.580) |
| RMS( | 0.722)..... | |

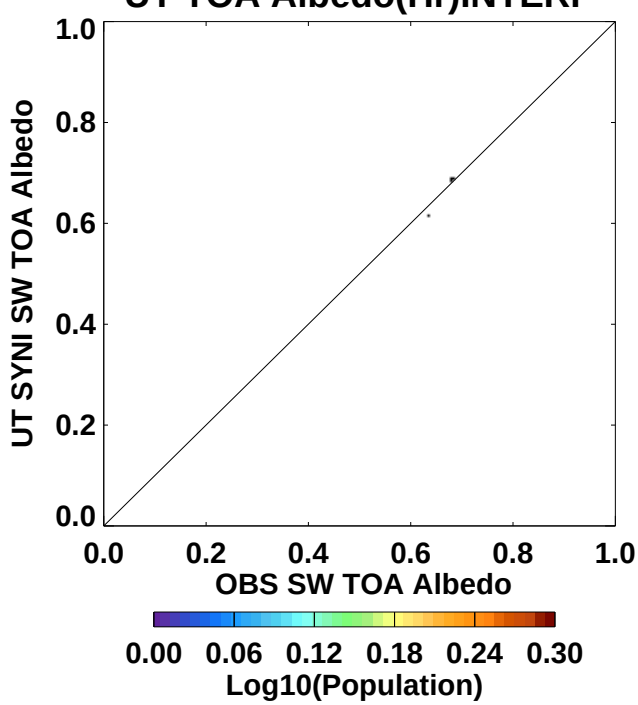
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) ClearSky 1% SPL

## UT TOA Albedo(Hr)CERES



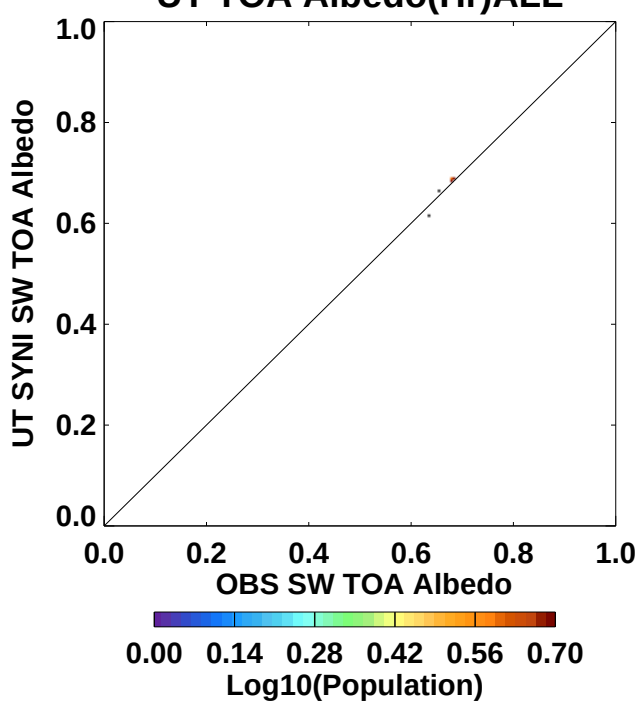

| N= 11. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.683( | 0.008) |
| UT SYNI SW TOA Albedo | 0.688( | 0.008) |
| Y-X | 0.005( | 0.000) |
| RMS( | 0.005)..... | |

## UT TOA Albedo(Hr)INTERP




| N= 5. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.676( | 0.021) |
| UT SYNI SW TOA Albedo | 0.676( | 0.033) |
| Y-X | -0.000( | 0.012) |
| RMS( | 0.011)..... | |

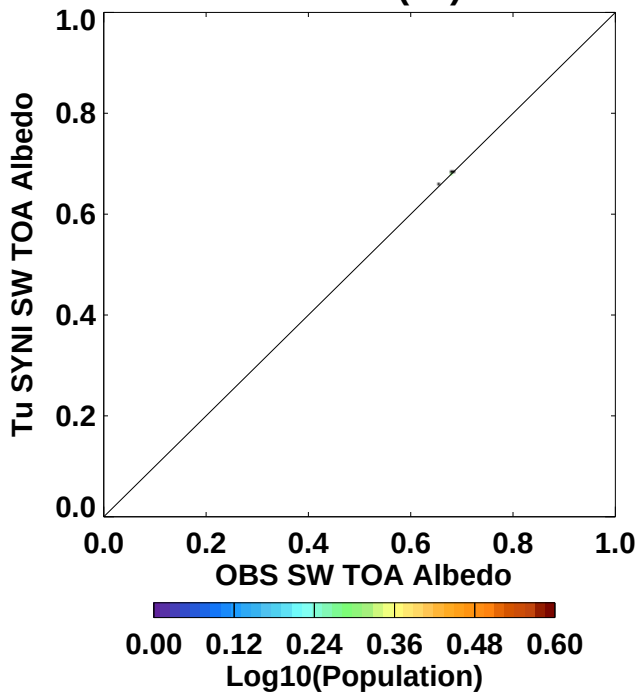
## UT TOA Albedo(Hr)ALL




| N= 16. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.681( | 0.013) |
| UT SYNI SW TOA Albedo | 0.684( | 0.019) |
| Y-X | 0.004( | 0.007) |
| RMS( | 0.007)..... | |

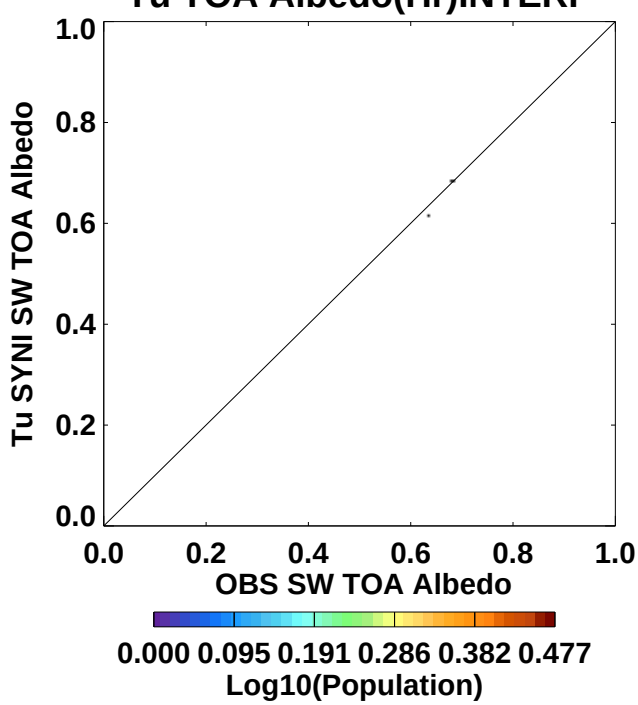
# SYNI Beta3 Year 2002: Spatial Subset (aka STS) ClearSky 1% SPL

## Tu TOA Albedo(Hr)CERES



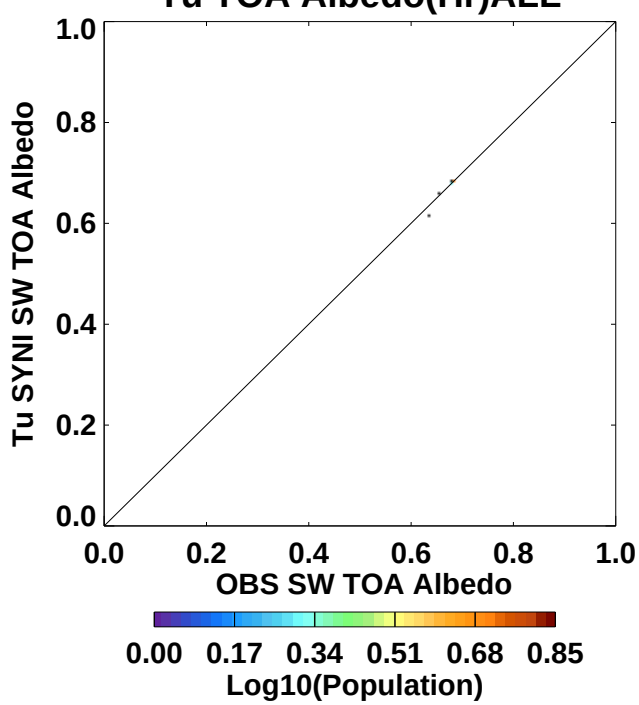

| N= 11. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.683( | 0.008) |
| Tu SYNI SW TOA Albedo | 0.684( | 0.008) |
| Y-X | 0.001( | 0.000) |
| RMS( | 0.001)..... | |

## Tu TOA Albedo(Hr)INTERP




| N= 5. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.676( | 0.021) |
| Tu SYNI SW TOA Albedo | 0.673( | 0.030) |
| Y-X | -0.003( | 0.009) |
| RMS( | 0.008)..... | |

## Tu TOA Albedo(Hr)ALL




| N= 16. | Mean | ( StdDev) |
|---|---|---|
| OBS SW TOA Albedo | 0.681( | 0.013) |
| Tu SYNI SW TOA Albedo | 0.680( | 0.018) |
| Y-X | -0.000( | 0.005) |
| RMS( | 0.005)..... | |