

Consistency Results for Filter A

In the following tables, ν is the degrees of freedom, $\tilde{\chi}^2$ is the calculated value of χ^2 from the data before Mandel-Paule, χ^2_{ν} is the value of χ^2 required for $p = 0.05$ and the 'Added Uncertainty' is the uncertainty added in quadrature to all participants' measurements to make $\tilde{\chi}^2 = \chi^2_{\nu}$ when necessary. The numbers in brackets, e.g. (1), are the number of participants for whom the degree of equivalence is greater than the expanded uncertainty. This number sometimes decreases after the Mandel-Paule process.

| 380 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 23.1 (2) | 1.5e-04 (2) |
| | Model B | 28 | 41.3 | 20.0 (2) | - |

| 400 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 10.6 (0) | - |
| | Model B | 28 | 41.3 | 18.9 (0) | - |

| 500 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 16.8 (1) | - |
| | Model B | 28 | 41.3 | 21.3 (1) | - |

| 600 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 18.5 (1) | - |
| | Model B | 28 | 41.3 | 23.7 (1) | - |

| 700 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 22.7 (2) | 2.1e-04 (2) |
| | Model B | 28 | 41.3 | 29.1 (2) | - |

| 800 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 29.7 (2) | 3.1e-04 (2) |
| | Model B | 28 | 41.3 | 27.4 (2) | - |

| 900 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 24.2 (2) | 2.2e-04 (2) |
| | Model B | 28 | 41.3 | 29.2 (2) | - |

| 1000 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 42.2 (3) | 4.2e-04 (2) |
| | Model B | 28 | 41.3 | 33.0 (3) | - |

Consistency Results for Filter B

In the following tables, ν is the degrees of freedom, $\tilde{\chi}^2$ is the calculated value of χ^2 from the data before Mandel-Paule, χ^2_ν is the value of χ^2 required for $p = 0.05$ and the 'Added Uncertainty' is the uncertainty added in quadrature to all participants' measurements to make $\tilde{\chi}^2 = \chi^2_\nu$ when necessary. The numbers in brackets, e.g. (1), are the number of participants for whom the degree of equivalence is greater than the expanded uncertainty. This number sometimes decreases after the Mandel-Paule process.

| 380 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 45.3 (5) | 1.0e-03 (1) |
| | Model B | 30 | 43.8 | 29.8 (5) | - |

| 400 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 32.3 (3) | 1.7e-04 (0) |
| | Model B | 30 | 43.8 | 33.1 (3) | - |

| 500 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 25.2 (2) | 1.2e-04 (2) |
| | Model B | 31 | 45.0 | 39.2 (2) | - |

| 600 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 44.3 (3) | 2.5e-04 (2) |
| | Model B | 31 | 45.0 | 39.1 (3) | - |

| 700 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 45.8 (3) | 2.9e-04 (2) |
| | Model B | 30 | 43.8 | 58.0 (3) | 2.9e-05 (3) |

| 800 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 28.7 (2) | 1.8e-04 (2) |
| | Model B | 30 | 43.8 | 37.9 (2) | - |

| 900 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 19.1 (2) | - |
| | Model B | 31 | 45.0 | 47.2 (2) | 1.7e-05 (2) |

| 1000 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 35.0 (2) | 9.8e-05 (1) |
| | Model B | 30 | 43.8 | 47.4 (2) | 1.7e-05 (2) |

Consistency Results for Filter C

In the following tables, ν is the degrees of freedom, $\tilde{\chi}^2$ is the calculated value of χ^2 from the data before Mandel-Paule, χ^2_ν is the value of χ^2 required for $p = 0.05$ and the 'Added Uncertainty' is the uncertainty added in quadrature to all participants' measurements to make $\tilde{\chi}^2 = \chi^2_\nu$ when necessary. The numbers in brackets, e.g. (1), are the number of participants for whom the degree of equivalence is greater than the expanded uncertainty. This number sometimes decreases after the Mandel-Paule process.

| 380 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 27.3 (3) | 1.2e-04 (1) |
| | Model B | 31 | 45.0 | 28.8 (3) | - |
| 400 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
| 12 participants | Model A | 11 | 19.7 | 5.1 (0) | - |
| | Model B | 30 | 43.8 | 29.1 (0) | - |
| 500 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
| 12 participants | Model A | 11 | 19.7 | 22.6 (3) | 2.5e-05 (2) |
| | Model B | 31 | 45.0 | 33.2 (3) | - |
| 600 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
| 12 participants | Model A | 11 | 19.7 | 18.2 (1) | - |
| | Model B | 31 | 45.0 | 48.1 (1) | 1.7e-06 (1) |
| 700 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
| 12 participants | Model A | 11 | 19.7 | 19.0 (2) | - |
| | Model B | 30 | 43.8 | 26.4 (2) | - |
| 800 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
| 12 participants | Model A | 11 | 19.7 | 15.2 (0) | - |
| | Model B | 31 | 45.0 | 38.5 (0) | - |
| 900 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
| 12 participants | Model A | 11 | 19.7 | 17.1 (2) | - |
| | Model B | 30 | 43.8 | 50.8 (2) | 5.6e-06 (2) |
| 1000 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
| 12 participants | Model A | 11 | 19.7 | 34.2 (2) | 1.8e-05 (2) |
| | Model B | 31 | 45.0 | 50.9 (2) | 2.9e-06 (2) |

Consistency Results for Filter D

In the following tables, ν is the degrees of freedom, $\tilde{\chi}^2$ is the calculated value of χ^2 from the data before Mandel-Paule, χ^2_ν is the value of χ^2 required for $p = 0.05$ and the 'Added Uncertainty' is the uncertainty added in quadrature to all participants' measurements to make $\tilde{\chi}^2 = \chi^2_\nu$ when necessary. The numbers in brackets, e.g. (1), are the number of participants for whom the degree of equivalence is greater than the expanded uncertainty. This number sometimes decreases after the Mandel-Paule process.

| 380 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 11 participants | Model A | 10 | 18.3 | 22.3 (1) | 1.4e-06 (1) |
| | Model B | 28 | 41.3 | 23.7 (1) | - |

| 400 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 3.2 (0) | - |
| | Model B | 31 | 45.0 | 39.3 (0) | - |

| 500 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 49.2 (3) | 1.2e-05 (1) |
| | Model B | 31 | 45.0 | 37.7 (3) | - |

| 600 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 46.7 (4) | 1.8e-05 (2) |
| | Model B | 31 | 45.0 | 37.2 (4) | - |

| 700 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 50.3 (3) | 5.2e-05 (1) |
| | Model B | 31 | 45.0 | 46.4 (3) | 1.1e-06 (3) |

| 800 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 25.1 (2) | 1.8e-05 (1) |
| | Model B | 30 | 43.8 | 30.1 (2) | - |

| 900 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 18.5 (1) | - |
| | Model B | 30 | 43.8 | 37.9 (1) | - |

| 1000 nm | | ν | χ^2_ν | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|--------------|------------------|-------------------|
| 12 participants | Model A | 11 | 19.7 | 9.7 (0) | - |
| | Model B | 31 | 45.0 | 38.9 (0) | - |

Consistency Results for Filter E

In the following tables, ν is the degrees of freedom, $\tilde{\chi}^2$ is the calculated value of χ^2 from the data before Mandel-Paule, χ^2_{ν} is the value of χ^2 required for $p = 0.05$ and the 'Added Uncertainty' is the uncertainty added in quadrature to all participants' measurements to make $\tilde{\chi}^2 = \chi^2_{\nu}$ when necessary. The numbers in brackets, e.g. (1), are the number of participants for whom the degree of equivalence is greater than the expanded uncertainty. This number sometimes decreases after the Mandel-Paule process.

| 380 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|----------------|---------|-------|----------------|------------------|-------------------|
| 9 participants | Model A | 8 | 15.5 | 10.0 (0) | - |
| | Model B | 22 | 33.9 | 6.1 (0) | - |

| 400 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 10 participants | Model A | 9 | 16.9 | 5.2 (0) | - |
| | Model B | 25 | 37.7 | 26.5 (0) | - |

| 500 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 11 participants | Model A | 10 | 18.3 | 16.2 (1) | - |
| | Model B | 28 | 41.3 | 16.7 (1) | - |

| 600 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 11 participants | Model A | 10 | 18.3 | 25.4 (1) | 1.3e-06 (1) |
| | Model B | 28 | 41.3 | 24.4 (1) | - |

| 700 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 11 participants | Model A | 10 | 18.3 | 38.8 (4) | 1.2e-05 (0) |
| | Model B | 28 | 41.3 | 28.1 (4) | - |

| 800 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 11 participants | Model A | 10 | 18.3 | 18.1 (1) | - |
| | Model B | 28 | 41.3 | 18.4 (1) | - |

| 900 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 11 participants | Model A | 10 | 18.3 | 24.6 (3) | 3.5e-06 (2) |
| | Model B | 28 | 41.3 | 22.3 (3) | - |

| 1000 nm | | ν | χ^2_{ν} | $\tilde{\chi}^2$ | Added Uncertainty |
|-----------------|---------|-------|----------------|------------------|-------------------|
| 11 participants | Model A | 10 | 18.3 | 19.2 (2) | 1.2e-06 (1) |
| | Model B | 28 | 41.3 | 24.5 (2) | - |