```
1.0*((a4*tanh(a11*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
                           0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + a8*((x0 - 1568.5) *
                           0.000145275)**a9)*tanh(a10*a3**((x0 - 1568.5) * 0.000145275)))
                           a1 = -0.235, a2 = -0.162,
                           a3 = 3.56e - 05, a4 = 4.98e - 05,
                           a5 = 0.518, a6 = 0.572234^{+0.00638(1.11\%)}_{-0.00638(1.11\%)},
                           \text{a7} = 1.07524^{+0.00334(0.311\%)}_{-0.00334(0.311\%)}, \quad \text{a8} = 0.391684^{+0.109(27.8\%)}_{-0.109(27.8\%)},
                           a9 = 1.14865^{+0.365(31.8\%)}_{-0.365(31.8\%)},
                                                                                                                                    a10 = 8.3311^{+3.16(37.9\%)}_{-3.16(37.9\%)},
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Candidate #26
                           a11 = 8.67203^{+0.487(5.62\%)}_{-0.487(5.62\%)}
                                                                                                                                                                                                                                                                                                                                     \chi^2/NDF = 31.77/29, RMSE = 0.02889, R2 = 1.0
     10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                       ---- a6 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                             a6 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Data – Fit
Uncertainty
                0
    -2.5
  1.25
                1
  0.75
                                                                                                      2 \times 10^{3}
                                                                                                                                                                                                               3 \times 10^{3}
                                                                                                                                                                                                                                                                                         4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                 6 \times 10^{3}
```

```
1.0*((a4*tanh(a11*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
                           0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + a8*((x0 - 1568.5) *
                           0.000145275)**a9)*tanh(a10*a3**((x0 - 1568.5) * 0.000145275)))
                           a1 = -0.235, a2 = -0.162,
                           a3 = 3.56e - 05, a4 = 4.98e - 05,
                           a5 = 0.518, a6 = 0.572234^{+0.00638(1.11\%)}_{-0.00638(1.11\%)},
                           \textbf{a7} = \textbf{1.07524}^{+0.00334(0.311\%)}_{-0.00334(0.311\%)}, \quad \text{a8} = 0.391684^{+0.109(27.8\%)}_{-0.109(27.8\%)},
                           a9 = 1.14865^{+0.365(31.8\%)}_{-0.365(31.8\%)}, a10 = 8.3311^{+3.16(37.9\%)}_{-3.16(37.9\%)},
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Candidate #26
                           a11 = 8.67203^{+0.487(5.62\%)}_{-0.487(5.62\%)}
                                                                                                                                                                                                                                                                                                                                         \chi^2/NDF = 31.77/29, RMSE = 0.02889, R2 = 1.0
     10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                           ---- a7 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                         - a7 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Data
     10^{0}
10^{-1}
10^{-2}
10<sup>-3</sup>
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Data – Fit
Uncertainty
                0
    -2.5
                1
                1
                1
                                                                                                        2 \times 10^{3}
                                                                                                                                                                                                                 3 \times 10^{3}
                                                                                                                                                                                                                                                                                             4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                      6 \times 10^3
```

```
1.0*((a4*tanh(a11*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
                           0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + a8*((x0 - 1568.5) *
                           0.000145275)**a9)*tanh(a10*a3**((x0 - 1568.5) * 0.000145275)))
                           a1 = -0.235, a2 = -0.162,
                           a3 = 3.56e - 05, a4 = 4.98e - 05,
                           a5 = 0.518, a6 = 0.572234^{+0.00638(1.11\%)}_{-0.00638(1.11\%)},
                           \text{a7} = 1.07524^{+0.00334(0.311\%)}_{-0.00334(0.311\%)}, \quad \textbf{a8} = \textbf{0.391684}^{+\textbf{0.109}(27.8\%)}_{-\textbf{0.109}(27.8\%)},
                                                                                                                                       a10 = 8.3311^{+3.16(37.9\%)}_{-3.16(37.9\%)},
                           a9 = 1.14865^{+0.365(31.8\%)}_{-0.365(31.8\%)},
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Candidate #26
                           a11 = 8.67203^{+0.487(5.62\%)}_{-0.487(5.62\%)}
                                                                                                                                                                                                                                                                                                                                          \chi^2/NDF = 31.77/29, RMSE = 0.02889, R2 = 1.0
     10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                            ---- a8 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a8 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Data – Fit
Uncertainty
                0
    -2.5
                5
                0
                                                                                                        2 \times 10^{3}
                                                                                                                                                                                                                 3 \times 10^{3}
                                                                                                                                                                                                                                                                                             4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                      6 \times 10^3
```

```
1.0*((a4*tanh(a11*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
                           0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + a8*((x0 - 1568.5) *
                           0.000145275)**a9)*tanh(a10*a3**((x0 - 1568.5) * 0.000145275)))
                           a1 = -0.235, a2 = -0.162,
                           a3 = 3.56e - 05, a4 = 4.98e - 05,
                           a5 = 0.518, a6 = 0.572234^{+0.00638(1.11\%)}_{-0.00638(1.11\%)},
                           a7 = 1.07524^{+0.00334(0.311\%)}_{-0.00334(0.311\%)}, \ a8 = 0.391684^{+0.109(27.8\%)}_{-0.109(27.8\%)},
                           \mathbf{a9} = \mathbf{1.14865}^{+0.365(31.8\%)}_{-0.365(31.8\%)},
                                                                                                                                                a10 = 8.3311^{+3.16(37.9\%)}_{-3.16(37.9\%)},
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Candidate #26
                           a11 = 8.67203^{+0.487(5.62\%)}_{-0.487(5.62\%)}
                                                                                                                                                                                                                                                                                                                                       \chi^2/NDF = 31.77/29, RMSE = 0.02889, R2 = 1.0
     10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                        ---- a9 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                            a9 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Data – Fit
Uncertainty
                0
    -2.5
       1.2
                1
       0.8
                                                                                                       2 \times 10^{3}
                                                                                                                                                                                                               3 \times 10^{3}
                                                                                                                                                                                                                                                                                           4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                   6 \times 10^{3}
```

```
1.0*((a4*tanh(a11*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
                          0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + a8*((x0 - 1568.5) *
                          0.000145275)**a9)*tanh(a10*a3**((x0 - 1568.5) * 0.000145275)))
                          a1 = -0.235, a2 = -0.162,
                          a3 = 3.56e - 05, a4 = 4.98e - 05,
                          a5 = 0.518, a6 = 0.572234^{+0.00638(1.11\%)}_{-0.00638(1.11\%)},
                          \text{a7} = 1.07524^{+0.00334(0.311\%)}_{-0.00334(0.311\%)}, \quad \text{a8} = 0.391684^{+0.109(27.8\%)}_{-0.109(27.8\%)},
                          a9 = 1.14865^{+0.365(31.8\%)}_{-0.365(31.8\%)},
                                                                                                                                     \mathbf{a10} = 8.3311^{+3.16(37.9\%)}_{-3.16(37.9\%)},
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Candidate #26
                          a11 = 8.67203^{+0.487(5.62\%)}_{-0.487(5.62\%)}
                                                                                                                                                                                                                                                                                                                                     \chi^2/NDF = 31.77/29, RMSE = 0.02889, R2 = 1.0
    10^2
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                 ---- a10 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                        a10 Down (-1\sigma)
     10^{0}
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Data – Fit
Uncertainty
               0
   -2.5
               5
               0
                                                                                                      2 \times 10^{3}
                                                                                                                                                                                                              3 \times 10^{3}
                                                                                                                                                                                                                                                                                         4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                 6 \times 10^3
```

```
1.0*((a4*tanh(a11*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x
                           0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + a8*((x0 - 1568.5) *
                           0.000145275)**a9)*tanh(a10*a3**((x0 - 1568.5) * 0.000145275)))
                           a1 = -0.235, a2 = -0.162,
                           a3 = 3.56e - 05, a4 = 4.98e - 05,
                           a5 = 0.518, a6 = 0.572234^{+0.00638(1.11\%)}_{-0.00638(1.11\%)},
                           a7 = 1.07524^{+0.00334(0.311\%)}_{-0.00334(0.311\%)}, \quad a8 = 0.391684^{+0.109(27.8\%)}_{-0.109(27.8\%)},
                           a9 = 1.14865^{+0.365(31.8\%)}_{-0.365(31.8\%)}, a10 = 8.3311^{+3.16(37.9\%)}_{-3.16(37.9\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Candidate #26
                           \mathbf{a11} = \mathbf{8.67203}^{+0.487(5.62\%)}_{-0.487(5.62\%)}
                                                                                                                                                                                                                                                                                                                                      \chi^2/NDF = 31.77/29, RMSE = 0.02889, R2 = 1.0
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                   ---- all Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                          all Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Data
     10<sup>0</sup>
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Data – Fit
Uncertainty
               0
    -2.5
                1
                                                                                                       2 \times 10^{3}
                                                                                                                                                                                                                3 \times 10^3
                                                                                                                                                                                                                                                                                           4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                   6 \times 10^{3}
```

```
1.0*((a4*tanh(a10*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + ((x0 - 1568.5) *
0.000145275)**a8)*tanh(a3**((x0 - 1568.5) * 0.000145275)*a9))
a1 = -0.235, a2 = -0.457969^{+0.0988(21.6\%)}_{-0.0988(21.6\%)}
a3 = 3.56e - 05, a4 = 4.98e - 05,
a5 = 0.518, a6 = 0.616511^{+0.0109(1.77\%)}_{-0.0109(1.77\%)},
\text{a7} = 1.08553^{+0.00464(0.427\%)}_{-0.00464(0.427\%)}, \quad \text{a8} = 0.856674^{+0.268(31.3\%)}_{-0.268(31.3\%)},
a9 = 4.05356^{+0.681(16.8\%)}_{-0.681(16.8\%)}, \ a10 = 6.88545^{+0.61(8.86\%)}_{-0.61(8.86\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Candidate #25
                                                                                                                                                                                                                                                                                                                                   \chi^2/NDF = 28.64/29, RMSE = 0.02414, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                              ---- a2 Up (+1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a2 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Data – Fit
Uncertainty
                                                                                 2 \times 10^{3}
                                                                                                                                                                                                   3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                     6 \times 10^{3}
                                                                                                                                                                                                                                                                                    4 \times 10^{3}
```

 $10^{1}$ 

 $10^{-1}$ 

 $10^{-3}$ 

10<sup>-5</sup>

 $10^{-7}$ 

2.5

0

2

1

0

-2.5

```
1.0*((a4*tanh(a10*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
                            0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + ((x0 - 1568.5) *
                            0.000145275)**a8)*tanh(a3**((x0 - 1568.5) * 0.000145275)*a9))
                            a1 = -0.235, a2 = -0.457969^{+0.0988(21.6\%)}_{-0.0988(21.6\%)},
                            a3 = 3.56e - 05, a4 = 4.98e - 05,
                            a5 = 0.518, a6 = 0.616511^{+0.0109(1.77\%)}_{-0.0109(1.77\%)},
                            \text{a7} = 1.08553^{+0.00464(0.427\%)}_{-0.00464(0.427\%)}, \quad \text{a8} = 0.856674^{+0.268(31.3\%)}_{-0.268(31.3\%)},
                            a9 = 4.05356^{+0.681(16.8\%)}_{-0.681(16.8\%)}, \ a10 = 6.88545^{+0.61(8.86\%)}_{-0.61(8.86\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Candidate #25
                                                                                                                                                                                                                                                                                                                                             \chi^2/NDF = 28.64/29, RMSE = 0.02414, R2 = 1.0
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a6 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a6 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
        2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Data – Fit
Uncertainty
                0
    -2.5
  1.25
                1
  0.75
                                                                                                        2 \times 10^{3}
                                                                                                                                                                                                                    3 \times 10^{3}
                                                                                                                                                                                                                                                                                                4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                          6 \times 10^{3}
```

```
1.0*((a4*tanh(a10*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x
                               0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + ((x0 - 1568.5) *
                               0.000145275)**a8)*tanh(a3**((x0 - 1568.5) * 0.000145275)*a9))
                              a1 = -0.235, a2 = -0.457969^{+0.0988(21.6\%)}_{-0.0988(21.6\%)},
                               a3 = 3.56e - 05, a4 = 4.98e - 05,
                               a5 = 0.518, a6 = 0.616511^{+0.0109(1.77\%)}_{-0.0109(1.77\%)},
                               \mathbf{a7} = \mathbf{1.08553}^{+0.00464(0.427\%)}_{-0.00464(0.427\%)}, \quad \mathbf{a8} = 0.856674^{+0.268(31.3\%)}_{-0.268(31.3\%)},
                               a9 = 4.05356^{+0.681(16.8\%)}_{-0.681(16.8\%)}, \ a10 = 6.88545^{+0.61(8.86\%)}_{-0.61(8.86\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Candidate #25
                                                                                                                                                                                                                                                                                                                                             \chi^2/NDF = 28.64/29, RMSE = 0.02414, R2 = 1.0
          10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---- a7 Up (+1\sigma)
         10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a7 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data
        10<sup>0</sup>
    10^{-1}
    10^{-2}
    10^{-3}
    10^{-4}
    10^{-5}
           2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data – Fit
Uncertainty
                   0
        -2.5
                    1
0.999
                                                                                                            2 \times 10^3
                                                                                                                                                                                                                      3 \times 10^3
                                                                                                                                                                                                                                                                                                 4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                            6 \times 10^{3}
```

```
1.0*((a4*tanh(a10*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
                            0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + ((x0 - 1568.5) *
                            0.000145275)**a8)*tanh(a3**((x0 - 1568.5) * 0.000145275)*a9))
                            a1 = -0.235, a2 = -0.457969^{+0.0988(21.6\%)}_{-0.0988(21.6\%)},
                            a3 = 3.56e - 05, a4 = 4.98e - 05,
                            a5 = 0.518, a6 = 0.616511^{+0.0109(1.77\%)}_{-0.0109(1.77\%)},
                            \text{a7} = 1.08553^{+0.00464(0.427\%)}_{-0.00464(0.427\%)}, \quad \textbf{a8} = \textbf{0.856674}^{+\textbf{0.268(31.3\%)}}_{-\textbf{0.268(31.3\%)}},
                            a9 = 4.05356^{+0.681(16.8\%)}_{-0.681(16.8\%)}, \ a10 = 6.88545^{+0.61(8.86\%)}_{-0.61(8.86\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Candidate #25
                                                                                                                                                                                                                                                                                                                                                \chi^2/NDF = 28.64/29, RMSE = 0.02414, R2 = 1.0
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---- a8 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a8 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
        2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Data – Fit
Uncertainty
                0
    -2.5
        1.2
                1
        0.8
                                                                                                          2 \times 10^{3}
                                                                                                                                                                                                                     3 \times 10^{3}
                                                                                                                                                                                                                                                                                                   4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                              6 \times 10^{3}
```

```
1.0*((a4*tanh(a10*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.0001425275) + a7))**((a3 
                            0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + ((x0 - 1568.5) *
                            0.000145275)**a8)*tanh(a3**((x0 - 1568.5) * 0.000145275)*a9))
                            a1 = -0.235, a2 = -0.457969^{+0.0988(21.6\%)}_{-0.0988(21.6\%)},
                            a3 = 3.56e - 05, a4 = 4.98e - 05,
                            a5 = 0.518, a6 = 0.616511^{+0.0109(1.77\%)}_{-0.0109(1.77\%)},
                            \mathsf{a7} = 1.08553^{+0.00464(0.427\%)}_{-0.00464(0.427\%)},
                                                                                                                                                     a8 = 0.856674^{+0.268(31.3\%)}_{-0.268(31.3\%)},
                            \mathbf{a9} = \mathbf{4.05356}^{+0.681(16.8\%)}_{-0.681(16.8\%)}, \ \mathbf{a10} = 6.88545^{+0.61(8.86\%)}_{-0.61(8.86\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Candidate #25
                                                                                                                                                                                                                                                                                                                                             \chi^2/NDF = 28.64/29, RMSE = 0.02414, R2 = 1.0
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---- a9 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a9 Down (-1\sigma)
      10^{0}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
        2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data – Fit
Uncertainty
                0
    -2.5
                2
                1
                0
                                                                                                        2 \times 10^{3}
                                                                                                                                                                                                                    3 \times 10^{3}
                                                                                                                                                                                                                                                                                                4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                           6 \times 10^3
```

```
1.0*((a4*tanh(a10*((x0 - 1568.5) * 0.000145275) + a7))**((a1 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a2 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x0 - 1568.5) * 0.00014275) + a7))**((a3 + ((x0 - 1568.5) * 0.000145275) + a7))**((a3 + ((x
                               0.000145275)/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))) - (a2 + ((x0 - 1568.5) *
                               0.000145275)**a8)*tanh(a3**((x0 - 1568.5) * 0.000145275)*a9))
                              a1 = -0.235, a2 = -0.457969^{+0.0988(21.6\%)}_{-0.0988(21.6\%)},
                               a3 = 3.56e - 05, a4 = 4.98e - 05,
                               a5 = 0.518, a6 = 0.616511^{+0.0109(1.77\%)}_{-0.0109(1.77\%)},
                               \text{a7} = 1.08553^{+0.00464(0.427\%)}_{-0.00464(0.427\%)}, \quad \text{a8} = 0.856674^{+0.268(31.3\%)}_{-0.268(31.3\%)},
                               a9 = 4.05356^{+0.681(16.8\%)}_{-0.681(16.8\%)}, a10 = 6.88545^{+0.61(8.86\%)}_{-0.61(8.86\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Candidate #25
                                                                                                                                                                                                                                                                                                                                            \chi^2/NDF = 28.64/29, RMSE = 0.02414, R2 = 1.0
          10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a10 Up (+1\sigma)
         10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a10 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Data
         10<sup>0</sup>
    10^{-1}
    10^{-2}
    10<sup>-3</sup>
    10^{-4}
    10^{-5}
           2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Data – Fit
Uncertainty
                   0
        -2.5
                    1
                    1
0.998
                                                                                                           2 \times 10^3
                                                                                                                                                                                                                      3 \times 10^{3}
                                                                                                                                                                                                                                                                                                 4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                           6 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) *
        0.000145275**exp(a7/(a6 + ((x0 - 1568.5) * 0.000145275))) + (a3*tanh(a8 + a9*((x0 - 1568.5) *
        0.000145275))**((a2 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) *
        0.000145275))))
        a1 = -2.64, a2 = -0.235,
        a3 = 3.59315e - 05^{+9.28e}_{-9.28e} - {06(25.8\%)}_{-06(25.8\%)}, a4 = 0.533074^{+0.0196(3.68\%)}_{-0.0196(3.68\%)},
        a5 = 0.611, a6 = 0.864,
        a7 = 1.88984^{+0.643(34.0\%)}_{-0.643(34.0\%)}, a8 = 1.27374^{+0.195(15.3\%)}_{-0.195(15.3\%)},
                                                                                                                                        Candidate #24
        a9 = 13.5394^{+4.89(36.1\%)}_{-4.89(36.1\%)}
                                                                                                 \chi^2/NDF = 223.3/30, RMSE = 0.05235, R2 = 1.0
 10^{2}
                                                                                                                                     Best-fit
                                                                                                                                     a3 Up (+1\sigma)
                                                                                                                                     a3 Down (-1\sigma)
 10^{0}
                                                                                                                                     Data
10^{-2}
10^{-4}
10^{-6}
    5
                                                                                                                                                             Data – Fit
Uncertainty
    0
   -5
    2
    0
                              2 \times 10^{3}
                                                             3 \times 10^{3}
                                                                                                                   6 \times 10^3
                                                                                    4 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) *
        0.000145275**exp(a7/(a6 + ((x0 - 1568.5) * 0.000145275))) + (a3*tanh(a8 + a9*((x0 - 1568.5) *
        0.000145275))**((a2 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) *
        0.000145275))))
        a1 = -2.64, a2 = -0.235,
        a3 = 3.59315e - 05^{+9.28e - 06(25.8\%)}_{-9.28e - 06(25.8\%)}, \quad \textbf{a4} = \textbf{0.533074}^{+\textbf{0.0196}(3.68\%)}_{-\textbf{0.0196}(3.68\%)},
        a5 = 0.611, a6 = 0.864,
        a7 = 1.88984^{+0.643(34.0\%)}_{-0.643(34.0\%)},
                                         a8 = 1.27374^{+0.195(15.3\%)}_{-0.195(15.3\%)},
                                                                                                                                               Candidate #24
        a9 = 13.5394^{+4.89(36.1\%)}_{-4.89(36.1\%)}
                                                                                                      \chi^2/NDF = 223.3/30, RMSE = 0.05235, R2 = 1.0
                                                                                                                                            Best-fit
 10^{2}
                                                                                                                                           a4 Up (+1\sigma)
                                                                                                                                           a4 Down (-1\sigma)
 10^{0}
                                                                                                                                            Data
10^{-2}
10^{-4}
10^{-6}
     5
                                                                                                                                                                    Data – Fit
Uncertainty
     0
    -5
   10
     0
                                2 \times 10^{3}
                                                                 3 \times 10^{3}
                                                                                        4 \times 10^{3}
                                                                                                                        6 \times 10^3
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) *
        0.000145275**exp(a7/(a6 + ((x0 - 1568.5) * 0.000145275))) + (a3*tanh(a8 + a9*((x0 - 1568.5) *
        0.000145275))**((a2 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) *
        0.000145275))))
        a1 = -2.64, a2 = -0.235,
        a3 = 3.59315e - 05^{+9.28e}_{-0.0196(3.68\%)}, \quad a4 = 0.533074^{+0.0196(3.68\%)}_{-0.0196(3.68\%)},
        a5 = 0.611, a6 = 0.864,
        a7 = 1.88984^{+0.643(34.0\%)}_{-0.643(34.0\%)}, a8 = 1.27374^{+0.195(15.3\%)}_{-0.195(15.3\%)},
                                                                                                                                       Candidate #24
        a9 = 13.5394^{+4.89(36.1\%)}_{-4.89(36.1\%)}
                                                                                                \chi^2/NDF = 223.3/30, RMSE = 0.05235, R2 = 1.0
 10^{2}
                                                                                                                                    Best-fit
                                                                                                                                    a7 Up (+1\sigma)
 10^{1}
                                                                                                                                    a7 Down (-1\sigma)
                                                                                                                                    Data
 10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
    5
                                                                                                                                                           Data – Fit
Uncertainty
    0
    -5
   10
    0
 -10
                              2 \times 10^{3}
                                                             3 \times 10^{3}
                                                                                   4 \times 10^{3}
                                                                                                                  6 \times 10^3
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) *
         0.000145275**exp(a7/(a6 + ((x0 - 1568.5) * 0.000145275))) + (a3*tanh(a8 + a9*((x0 - 1568.5) *
         0.000145275))**((a2 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) *
         0.000145275))))
         a1 = -2.64, a2 = -0.235,
         a3 = 3.59315e - 05^{+9.28e}_{-0.0196(3.68\%)}, \quad a4 = 0.533074^{+0.0196(3.68\%)}_{-0.0196(3.68\%)},
         a5 = 0.611, a6 = 0.864,
         a7 = 1.88984^{+0.643(34.0\%)}_{-0.643(34.0\%)},
                                         \mathbf{a8} = \mathbf{1.27374}^{+0.195(15.3\%)}_{-0.195(15.3\%)},
                                                                                                                                           Candidate #24
         a9 = 13.5394^{+4.89(36.1\%)}_{-4.89(36.1\%)}
                                                                                                    \chi^2/NDF = 223.3/30, RMSE = 0.05235, R2 = 1.0
  10^{2}
                                                                                                                                        Best-fit
                                                                                                                                        a8 Up (+1\sigma)
  10^{1}
                                                                                                                                        a8 Down (-1\sigma)
                                                                                                                                        Data
  10^{0}
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
 10^{-6}
      5
                                                                                                                                                                Data – Fit
Uncertainty
      0
     -5
 1.03
      1
0.975
                                2 \times 10^{3}
                                                                3 \times 10^{3}
                                                                                                                      6 \times 10^3
                                                                                      4 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) *
        0.000145275**exp(a7/(a6 + ((x0 - 1568.5) * 0.000145275))) + (a3*tanh(a8 + a9*((x0 - 1568.5) *
        0.000145275))**((a2 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) *
        0.000145275))))
        a1 = -2.64, a2 = -0.235.
        a3 = 3.59315e - 05^{+9.28e}_{-9.28e} \, {}^{-06(25.8\%)}_{-0.6(25.8\%)}, \ a4 = 0.533074^{+0.0196(3.68\%)}_{-0.0196(3.68\%)},
        a5 = 0.611, a6 = 0.864,
        a7 = 1.88984^{+0.643(34.0\%)}_{-0.643(34.0\%)},
                                         a8 = 1.27374^{+0.195(15.3\%)}_{-0.195(15.3\%)},
                                                                                                                                            Candidate #24
        \mathbf{a9} = \mathbf{13.5394}_{-4.89(36.1\%)}^{+4.89(36.1\%)}
                                                                                                    \chi^2/NDF = 223.3/30, RMSE = 0.05235, R2 = 1.0
 10^{2}
                                                                                                                                         Best-fit
                                                                                                                                         a9 Up (+1\sigma)
 10^{1}
                                                                                                                                         a9 Down (-1\sigma)
                                                                                                                                         Data
 10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
     5
                                                                                                                                                                 Data – Fit
Uncertainty
    0
   -5
1.01
     1
                               2 \times 10^{3}
                                                               3 \times 10^{3}
                                                                                      4 \times 10^{3}
                                                                                                                       6 \times 10^{3}
```

```
1.0*(-((x0 - 1568.5) * 0.000145275)**a7*tanh(a2**((x0 - 1568.5) * 0.000145275)*a6) +
                             (a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3))**((a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275))tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3
                             + a4*((x0 - 1568.5) * 0.000145275))))
                             \mathbf{a1} = -0.242435^{+0.00205(0.846\%)}_{-0.00205(0.846\%)}, \ \ a2 = 4.98e - 05,
                             a3 = 0.536846^{+0.00547(1.02\%)}_{-0.00547(1.02\%)}, \ a4 = 0.757678^{+0.0617(8.14\%)}_{-0.0617(8.14\%)},
                             a5 = 1.1, a6 = 3.03687^{+0.576(19.0\%)}_{-0.576(19.0\%)},
                             a7 = 0.978795^{+0.2(20.4\%)}_{-0.2(20.4\%)}, a8 = 5.71013^{+1.33(23.3\%)}_{-1.33(23.3\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Candidate #23
                                                                                                                                                                                                                                                                                                                                                       \chi^2/NDF = 28.83/29, RMSE = 0.02355, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best-fit
      10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ---- a1 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a1 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
        2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data – Fit
Uncertainty
                0
    -2.5
  1.25
                 1
  0.75
                                                                                                           2 \times 10^{3}
                                                                                                                                                                                                                          3 \times 10^{3}
                                                                                                                                                                                                                                                                                                        4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                       6 \times 10^3
```

```
1.0*(-((x0 - 1568.5) * 0.000145275)**a7*tanh(a2**((x0 - 1568.5) * 0.000145275)*a6) +
                             (a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3))**((a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275))tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3
                             + a4*((x0 - 1568.5) * 0.000145275))))
                             a1 = -0.242435^{+0.00205(0.846\%)}_{-0.00205(0.846\%)}, a2 = 4.98e - 05,
                             \mathbf{a3} = \mathbf{0.536846}^{+0.00547(1.02\%)}_{-0.00547(1.02\%)}, \quad \mathbf{a4} = 0.757678^{+0.0617(8.14\%)}_{-0.0617(8.14\%)},
                             a5 = 1.1, a6 = 3.03687^{+0.576(19.0\%)}_{-0.576(19.0\%)},
                             a7 = 0.978795^{+0.2(20.4\%)}_{-0.2(20.4\%)}, a8 = 5.71013^{+1.33(23.3\%)}_{-1.33(23.3\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Candidate #23
                                                                                                                                                                                                                                                                                                                                                          \chi^2/NDF = 28.83/29, RMSE = 0.02355, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best-fit
      10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---- a3 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a3 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
        2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Data – Fit
Uncertainty
                 0
    -2.5
        1.2
                 1
        0.8
                                                                                                             2 \times 10^{3}
                                                                                                                                                                                                                             3 \times 10^{3}
                                                                                                                                                                                                                                                                                                            4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                           6 \times 10^3
```

```
1.0*(-((x0 - 1568.5) * 0.000145275)**a7*tanh(a2**((x0 - 1568.5) * 0.000145275)*a6) +
                              (a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3))**((a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275))tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3
                              + a4*((x0 - 1568.5)*0.000145275))))
                              a1 = -0.242435^{+0.00205(0.846\%)}_{-0.00205(0.846\%)}, a2 = 4.98e - 05,
                              a3 = 0.536846^{+0.00547(1.02\%)}_{-0.00547(1.02\%)}, a4 = 0.757678^{+0.0617(8.14\%)}_{-0.0617(8.14\%)},
                              a5 = 1.1, a6 = 3.03687^{+0.576(19.0\%)}_{-0.576(19.0\%)},
                              a7 = 0.978795^{+0.2(20.4\%)}_{-0.2(20.4\%)}, a8 = 5.71013^{+1.33(23.3\%)}_{-1.33(23.3\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Candidate #23
                                                                                                                                                                                                                                                                                                                                                                   \chi^2/NDF = 28.83/29, RMSE = 0.02355, R2 = 1.0
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a4 Up (+1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a4 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Data
      10<sup>0</sup>
10^{-2}
10^{-4}
10^{-6}
        2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Data – Fit
Uncertainty
                 0
     -2.5
                 2
                 0
                                                                                                               2 \times 10^{3}
                                                                                                                                                                                                                                  3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                   4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                                     6 \times 10^3
```

```
1.0*(-((x0 - 1568.5) * 0.000145275)**a7*tanh(a2**((x0 - 1568.5) * 0.000145275)*a6) +
                             (a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3))**((a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275))tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3
                             + a4*((x0 - 1568.5) * 0.000145275))))
                             a1 = -0.242435^{+0.00205(0.846\%)}_{-0.00205(0.846\%)}, a2 = 4.98e - 05,
                             \text{a3} = 0.536846^{+0.00547(1.02\%)}_{-0.00547(1.02\%)}, \quad \text{a4} = 0.757678^{+0.0617(8.14\%)}_{-0.0617(8.14\%)},
                             a5 = 1.1, a6 = 3.03687^{+0.576(19.0\%)}_{-0.576(19.0\%)},
                             a7 = 0.978795^{+0.2(20.4\%)}_{-0.2(20.4\%)}, a8 = 5.71013^{+1.33(23.3\%)}_{-1.33(23.3\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Candidate #23
                                                                                                                                                                                                                                                                                                                                                             \chi^2/NDF = 28.83/29, RMSE = 0.02355, R2 = 1.0
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a6 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a6 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
        2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Data – Fit
Uncertainty
                 0
    -2.5
                 2
                 0
                                                                                                             2 \times 10^{3}
                                                                                                                                                                                                                              3 \times 10^{3}
                                                                                                                                                                                                                                                                                                              4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                              6 \times 10^3
```

```
1.0*(-((x0 - 1568.5) * 0.000145275)**a7*tanh(a2**((x0 - 1568.5) * 0.000145275)*a6) +
                             (a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3))**((a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))tanh(a3 + ((x0 - 1568.5) * 0.000145275))tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3 + ((x0 - 1568.5) * 0.000145275)tanh(a3
                              + a4*((x0 - 1568.5)*0.000145275))))
                             \mathrm{a1} = -0.242435^{+0.00205(0.846\%)}_{-0.00205(0.846\%)}, \ \ a2 = 4.98e - 05,
                             a3 = 0.536846^{+0.00547(1.02\%)}_{-0.00547(1.02\%)}, \quad a4 = 0.757678^{+0.0617(8.14\%)}_{-0.0617(8.14\%)},
                             a5 = 1.1, a6 = 3.03687^{+0.576(19.0\%)}_{-0.576(19.0\%)},
                             a7 = 0.978795^{+0.2(20.4\%)}_{-0.2(20.4\%)}, a8 = 5.71013^{+1.33(23.3\%)}_{-1.33(23.3\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Candidate #23
                                                                                                                                                                                                                                                                                                                                                           \chi^2/NDF = 28.83/29, RMSE = 0.02355, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best-fit
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -- a7 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a7 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
        2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Data – Fit
Uncertainty
                0
    -2.5
        1.1
                 1
        0.9
                                                                                                             2 \times 10^{3}
                                                                                                                                                                                                                             3 \times 10^{3}
                                                                                                                                                                                                                                                                                                            4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                            6 \times 10^3
```

```
1.0*(-((x0 - 1568.5) * 0.000145275)**a7*tanh(a2**((x0 - 1568.5) * 0.000145275)*a6) +
          (a2*tanh(a5 + a8*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a8*((x0 - 1568.5) * 0.000145275)))
          + a4*((x0 - 1568.5) * 0.000145275))))
          \mathrm{a1} = -0.242435^{+0.00205(0.846\%)}_{-0.00205(0.846\%)}, \ a2 = 4.98e - 05,
          \text{a3} = 0.536846^{+0.00547(1.02\%)}_{-0.00547(1.02\%)}, \quad \text{a4} = 0.757678^{+0.0617(8.14\%)}_{-0.0617(8.14\%)},
          a5 = 1.1, a6 = 3.03687^{+0.576(19.0\%)}_{-0.576(19.0\%)},
          a7 = 0.978795^{+0.2(20.4\%)}_{-0.2(20.4\%)}, a8 = 5.71013<sup>+1.33(23.3%)</sup>
                                                                                                                                                             Candidate #23
                                                                                                                \chi^2/NDF = 28.83/29, RMSE = 0.02355, R2 = 1.0
                                                                                                                                                          Best-fit
   10<sup>2</sup>
                                                                                                                                                          a8 Up (+1\sigma)
   10^{1}
                                                                                                                                                          a8 Down (-1\sigma)
                                                                                                                                                          Data
   10^{0}
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
   2.5
                                                                                                                                                                                     Data – Fit
Uncertainty
      0
  -2.5
       1
                                                                                                                                                                                     \pm 1\sigma
Best-fit
       1
0.995
                                    2 \times 10^3
                                                                        3 \times 10^{3}
                                                                                                 4 \times 10^{3}
                                                                                                                                     6 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)**a7) + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)**a7) + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)**a7) + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)**a7))))))
           a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
           1568.5) * 0.000145275))))
           a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)}
           \label{eq:a3} {\rm a3} = 6.64543e - 05^{+9.1e}_{-9.1e} {}^{-06(13.7\%)}_{-06(13.7\%)}, \ \ a4 = 0.518,
                                                         a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
           a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)}, \\
           a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)}, a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                   Candidate #22
                                                                                                                                           \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                              Best-fit
  10^{2}
                                                                                                                                                                                    ---- a2 Up (+1\sigma)
  10^{1}
                                                                                                                                                                                              a2 Down (-1\sigma)
                                                                                                                                                                                               Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
   2.5
                                                                                                                                                                                                                                Data – Fit
Uncertainty
      0
 -2.5
 1.25
       1
 0.75
                                           2 \times 10^{3}
                                                                                        3 \times 10^{3}
                                                                                                                        4 \times 10^{3}
                                                                                                                                                                    6 \times 10^3
```

```
a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
        1568.5) * 0.000145275))))
        a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
        a3 = 6.64543e - 05^{+9.1e - 06(13.7\%)}_{-9.1e - 06(13.7\%)}, a4 = 0.518,
        a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)}, \ a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
        a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)}, a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                       Candidate #22
                                                                                                \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                    Best-fit
 10<sup>2</sup>
                                                                                                                             ---- a3 Up (+1\sigma)
                                                                                                                                    a3 Down (-1\sigma)
 10^{1}
                                                                                                                                    Data
 10<sup>0</sup>
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
  2.5
                                                                                                                                                           Data – Fit
Uncertainty
    0
 -2.5
    1
  0.9
                              2 \times 10^{3}
                                                             3 \times 10^{3}
                                                                                   4 \times 10^3
                                                                                                                  6 \times 10^3
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1.5) + 1.
                             a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
                             1568.5) * 0.000145275))))
                             a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
                             {\rm a3} = 6.64543e - 05^{+9.1e\,-\,06(13.7\%)}_{-9.1e\,-\,06(13.7\%)}, \ \ a4 = 0.518,
                             \mathbf{a5} = \mathbf{0.732148}^{+0.011(1.5\%)}_{-0.011(1.5\%)},
                                                                                                                                                           a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
                             a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)}, a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Candidate #22
                                                                                                                                                                                                                                                                                                                                                                 \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best-fit
     10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -- a5 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a5 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data – Fit
Uncertainty
                0
    -2.5
       1.5
                 1
       0.5
                                                                                                              2 \times 10^{3}
                                                                                                                                                                                                                                3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                 4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                                  6 \times 10^3
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.00014))**a7 + (a3*tanh(a1*a3**((x0 - 1568.5) * 0.00014))**a7 + (a3
                                 a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
                                 1568.5) * 0.000145275))))
                                 a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
                                 \label{eq:a3} {\rm a3} = 6.64543e - 05^{+9.1e}_{-9.1e} {}^{-06(13.7\%)}_{-06(13.7\%)}, \ \ a4 = 0.518,
                                 a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)}\text{,}
                                                                                                                                                       \mathbf{a6} = \mathbf{1.19315}^{+0.186(15.6\%)}_{-0.186(15.6\%)},
                                 a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)},
                                                                                                                                                             a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Candidate #22
                                                                                                                                                                                                                                                                                                                                                                     \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best-fit
          10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a6 Up (+1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a6 Down (-1\sigma)
          10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Data
          10<sup>0</sup>
    10^{-1}
   10^{-2}
    10^{-3}
    10^{-4}
    10^{-5}
           2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Data – Fit
Uncertainty
                    0
        -2.5
     1.03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \pm 1\sigma
Best-fit
                     1
0.975
                                                                                                                    2 \times 10^3
                                                                                                                                                                                                                                     3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                      4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                        6 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1.5) + 1.
                             a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
                             1568.5) * 0.000145275))))
                             a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
                             \label{eq:a3} {\rm a3} = 6.64543e - 05^{+9.1e}_{-9.1e} {}^{-06(13.7\%)}_{-06(13.7\%)}, \ \ a4 = 0.518,
                             a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)}, \ a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
                             \mathbf{a7} = \mathbf{0.839884}^{+0.209(24.9\%)}_{-0.209(24.9\%)},
                                                                                                                                                                 a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Candidate #22
                                                                                                                                                                                                                                                                                                                                                                      \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best-fit
     10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -- a7 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a7 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Data – Fit
Uncertainty
                0
    -2.5
                 1
       0.8
                                                                                                                2 \times 10^{3}
                                                                                                                                                                                                                                   3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                     4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                                        6 \times 10^3
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.00014))**a7 + (a3*tanh(a1*a3**((x0 - 1568.5) * 0.00014))**a7 + (a3
                              a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
                              1568.5) * 0.000145275))))
                              a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
                              \label{eq:a3} {\rm a3} = 6.64543e - 05^{+9.1e}_{-9.1e} {}^{-06(13.7\%)}_{-06(13.7\%)}, \ \ a4 = 0.518,
                              a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)},
                                                                                                                                                   a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
                              a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)},
                                                                                                                                                          \mathbf{a8} = \mathbf{6.47593}^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Candidate #22
                                                                                                                                                                                                                                                                                                                                                                   \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best-fit
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a8 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a8 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Data – Fit
Uncertainty
                 0
     -2.5
  1.01
                  1
                                                                                                                2 \times 10^3
                                                                                                                                                                                                                                   3 \times 10^3
                                                                                                                                                                                                                                                                                                                   4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                      6 \times 10^{3}
```



```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)**a7) + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)**a7) + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)**a7) + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)**a7))))))
           a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
           1568.5) * 0.000145275))))
           a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)}
           \label{eq:a3} {\rm a3} = 6.64543e - 05^{+9.1e}_{-9.1e} {}^{-06(13.7\%)}_{-06(13.7\%)}, \ a4 = 0.518,
                                                         a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
           a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)}, \\
           a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)}, a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                  Candidate #21
                                                                                                                                           \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                              Best-fit
  10^{2}
                                                                                                                                                                                    ---- a2 Up (+1\sigma)
  10^{1}
                                                                                                                                                                                              a2 Down (-1\sigma)
                                                                                                                                                                                              Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
   2.5
                                                                                                                                                                                                                               Data – Fit
Uncertainty
      0
 -2.5
 1.25
       1
 0.75
                                           2 \times 10^{3}
                                                                                        3 \times 10^{3}
                                                                                                                        4 \times 10^{3}
                                                                                                                                                                    6 \times 10^3
```

```
a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
        1568.5) * 0.000145275))))
        a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
        a3 = 6.64543e - 05^{+9.1e - 06(13.7\%)}_{-9.1e - 06(13.7\%)}, a4 = 0.518,
        a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)}, \ a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
        a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)}, a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                       Candidate #21
                                                                                                \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                    Best-fit
 10<sup>2</sup>
                                                                                                                             ---- a3 Up (+1\sigma)
                                                                                                                                    a3 Down (-1\sigma)
 10^{1}
                                                                                                                                    Data
 10<sup>0</sup>
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
  2.5
                                                                                                                                                           Data – Fit
Uncertainty
    0
 -2.5
    1
  0.9
                              2 \times 10^{3}
                                                             3 \times 10^{3}
                                                                                   4 \times 10^3
                                                                                                                  6 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1.5) + 1.
                             a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
                             1568.5) * 0.000145275))))
                             a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
                             {\rm a3} = 6.64543e - 05^{+9.1e\,-\,06(13.7\%)}_{-9.1e\,-\,06(13.7\%)}, \  \, a4 = 0.518,
                             \mathbf{a5} = \mathbf{0.732148}^{+0.011(1.5\%)}_{-0.011(1.5\%)},
                                                                                                                                                           a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
                             a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)}, \quad a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Candidate #21
                                                                                                                                                                                                                                                                                                                                                                  \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best-fit
     10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -- a5 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a5 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Data – Fit
Uncertainty
                0
    -2.5
       1.5
                 1
       0.5
                                                                                                              2 \times 10^{3}
                                                                                                                                                                                                                                 3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                  4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                                    6 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.00014))**a7 + (a3*tanh(a1*a3**((x0 - 1568.5) * 0.00014))**a7 + (a3
                                 a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
                                 1568.5) * 0.000145275))))
                                 a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
                                 \label{eq:a3} {\rm a3} = 6.64543e - 05^{+9.1e}_{-9.1e} {}^{-06(13.7\%)}_{-06(13.7\%)}, \ \ a4 = 0.518,
                                 a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)}\text{,}
                                                                                                                                                       \mathbf{a6} = \mathbf{1.19315}^{+0.186(15.6\%)}_{-0.186(15.6\%)},
                                 a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)},
                                                                                                                                                             a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Candidate #21
                                                                                                                                                                                                                                                                                                                                                                     \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best-fit
          10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a6 Up (+1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a6 Down (-1\sigma)
          10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Data
          10<sup>0</sup>
    10^{-1}
   10^{-2}
    10^{-3}
    10^{-4}
    10^{-5}
           2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Data – Fit
Uncertainty
                    0
        -2.5
     1.03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \pm 1\sigma
Best-fit
                     1
0.975
                                                                                                                    2 \times 10^3
                                                                                                                                                                                                                                     3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                      4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                        6 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1.5) + 1.
                             a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
                             1568.5) * 0.000145275))))
                             a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
                             \label{eq:a3} {\rm a3} = 6.64543e - 05^{+9.1e}_{-9.1e} {}^{-06(13.7\%)}_{-06(13.7\%)}, \  \, a4 = 0.518,
                             a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)}, \ a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
                             \mathbf{a7} = \mathbf{0.839884}^{+0.209(24.9\%)}_{-0.209(24.9\%)},
                                                                                                                                                                  a8 = 6.47593^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Candidate #21
                                                                                                                                                                                                                                                                                                                                                                       \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best-fit
     10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -- a7 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a7 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Data – Fit
Uncertainty
                0
    -2.5
                 1
       0.8
                                                                                                                2 \times 10^{3}
                                                                                                                                                                                                                                    3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                     4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                                         6 \times 10^{3}
```

```
1.0*(a1*a3**((x0 - 1568.5) * 0.000145275)*((x0 - 1568.5) * 0.000145275)**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145275))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.000145))**a7 + (a3*tanh(a6 + 1.0*(a1*a3**((x0 - 1568.5) * 0.00014))**a7 + (a3*tanh(a1*a3**((x0 - 1568.5) * 0.00014))**a7 + (a3
                              a8*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))
                              1568.5) * 0.000145275))))
                              a1 = -2.64, a2 = -0.243138^{+0.00179(0.736\%)}_{-0.00179(0.736\%)},
                              \label{eq:a3} {\rm a3} = 6.64543e - 05^{+9.1e}_{-9.1e} {}^{-06(13.7\%)}_{-06(13.7\%)}, \ \ a4 = 0.518,
                              a5 = 0.732148^{+0.011(1.5\%)}_{-0.011(1.5\%)},
                                                                                                                                                   a6 = 1.19315^{+0.186(15.6\%)}_{-0.186(15.6\%)},
                              a7 = 0.839884^{+0.209(24.9\%)}_{-0.209(24.9\%)},
                                                                                                                                                          \mathbf{a8} = \mathbf{6.47593}^{+2.28(35.2\%)}_{-2.28(35.2\%)}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Candidate #21
                                                                                                                                                                                                                                                                                                                                                                   \chi^2/NDF = 28.71/29, RMSE = 0.02369, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best-fit
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a8 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a8 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
       2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Data – Fit
Uncertainty
                 0
     -2.5
  1.01
                  1
                                                                                                                2 \times 10^3
                                                                                                                                                                                                                                   3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                   4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                       6 \times 10^{3}
```

Candidate function #20

```
1.0*(a3/(a1*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4))
          0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
          0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
          a1 = -0.433, a2 = -0.238539^{+0.000208(0.0872\%)}_{-0.000208(0.0872\%)},
          a3 = 8.2455e - 07^{+1.61e - 07(19.5\%)}_{-1.61e - 07(19.5\%)}, \ a4 = 0.0448419^{+2.79e - 06(0.00622\%)}_{-2.79e - 06(0.00622\%)},
          a5 = 0.82565^{+0.018(2.18\%)}_{-0.018(2.18\%)}, \quad a6 = 1.49249^{+0.0967(6.48\%)}_{-0.0967(6.48\%)},
          a7 = 1.1, a8 = 2.31,
                                                                                                                                                        Candidate #20
          a9 = 2.33529^{+0.495(21.2\%)}_{-0.495(21.2\%)}
                                                                                                            \chi^2/NDF = 21.38/29, RMSE = 0.01817, R2 = 1.0
                                                                                                                                                    Best-fit
   10<sup>2</sup>
                                                                                                                                                    a2 Up (+1\sigma)
   10^{1}
                                                                                                                                                    a2 Down (-1\sigma)
                                                                                                                                                    Data
   10^{0}
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
      2
                                                                                                                                                                              Data – Fit
Uncertainty
      0
     -2
      1
      1
0.998
                                   2 \times 10^3
                                                                     3 \times 10^{3}
                                                                                              4 \times 10^{3}
                                                                                                                                6 \times 10^3
```

```
1.0*(a3/(a1*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + 
                             0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
                             0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
                             a1 = -0.433, a2 = -0.238539^{+0.000208(0.0872\%)}_{-0.000208(0.0872\%)},
                             \mathbf{a3} = \mathbf{8.2455e} - \mathbf{07^{+1.61e-07(19.5\%)}_{-1.61e-07(19.5\%)}}, \quad \mathbf{a4} = 0.0448419^{+2.79e-06(0.00622\%)}_{-2.79e-06(0.00622\%)},
                             a5 = 0.82565^{+0.018(2.18\%)}_{-0.018(2.18\%)}, \quad a6 = 1.49249^{+0.0967(6.48\%)}_{-0.0967(6.48\%)},
                             a7 = 1.1, a8 = 2.31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Candidate #20
                             a9 = 2.33529^{+0.495(21.2\%)}_{-0.495(21.2\%)}
                                                                                                                                                                                                                                                                                                                                                           \chi^2/NDF = 21.38/29, RMSE = 0.01817, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best-fit
      10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a3 Up (+1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a3 Down (-1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Data – Fit
Uncertainty
                 0
             -2
        1.1
                 1
        0.9
                                                                                                             2 \times 10^{3}
                                                                                                                                                                                                                            3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                           6 \times 10^3
                                                                                                                                                                                                                                                                                                             4 \times 10^{3}
```

```
1.0*(a3/(a1*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4)) + (a3*tanh
                            0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
                            0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
                            a1 = -0.433, a2 = -0.238539^{+0.000208(0.0872\%)}_{-0.000208(0.0872\%)},
                            a3 = 8.2455e - 07^{+1.61e - 07(19.5\%)}_{-1.61e - 07(19.5\%)}, \quad \textbf{a4} = \textbf{0.0448419}^{+2.79e - 06(0.00622\%)}_{-2.79e - 06(0.00622\%)},
                            a5 = 0.82565^{+0.018(2.18\%)}_{-0.018(2.18\%)}, \quad a6 = 1.49249^{+0.0967(6.48\%)}_{-0.0967(6.48\%)},
                            a7 = 1.1, a8 = 2.31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Candidate #20
                            a9 = 2.33529^{+0.495(21.2\%)}_{-0.495(21.2\%)}
                                                                                                                                                                                                                                                                                                                                                             \chi^2/NDF = 21.38/29, RMSE = 0.01817, R2 = 1.0
     10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a4 Up (+1\sigma)
     10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a4 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Data
     10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Data – Fit
Uncertainty
                0
              -2
                1
                                                                                                             2 \times 10^{3}
                                                                                                                                                                                                                              3 \times 10^3
                                                                                                                                                                                                                                                                                                              4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                              6 \times 10^3
```

```
1.0*(a3/(a1*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + 
                             0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
                             0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
                             a1 = -0.433, a2 = -0.238539^{+0.000208(0.0872\%)}_{-0.000208(0.0872\%)},
                             a3 = 8.2455e - 07^{+1.61e - 07(19.5\%)}_{-1.61e - 07(19.5\%)}, \quad a4 = 0.0448419^{+2.79e - 06(0.00622\%)}_{-2.79e - 06(0.00622\%)},
                             a5 = 0.82565^{+0.018(2.18\%)}_{-0.018(2.18\%)}, a6 = 1.49249^{+0.0967(6.48\%)}_{-0.0967(6.48\%)},
                             a7 = 1.1, a8 = 2.31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Candidate #20
                             a9 = 2.33529^{+0.495(21.2\%)}_{-0.495(21.2\%)}
                                                                                                                                                                                                                                                                                                                                                       \chi^2/NDF = 21.38/29, RMSE = 0.01817, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best-fit
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a5 Up (+1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a5 Down (-1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Data – Fit
Uncertainty
                 0
             -2
  1.05
                 1
  0.95
                                                                                                            2 \times 10^{3}
                                                                                                                                                                                                                           3 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                      6 \times 10^{3}
                                                                                                                                                                                                                                                                                                         4 \times 10^{3}
```

```
1.0*(a3/(a1*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4)) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4)) + (a3*tanh
                             0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
                             0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
                             a1 = -0.433, a2 = -0.238539^{+0.000208(0.0872\%)}_{-0.000208(0.0872\%)},
                             a3 = 8.2455e - 07^{+1.61e - 07(19.5\%)}_{-1.61e - 07(19.5\%)}, \quad a4 = 0.0448419^{+2.79e - 06(0.00622\%)}_{-2.79e - 06(0.00622\%)},
                             a5 = 0.82565^{+0.018(2.18\%)}_{-0.018(2.18\%)}, \quad \textbf{a6} = \textbf{1.49249}^{+0.0967(6.48\%)}_{-0.0967(6.48\%)},
                             a7 = 1.1, a8 = 2.31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Candidate #20
                             a9 = 2.33529^{+0.495(21.2\%)}_{-0.495(21.2\%)}
                                                                                                                                                                                                                                                                                                                                                            \chi^2/NDF = 21.38/29, RMSE = 0.01817, R2 = 1.0
      10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a6 Up (+1\sigma)
      10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a6 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Data
      10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Data – Fit
Uncertainty
                 0
              -2
                 1
  0.95
                                                                                                              2 \times 10^{3}
                                                                                                                                                                                                                              3 \times 10^3
                                                                                                                                                                                                                                                                                                             4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                            6 \times 10^3
```

```
1.0*(a3/(a1*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5) + a4) + (a3*tanh(a7 + a9*((x0 - 1568.5)
                                0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
                                0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
                                a1 = -0.433, a2 = -0.238539^{+0.000208(0.0872\%)}_{-0.000208(0.0872\%)},
                                a3 = 8.2455e - 07^{+1.61e - 07(19.5\%)}_{-1.61e - 07(19.5\%)}, \ a4 = 0.0448419^{+2.79e - 06(0.00622\%)}_{-2.79e - 06(0.00622\%)},
                                a5 = 0.82565^{+0.018(2.18\%)}_{-0.018(2.18\%)}, \quad a6 = 1.49249^{+0.0967(6.48\%)}_{-0.0967(6.48\%)},
                                a7 = 1.1, a8 = 2.31,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Candidate #20
                                \mathbf{a9} = \mathbf{2.33529}^{+0.495(21.2\%)}_{-0.495(21.2\%)}
                                                                                                                                                                                                                                                                                                                                                         \chi^2/NDF = 21.38/29, RMSE = 0.01817, R2 = 1.0
         10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a9 Up (+1\sigma)
         10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a9 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Data
         10^{0}
    10^{-1}
   10^{-2}
    10^{-3}
   10^{-4}
    10^{-5}
                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Data – Fit
Uncertainty
                    0
                 -2
                     1
                     1
0.998
                                                                                                                2 \times 10^3
                                                                                                                                                                                                                              3 \times 10^{3}
                                                                                                                                                                                                                                                                                                           4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                         6 \times 10^{3}
```



```
1.0*(a4/(a1*((x0 - 1568.5) * 0.000145275) + a3) + (a4*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a3)))
         0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
         0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
         a1 = -1.37363^{+0.498(36.3\%)}_{-0.498(36.3\%)}, a2 = -0.235,
         a3 = 0.653922^{+0.232(35.5\%)}_{-0.232(35.5\%)}, \ a4 = 4.98e - 05,
         a5 = 0.514716^{+0.00445(0.865\%)}_{-0.00445(0.865\%)}, \quad a6 = 0.561587^{+0.031(5.52\%)}_{-0.031(5.52\%)},
         {\rm a7} = 1.19828^{+0.198(16.5\%)}_{-0.198(16.5\%)}, \ a8 = 2.31,
                                                                                                                                                      Candidate #19
         a9 = 5.22361^{+1.86(35.6\%)}_{-1.86(35.6\%)}
                                                                                                           \chi^2/NDF = 227.9/29, RMSE = 0.04943, R2 = 1.0
 10^{2}
                                                                                                                                                  Best-fit
                                                                                                                                                  al Up (+1\sigma)
 10^{1}
                                                                                                                                                  al Down (-1\sigma)
                                                                                                                                                  Data
 10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
     5
                                                                                                                                                                            Data – Fit
Uncertainty
     0
    -5
     0
-200
                                 2 \times 10^{3}
                                                                    3 \times 10^{3}
                                                                                            4 \times 10^{3}
                                                                                                                              6 \times 10^{3}
```

```
1.0*(a4/(a1*((x0 - 1568.5) * 0.000145275) + a3) + (a4*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a3)))
         0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
         0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
         a1 = -1.37363^{+0.498(36.3\%)}_{-0.498(36.3\%)},
                                                a2 = -0.235,
         \mathbf{a3} = \mathbf{0.653922}^{+0.232(35.5\%)}_{-0.232(35.5\%)},
                                                 a4 = 4.98e - 05
         a5 = 0.514716^{+0.00445(0.865\%)}_{-0.00445(0.865\%)}, \quad a6 = 0.561587^{+0.031(5.52\%)}_{-0.031(5.52\%)},
         {\rm a7} = 1.19828^{+0.198(16.5\%)}_{-0.198(16.5\%)}, \ a8 = 2.31,
                                                                                                                                                        Candidate #19
         a9 = 5.22361^{+1.86(35.6\%)}_{-1.86(35.6\%)}
                                                                                                            \chi^2/NDF = 227.9/29, RMSE = 0.04943, R2 = 1.0
 10^{2}
                                                                                                                                                     Best-fit
                                                                                                                                                     a3 Up (+1\sigma)
 10^{1}
                                                                                                                                                     a3 Down (-1\sigma)
 10^{0}
                                                                                                                                                     Data
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
     5
                                                                                                                                                                               Data – Fit
Uncertainty
     0
    -5
     0
-200
                                  2 \times 10^{3}
                                                                     3 \times 10^{3}
                                                                                              4 \times 10^{3}
                                                                                                                                6 \times 10^{3}
```

```
1.0*(a4/(a1*((x0 - 1568.5) * 0.000145275) + a3) + (a4*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a3)))
         0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
         0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
         \mathrm{a1} = -1.37363^{+0.498(36.3\%)}_{-0.498(36.3\%)}, \ a2 = -0.235,
        a3 = 0.653922^{+0.232(35.5\%)}_{-0.232(35.5\%)}, a4 = 4.98e - 05,
         a5 = 0.514716^{+0.00445(0.865\%)}_{-0.00445(0.865\%)}, a6 = 0.561587^{+0.031(5.52\%)}_{-0.031(5.52\%)},
         {\rm a7} = 1.19828^{+0.198(16.5\%)}_{-0.198(16.5\%)}, \ a8 = 2.31,
                                                                                                                                                      Candidate #19
         a9 = 5.22361^{+1.86(35.6\%)}_{-1.86(35.6\%)}
                                                                                                           \chi^2/NDF = 227.9/29, RMSE = 0.04943, R2 = 1.0
                                                                                                                                                   Best-fit
 10^{2}
                                                                                                                                                   a5 Up (+1\sigma)
 10^{1}
                                                                                                                                                   a5 Down (-1\sigma)
                                                                                                                                                   Data
 10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
     5
                                                                                                                                                                            Data – Fit
Uncertainty
     0
    -5
  2.5
     0
                                 2 \times 10^{3}
                                                                    3 \times 10^{3}
                                                                                             4 \times 10^{3}
                                                                                                                               6 \times 10^{3}
```

```
1.0*(a4/(a1*((x0 - 1568.5) * 0.000145275) + a3) + (a4*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a3)))
         0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
         0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
         \mathrm{a1} = -1.37363^{+0.498(36.3\%)}_{-0.498(36.3\%)}, \ a2 = -0.235,
         a3 = 0.653922^{+0.232(35.5\%)}_{-0.232(35.5\%)}, \ a4 = 4.98e - 05,
         a5 = 0.514716^{+0.00445(0.865\%)}_{-0.00445(0.865\%)}, a6 = 0.561587^{+0.031(5.52\%)}_{-0.031(5.52\%)},
         {\rm a7} = 1.19828^{+0.198(16.5\%)}_{-0.198(16.5\%)}, \ a8 = 2.31,
                                                                                                                                                      Candidate #19
         a9 = 5.22361^{+1.86(35.6\%)}_{-1.86(35.6\%)}
                                                                                                           \chi^2/NDF = 227.9/29, RMSE = 0.04943, R2 = 1.0
 10^{2}
                                                                                                                                                   Best-fit
                                                                                                                                                   a6 Up (+1\sigma)
 10^{1}
                                                                                                                                                   a6 Down (-1\sigma)
                                                                                                                                                   Data
 10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
     5
                                                                                                                                                                            Data – Fit
Uncertainty
     0
    -5
   20
     0
  -20
                                 2 \times 10^{3}
                                                                    3 \times 10^{3}
                                                                                            4 \times 10^{3}
                                                                                                                               6 \times 10^3
```

```
1.0*(a4/(a1*((x0 - 1568.5) * 0.000145275) + a3) + (a4*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a3)))
          0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
          0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
          a1 = -1.37363^{+0.498(36.3\%)}_{-0.498(36.3\%)}, \ a2 = -0.235,
          a3 = 0.653922^{+0.232(35.5\%)}_{-0.232(35.5\%)}, a4 = 4.98e - 05,
          a5 = 0.514716^{+0.00445(0.865\%)}_{-0.00445(0.865\%)}, \quad a6 = 0.561587^{+0.031(5.52\%)}_{-0.031(5.52\%)},
          \mathbf{a7} = \mathbf{1.19828}^{+0.198(16.5\%)}_{-0.198(16.5\%)},
                                                a8 = 2.31,
                                                                                                                                                        Candidate #19
          a9 = 5.22361^{+1.86(35.6\%)}_{-1.86(35.6\%)}
                                                                                                            \chi^2/NDF = 227.9/29, RMSE = 0.04943, R2 = 1.0
   10^{2}
                                                                                                                                                     Best-fit
                                                                                                                                                    a7 Up (+1\sigma)
   10^{1}
                                                                                                                                                    a7 Down (-1\sigma)
                                                                                                                                                    Data
   10<sup>0</sup>
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
 10^{-6}
      5
                                                                                                                                                                              Data – Fit
Uncertainty
      0
     -5
 1.03
      1
0.975
                                   2 \times 10^{3}
                                                                     3 \times 10^{3}
                                                                                              4 \times 10^{3}
                                                                                                                                6 \times 10^3
```

```
1.0*(a4/(a1*((x0 - 1568.5) * 0.000145275) + a3) + (a4*tanh(a7 + a9*((x0 - 1568.5) * 0.000145275) + a3)))
         0.000145275)*(a8 + ((x0 - 1568.5) * 0.000145275))))**((a2 + ((x0 - 1568.5) *
         0.000145275))/tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))
         \mathsf{a1} = -1.37363^{+0.498(36.3\%)}_{-0.498(36.3\%)},
                                                a2 = -0.235.
         a3 = 0.653922^{+0.232(35.5\%)}_{-0.232(35.5\%)}, \ a4 = 4.98e - 05,
         a5 = 0.514716^{+0.00445(0.865\%)}_{-0.00445(0.865\%)}, \quad a6 = 0.561587^{+0.031(5.52\%)}_{-0.031(5.52\%)},
         \mathsf{a7} = 1.19828^{+0.198(16.5\%)}_{-0.198(16.5\%)}\text{,}
                                              a8 = 2.31.
                                                                                                                                                            Candidate #19
         \mathbf{a9} = \mathbf{5.22361}^{+1.86(35.6\%)}_{-1.86(35.6\%)}
                                                                                                               \chi^2/NDF = 227.9/29, RMSE = 0.04943, R2 = 1.0
  10^{2}
                                                                                                                                                        Best-fit
                                                                                                                                                        a9 Up (+1\sigma)
  10^{1}
                                                                                                                                                        a9 Down (-1\sigma)
                                                                                                                                                        Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
     5
                                                                                                                                                                                   Data – Fit
Uncertainty
     0
    -5
1.01
     1
                                   2 \times 10^{3}
                                                                      3 \times 10^{3}
                                                                                                4 \times 10^{3}
                                                                                                                                   6 \times 10^3
```



```
1.0*(a2 + (a3*tanh(a6 + a8*((x0 - 1568.5) * 0.000145275)*(a7 + ((x0 - 1568.5) * 0.000145275)*(a7 + (
                                                     (0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a2 + a5*((x0 - 1568.5) * 0.000145275)))**((a3 + a5*((
                                                     0.000145275))))
                                                     a1 = -0.238095^{+0.000407(0.171\%)}_{-0.000407(0.171\%)}, a2 = -0.000115,
                                                     a3 = 4.98e - 05, a4 = 0.572135^{+0.0199(3.48\%)}_{-0.0199(3.48\%)},
                                                     a5 = 0.431686^{+0.0477(11.0\%)}_{-0.0477(11.0\%)}, \quad a6 = 0.402989^{+0.131(32.5\%)}_{-0.131(32.5\%)},
                                                     a7 = 0.736682^{+0.179(24.3\%)}_{-0.179(24.3\%)},
                                                                                                                                                                                                                                                                           a8 = 4.94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Candidate #18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \chi^2/NDF = 106.9/30, RMSE = 0.02393, R2 = 1.0
           10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a1 Up (+1\sigma)
           10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a1 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Data
           10^{0}
 10^{-1}
 10^{-2}
10^{-3}
 10^{-4}
10^{-5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Data – Fit
Uncertainty
                               5
                               0
                         -5
               1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \pm 1\sigma
Best-fit
                               1
               0.5
                                                                                                                                                                                                     2 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 \times 10^3
```

```
1.0*(a2 + (a3*tanh(a6 + a8*((x0 - 1568.5) * 0.000145275)*(a7 + ((x0 - 1568.5) * 0.000145275)*(a7 + (
                                                     (0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a2 + a5*((x0 - 1568.5) * 0.000145275)))**((a3 + a5*((
                                                     0.000145275))))
                                                     a1 = -0.238095^{+0.000407(0.171\%)}_{-0.000407(0.171\%)},
                                                                                                                                                                                                                                                                                                                             a2 = -0.000115,
                                                     a3 = 4.98e - 05, a4 = 0.572135^{+0.0199(3.48\%)}_{-0.0199(3.48\%)},
                                                     a5 = 0.431686^{+0.0477(11.0\%)}_{-0.0477(11.0\%)}, \ a6 = 0.402989^{+0.131(32.5\%)}_{-0.131(32.5\%)},
                                                     a7 = 0.736682^{+0.179(24.3\%)}_{-0.179(24.3\%)},
                                                                                                                                                                                                                                                                              a8 = 4.94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Candidate #18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \chi^2/NDF = 106.9/30, RMSE = 0.02393, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best-fit
           10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a4 Up (+1\sigma)
           10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a4 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Data
           10<sup>0</sup>
 10^{-1}
 10^{-2}
10^{-3}
 10^{-4}
10^{-5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Data – Fit
Uncertainty
                                5
                                0
                         -5
                     10
                                0
                                                                                                                                                                                                       2 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                    3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 \times 10^3
```

```
1.0*(a2 + (a3*tanh(a6 + a8*((x0 - 1568.5) * 0.000145275)*(a7 + ((x0 - 1568.5) * 0.000145275)*(a7 + (
                                                     (0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a2 + a5*((x0 - 1568.5) * 0.000145275)))**((a3 + a5*((
                                                     0.000145275))))
                                                     a1 = -0.238095^{+0.000407(0.171\%)}_{-0.000407(0.171\%)}, a2 = -0.000115,
                                                     a3 = 4.98e - 05, a4 = 0.572135^{+0.0199(3.48\%)}_{-0.0199(3.48\%)},
                                                     a5 = 0.431686<sup>+0.0477(11.0%)</sup><sub>-0.0477(11.0%)</sub>, a6 = 0.402989<sup>+0.131(32.5%)</sup><sub>-0.131(32.5%)</sub>,
                                                     a7 = 0.736682^{+0.179(24.3\%)}_{-0.179(24.3\%)}, a8 = 4.94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Candidate #18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \chi^2/NDF = 106.9/30, RMSE = 0.02393, R2 = 1.0
           10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best-fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ---- a5 Up (+1\sigma)
           10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a5 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Data
           10^{0}
 10^{-1}
 10^{-2}
10^{-3}
10^{-4}
 10^{-5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Data – Fit
Uncertainty
                               5
                               0
                         -5
                    20
                               0
               -20
                                                                                                                                                                                                     2 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                               3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 \times 10^3
```

```
1.0*(a2 + (a3*tanh(a6 + a8*((x0 - 1568.5) * 0.000145275)*(a7 + ((x0 - 1568.5) * 0.000145275)*(a7 + (
                                                     (0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a2 + a5*((x0 - 1568.5) * 0.000145275)))**((a3 + a5*((
                                                     0.000145275))))
                                                     a1 = -0.238095^{+0.000407(0.171\%)}_{-0.000407(0.171\%)}, a2 = -0.000115,
                                                     a3 = 4.98e - 05, a4 = 0.572135^{+0.0199(3.48\%)}_{-0.0199(3.48\%)},
                                                     \mathsf{a5} = 0.431686^{+0.0477(11.0\%)}_{-0.0477(11.0\%)}, \quad \mathbf{a6} = \mathbf{0.402989^{+0.131(32.5\%)}_{-0.131(32.5\%)}},
                                                     a7 = 0.736682^{+0.179(24.3\%)}_{-0.179(24.3\%)},
                                                                                                                                                                                                                                                                             a8 = 4.94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Candidate #18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \chi^2/NDF = 106.9/30, RMSE = 0.02393, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best-fit
          10<sup>2</sup>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a6 Up (+1\sigma)
           10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a6 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Data
           10^{0}
 10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Data – Fit
Uncertainty
                               5
                               0
                         -5
               1.1
                               1
               0.9
                                                                                                                                                                                                        2 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                    3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 \times 10^3
```

```
1.0*(a2 + (a3*tanh(a6 + a8*((x0 - 1568.5) * 0.000145275)*(a7 + ((x0 - 1568.5) * 0.000145275)*(a7 + (
                                                     (0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4 + a5*((x0 - 1568.5) * 0.000145275)))**((a2 + a5*((x0 - 1568.5) * 0.000145275)))**((a3 + a5*((
                                                     0.000145275))))
                                                     a1 = -0.238095^{+0.000407(0.171\%)}_{-0.000407(0.171\%)}, a2 = -0.000115,
                                                     a3 = 4.98e - 05, a4 = 0.572135^{+0.0199(3.48\%)}_{-0.0199(3.48\%)},
                                                     a5 = 0.431686^{+0.0477(11.0\%)}_{-0.0477(11.0\%)}, \ a6 = 0.402989^{+0.131(32.5\%)}_{-0.131(32.5\%)},
                                                     a7 = 0.736682^{+0.179(24.3\%)}_{-0.179(24.3\%)},
                                                                                                                                                                                                                                                                                              a8 = 4.94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Candidate #18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \chi^2/NDF = 106.9/30, RMSE = 0.02393, R2 = 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best-fit
           10^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a7 Up (+1\sigma)
           10^{1}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a7 Down (-1\sigma)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Data
           10^{0}
 10^{-1}
10^{-2}
 10^{-3}
10^{-4}
10^{-5}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Data – Fit
Uncertainty
                               5
                               0
                         -5
   1.02
                               1
     0.98
                                                                                                                                                                                                      2 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                               3 \times 10^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 \times 10^3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 \times 10^3
```



```
1.0*((a2*tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))**((a1 + ((x0 - 1568.5) * 0.000145275))))
          0.000145275)/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
          a1 = -0.235, a2 = 4.98e - 05,
          \mathbf{a3} = \mathbf{0.517391}^{+0.00529(1.02\%)}_{-0.00529(1.02\%)}, \quad \mathbf{a4} = 0.544452^{+0.0305(5.6\%)}_{-0.0305(5.6\%)},
          a5 = 1.09102^{+0.189(17.3\%)}_{-0.189(17.3\%)}, \ a6 = 10.3529^{+3.52(34.0\%)}_{-3.52(34.0\%)}
                                                                                                                                                            Candidate #17
                                                                                                               \chi^2/NDF = 274.3/31, RMSE = 0.04628, R2 = 1.0
                                                                                                                                                         Best-fit
   10^{2}
                                                                                                                                                    -- a3 Up (+1\sigma)
                                                                                                                                                         a3 Down (-1\sigma)
   10^{1}
                                                                                                                                                         Data
   10<sup>0</sup>
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
                                                                                                                                                                                     <u>6</u>
      5
                                                                                                                                                                                    Data – Fit
Uncertainty
      0
     -5
  1.03
      1
0.975
                                    2 \times 10^3
                                                                       3 \times 10^{3}
                                                                                                 4 \times 10^{3}
                                                                                                                                    6 \times 10^{3}
```

```
0.000145275))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
        a1 = -0.235, a2 = 4.98e - 05,
        \text{a3} = 0.517391^{+0.00529(1.02\%)}_{-0.00529(1.02\%)}, \quad \textbf{a4} = \textbf{0.544452}^{+0.0305(5.6\%)}_{-0.0305(5.6\%)},
        a5 = 1.09102^{+0.189(17.3\%)}_{-0.189(17.3\%)}, \ a6 = 10.3529^{+3.52(34.0\%)}_{-3.52(34.0\%)}
                                                                                                                                        Candidate #17
                                                                                                 \chi^2/NDF = 274.3/31, RMSE = 0.04628, R2 = 1.0
                                                                                                                                     Best-fit
 10^{2}
                                                                                                                                 -- a4 Up (+1\sigma)
                                                                                                                                     a4 Down (-1\sigma)
 10^{1}
                                                                                                                                     Data
 10^{0}
10^{-1}
10^{-2}
10<sup>-3</sup>
10^{-4}
10^{-5}
                                                                                                                                                              <u>6</u>
    5
                                                                                                                                                            Data – Fit
Uncertainty
    0
   -5
  1.1
    1
  0.9
                              2 \times 10^{3}
                                                             3 \times 10^{3}
                                                                                    4 \times 10^{3}
                                                                                                                   6 \times 10^{3}
```

```
1.0*((a2*tanh(a5 + a6*((x0 - 1568.5) * 0.000145275))))**((a1 + ((x0 - 1568.5) * 0.000145275))))
          0.000145275))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
          a1 = -0.235, a2 = 4.98e - 05,
          \mathsf{a3} = 0.517391^{+0.00529(1.02\%)}_{-0.00529(1.02\%)},
                                                   a4 = 0.544452^{+0.0305(5.6\%)}_{-0.0305(5.6\%)},
          a5 = 1.09102<sup>+0.189(17.3%)</sup><sub>-0.189(17.3%)</sub>, a6 = 10.3529<sup>+3.52(34.0%)</sup><sub>-3.52(34.0%)</sub>
                                                                                                                                                            Candidate #17
                                                                                                               \chi^2/NDF = 274.3/31, RMSE = 0.04628, R2 = 1.0
                                                                                                                                                         Best-fit
   10^{2}
                                                                                                                                                    -- a5 Up (+1\sigma)
                                                                                                                                                         a5 Down (-1\sigma)
   10^{1}
                                                                                                                                                         Data
   10<sup>0</sup>
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
                                                                                                                                                                                     <u>6</u>
      5
                                                                                                                                                                                   Data – Fit
Uncertainty
      0
     -5
  1.05
  1.03
      1
0.975
                                    2 \times 10^3
                                                                       3 \times 10^{3}
                                                                                                4 \times 10^{3}
                                                                                                                                    6 \times 10^{3}
```

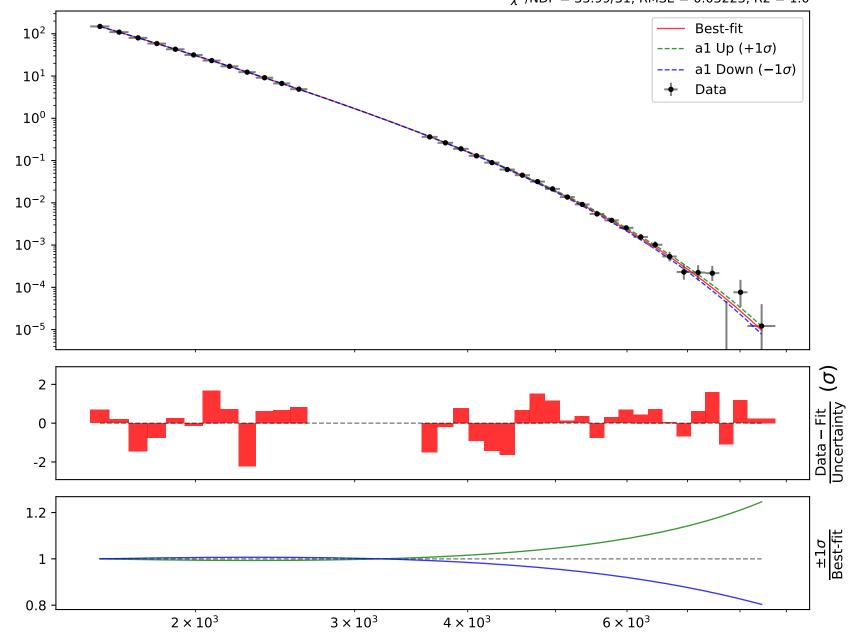
```
0.000145275)/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
        a1 = -0.235, a2 = 4.98e - 05,
        a3 = 0.517391^{+0.00529(1.02\%)}_{-0.00529(1.02\%)}, \ a4 = 0.544452^{+0.0305(5.6\%)}_{-0.0305(5.6\%)},
        a5 = 1.09102^{+0.189(17.3\%)}_{-0.189(17.3\%)}, \ \ \textbf{a6} = \textbf{10.3529}^{+3.52(\textbf{34.0\%})}_{-\textbf{3.52(\textbf{34.0\%})}}
                                                                                                                                           Candidate #17
                                                                                                   \chi^2/NDF = 274.3/31, RMSE = 0.04628, R2 = 1.0
 10^{2}
                                                                                                                                        Best-fit
                                                                                                                                    -- a6 Up (+1\sigma)
                                                                                                                                        a6 Down (-1\sigma)
 10^{1}
                                                                                                                                        Data
 10^{0}
10^{-1}
10^{-2}
10<sup>-3</sup>
10^{-4}
10^{-5}
                                                                                                                                                                  <u>g</u>
    5
                                                                                                                                                                Data – Fit
Uncertainty
     0
   -5
1.01
     1
0.99
                               2 \times 10^{3}
                                                               3 \times 10^{3}
                                                                                      4 \times 10^{3}
                                                                                                                      6 \times 10^{3}
```



1.0\*((a3\*exp(a1\*((x0 - 1568.5) \* 0.000145275)))\*\*((a2 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a4 + ((x0 - 1568.5) \* 0.000145275))))

 $\begin{array}{l} \textbf{a1} = -\textbf{4.34803}^{+0.2607(6.0\%)}_{-0.2592(5.96\%)}, \quad \text{a2} = -0.238618^{+0.0002042(0.0856\%)}_{-0.000204(0.0855\%)}, \\ \textbf{a3} = 8.95886e - 05^{+1.561e}_{-1.337e}^{+0.5(17.4\%)}, \quad \text{a4} = 0.477612^{+0.009343(1.96\%)}_{-0.00922(1.93\%)} \end{array}$ 

## Candidate #16 $\chi^2/NDF = 33.99/31$ , RMSE = 0.03223, R2 = 1.0



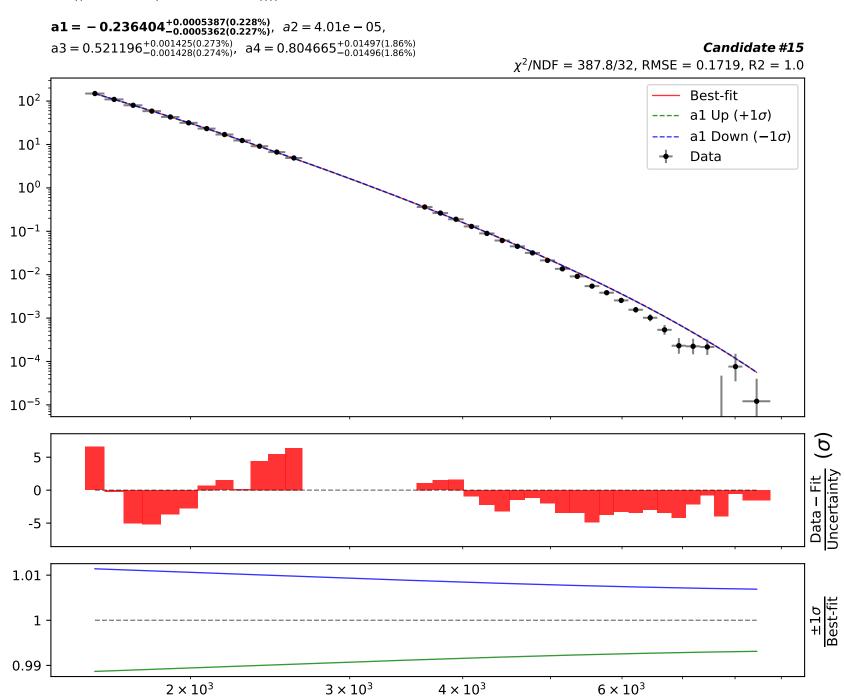
```
1.0*((a3*exp(a1*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4))
          + ((x0 - 1568.5) * 0.000145275))))
          a1 = -4.34803^{+0.2607(6.0\%)}_{-0.2592(5.96\%)},
                                                  a2 = -0.238618^{+0.0002042(0.0856\%)}_{-0.000204(0.0855\%)},
          a3 = 8.95886e - 05^{+1.561e - 05(17.4\%)}_{-1.337e - 05(14.9\%)}, \quad a4 = 0.477612^{+0.009343(1.96\%)}_{-0.00922(1.93\%)}
                                                                                                                                                        Candidate #16
                                                                                                            \chi^2/NDF = 33.99/31, RMSE = 0.03223, R2 = 1.0
                                                                                                                                                     Best-fit
   10<sup>2</sup>
                                                                                                                                             ---- a2 Up (+1\sigma)
                                                                                                                                                     a2 Down (-1\sigma)
   10^{1}
                                                                                                                                                     Data
   10<sup>0</sup>
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
      2
                                                                                                                                                                               Data – Fit
Uncertainty
      0
     -2
      1
      1
0.998
                                   2 \times 10^3
                                                                      3 \times 10^3
                                                                                              4 \times 10^{3}
                                                                                                                                 6 \times 10^{3}
```

```
1.0*((a3*exp(a1*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4))
         + ((x0 - 1568.5) * 0.000145275))))
         \mathtt{a1} = -4.34803^{+0.2607(6.0\%)}_{-0.2592(5.96\%)}\text{, }\mathtt{a2} = -0.238618^{+0.0002042(0.0856\%)}_{-0.000204(0.0855\%)}\text{,}
                                                                    a4 = 0.477612^{+0.009343(1.96\%)}_{-0.00922(1.93\%)}
         \mathbf{a3} = \mathbf{8.95886e} - \mathbf{05}^{+1.561e}_{-1.337e} - \mathbf{05}^{(17.4\%)}_{05(14.9\%)},
                                                                                                                                                                    Candidate #16
                                                                                                                     \chi^2/NDF = 33.99/31, RMSE = 0.03223, R2 = 1.0
                                                                                                                                                                 Best-fit
  10^{2}
                                                                                                                                                         ---- a3 Up (+1\sigma)
                                                                                                                                                                 a3 Down (-1\sigma)
  10^{1}
                                                                                                                                                                 Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
     2
                                                                                                                                                                                             Data – Fit
Uncertainty
     0
    -2
  1.1
     1
  0.9
                                     2 \times 10^{3}
                                                                          3 \times 10^{3}
                                                                                                     4 \times 10^3
                                                                                                                                           6 \times 10^{3}
```

```
1.0*((a3*exp(a1*((x0 - 1568.5) * 0.000145275)))**((a2 + ((x0 - 1568.5) * 0.000145275)))/tanh(a4))
        + ((x0 - 1568.5) * 0.000145275))))
        a1 = -4.34803^{+0.2607(6.0\%)}_{-0.2592(5.96\%)},
                                               a2 = -0.238618^{+0.0002042(0.0856\%)}_{-0.000204(0.0855\%)},
        a3 = 8.95886e - 05^{+1.561e - 05(17.4\%)}_{-1.337e - 05(14.9\%)}, a4 = 0.477612^{+0.009343(1.96\%)}_{-0.00922(1.93\%)}
                                                                                                                                                   Candidate #16
                                                                                                         \chi^2/NDF = 33.99/31, RMSE = 0.03223, R2 = 1.0
                                                                                                                                                Best-fit
 10^{2}
                                                                                                                                                a4 Up (+1\sigma)
                                                                                                                                                a4 Down (-1\sigma)
 10^{1}
                                                                                                                                                Data
 10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
     2
                                                                                                                                                                         Data – Fit
Uncertainty
     0
    -2
1.05
     1
0.95
                                 2 \times 10^{3}
                                                                  3 \times 10^3
                                                                                                                            6 \times 10^3
                                                                                           4 \times 10^3
```

Candidate function #15

1.0\*((a2\*exp(-((x0 - 1568.5) \* 0.000145275))))\*\*((a1 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a3 + a4\*((x0 - 1568.5) \* 0.000145275))))



```
1.0*((a2*exp(-((x0 - 1568.5) * 0.000145275)))**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a3 + ((x0 - 1568.5) * 0.000145275)))
         a4*((x0 - 1568.5) * 0.000145275))))
         a1 = -0.236404^{+0.0005387(0.228\%)}_{-0.0005362(0.227\%)},
                                                        a2 = 4.01e - 05,
         \mathbf{a3} = \mathbf{0.521196}^{+0.001425(0.273\%)}_{-0.001428(0.274\%)},
                                                       a4 = 0.804665^{+0.01497(1.86\%)}_{-0.01496(1.86\%)}
                                                                                                                                                         Candidate #15
                                                                                                               \chi^2/NDF = 387.8/32, RMSE = 0.1719, R2 = 1.0
                                                                                                                                                      Best-fit
 10^{2}
                                                                                                                                              ---- a3 Up (+1\sigma)
                                                                                                                                                      a3 Down (-1\sigma)
 10^{1}
                                                                                                                                                      Data
 10<sup>0</sup>
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
     5
                                                                                                                                                                                Data – Fit
Uncertainty
     0
    -5
1.01
     1
0.99
```

 $4 \times 10^3$ 

 $6 \times 10^3$ 

 $2 \times 10^{3}$ 

 $3 \times 10^{3}$ 

1.0\*((a2\*exp(-((x0 - 1568.5) \* 0.000145275)))\*\*((a1 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a3 + ((x0 - 1568.5) \* 0.000145275)))a4\*((x0 - 1568.5) \* 0.000145275))))  $a1 = -0.236404^{+0.0005387(0.228\%)}_{-0.0005362(0.227\%)}, \ a2 = 4.01e - 05,$  $a3 = 0.521196^{+0.001425(0.273\%)}_{-0.001428(0.274\%)},$  $\mathbf{a4} = \mathbf{0.804665}^{+0.01497(1.86\%)}_{-0.01496(1.86\%)}$ Candidate #15  $\chi^2/NDF = 387.8/32$ , RMSE = 0.1719, R2 = 1.0 Best-fit 10<sup>2</sup> a4 Up  $(+1\sigma)$ a4 Down  $(-1\sigma)$  $10^{1}$ Data  $10^{0}$  $10^{-1}$  $10^{-2}$  $10^{-3}$  $10^{-4}$  $10^{-5}$ 5 Data – Fit Uncertainty 0 -5 1.03 1 0.975

 $4 \times 10^{3}$ 

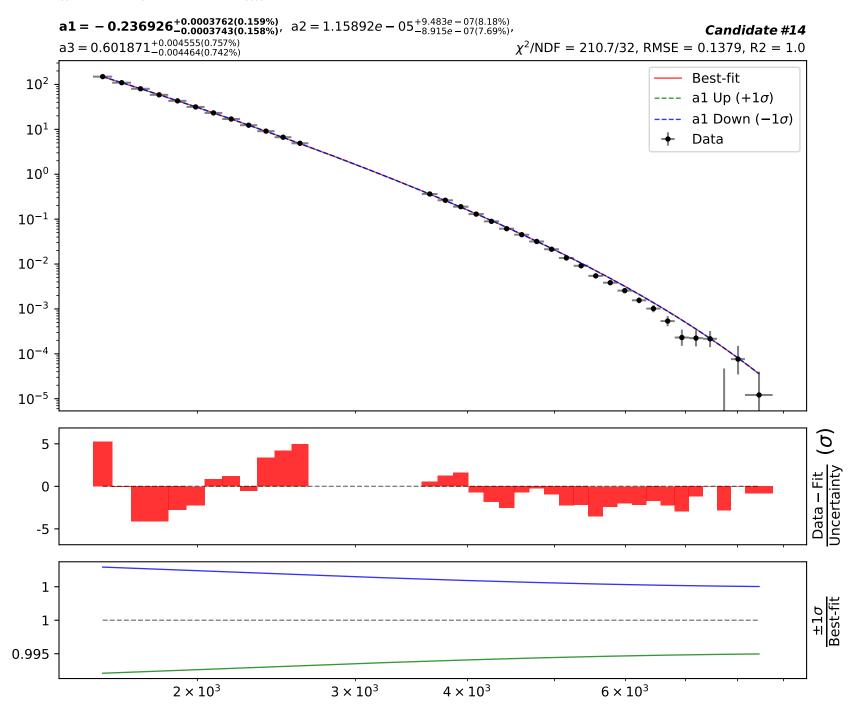
 $6 \times 10^{3}$ 

 $2 \times 10^3$ 

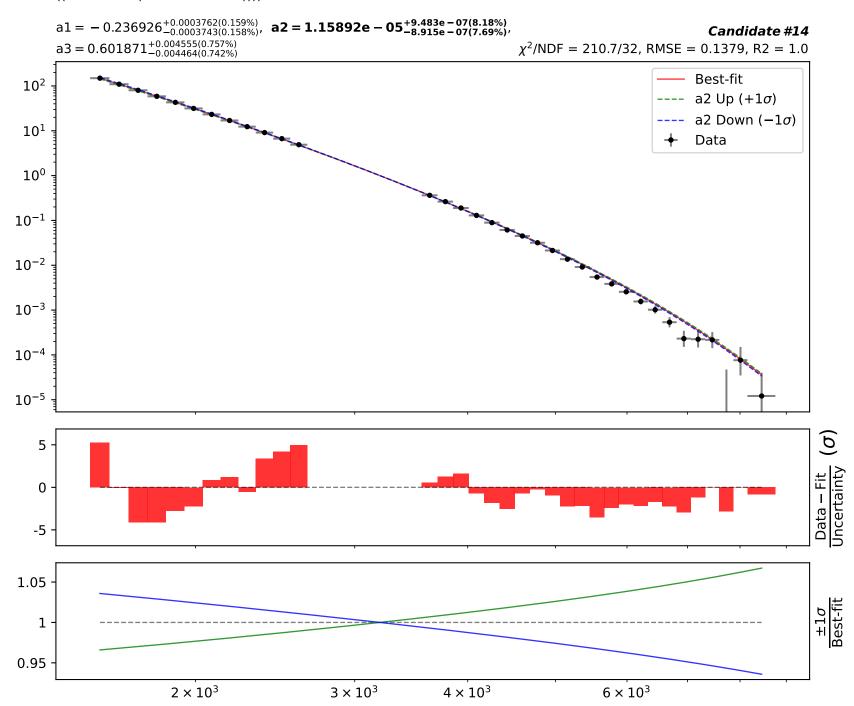
 $3 \times 10^{3}$ 

Candidate function #14

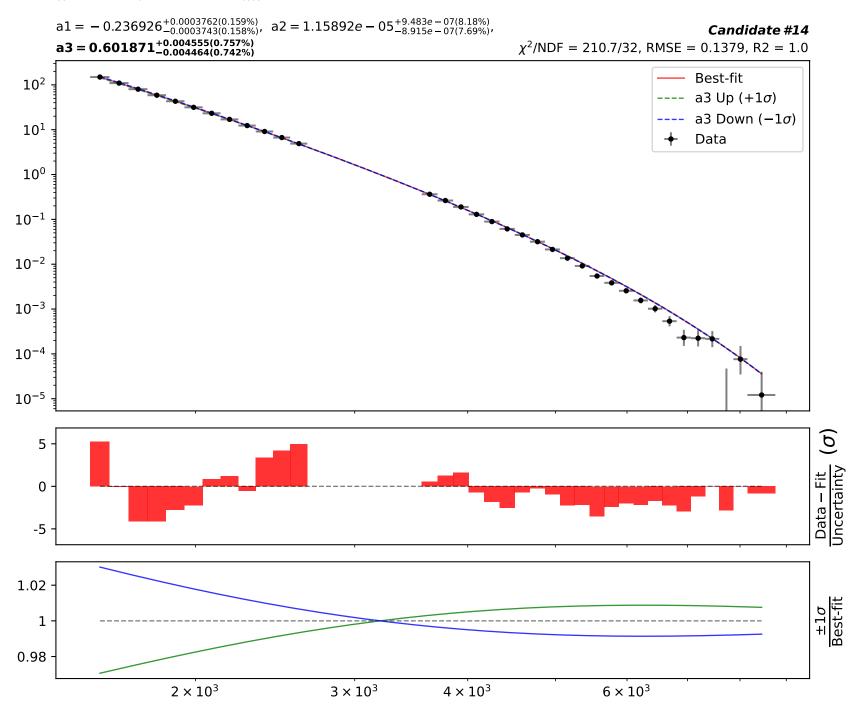
1.0\*((a2\*exp(-((x0 - 1568.5) \* 0.000145275))))\*\*((a1 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a3 + ((x0 - 1568.5) \* 0.000145275))))



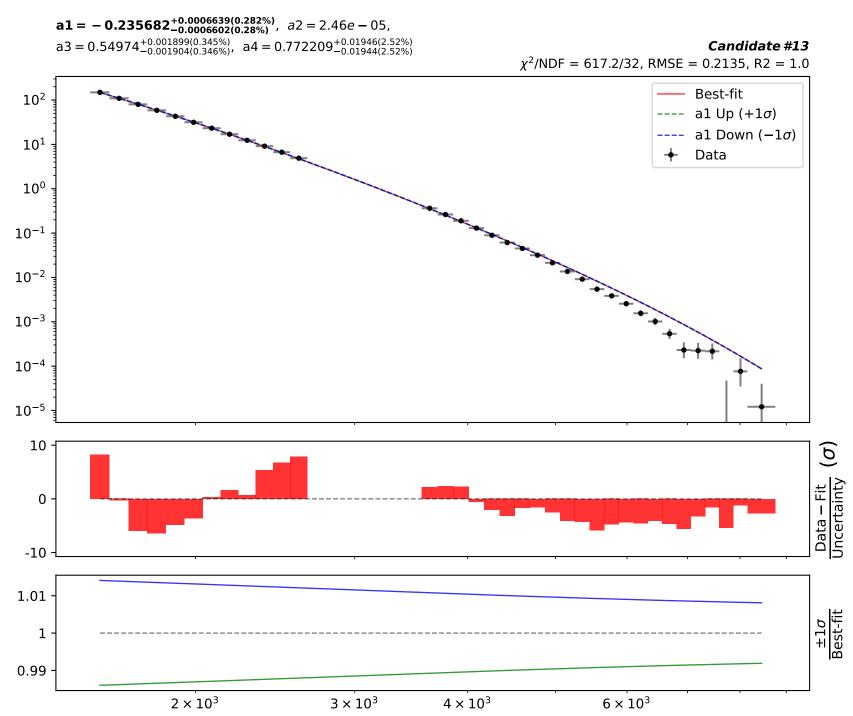
1.0\*((a2\*exp(-((x0 - 1568.5) \* 0.000145275)))\*\*((a1 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a3 + ((x0 - 1568.5) \* 0.000145275))))



1.0\*((a2\*exp(-((x0 - 1568.5) \* 0.000145275)))\*\*((a1 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a3 + ((x0 - 1568.5) \* 0.000145275))))



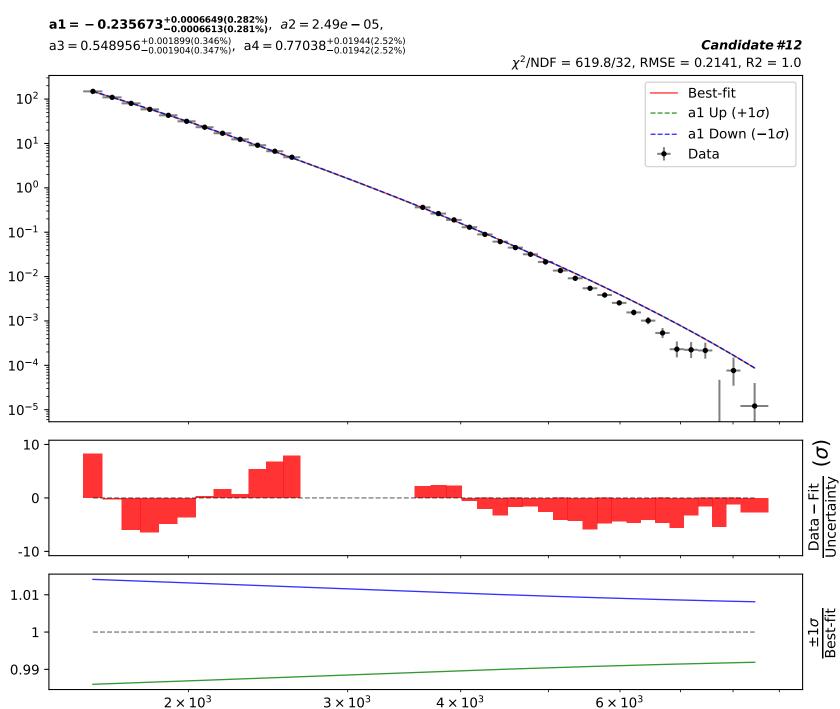




```
1.0*(a2**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
         \mathtt{a1} = -0.235682^{+0.0006639(0.282\%)}_{-0.0006602(0.28\%)}, \ \ \mathtt{a2} = 2.46e - 05,
         \mathbf{a3} = \mathbf{0.54974}^{+0.001899(0.345\%)}_{-0.001904(0.346\%)}, \ \mathbf{a4} = 0.772209^{+0.01946(2.52\%)}_{-0.01944(2.52\%)}
                                                                                                                                                              Candidate #13
                                                                                                                   \chi^2/NDF = 617.2/32, RMSE = 0.2135, R2 = 1.0
                                                                                                                                                           Best-fit
  10^{2}
                                                                                                                                                           a3 Up (+1\sigma)
                                                                                                                                                           a3 Down (-1\sigma)
  10^{1}
                                                                                                                                                           Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
   10
                                                                                                                                                                                      Data – Fit
Uncertainty
     0
  -10
1.01
     1
0.99 -
                                   2 \times 10^3
                                                                       3 \times 10^3
                                                                                                                                      6 \times 10^3
                                                                                                 4 \times 10^3
```

```
1.0*(a2**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
         \mathtt{a1} = -0.235682^{+0.0006639(0.282\%)}_{-0.0006602(0.28\%)}, \ \ \mathtt{a2} = 2.46e - 05,
         a3 = 0.54974^{+0.001899(0.345\%)}_{-0.001904(0.346\%)}, a4 = 0.772209^{+0.01946(2.52\%)}_{-0.01944(2.52\%)}
                                                                                                                                                       Candidate #13
                                                                                                              \chi^2/NDF = 617.2/32, RMSE = 0.2135, R2 = 1.0
                                                                                                                                                    Best-fit
 10^{2}
                                                                                                                                                    a4 Up (+1\sigma)
                                                                                                                                                    a4 Down (-1\sigma)
 10^{1}
                                                                                                                                                    Data
 10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
   10
                                                                                                                                                                              Data – Fit
Uncertainty
     0
  -10
1.05
     1
0.95
                                  2 \times 10^{3}
                                                                                                                                6 \times 10^3
                                                                    3 \times 10^{3}
                                                                                             4 \times 10^3
```

Candidate function #12

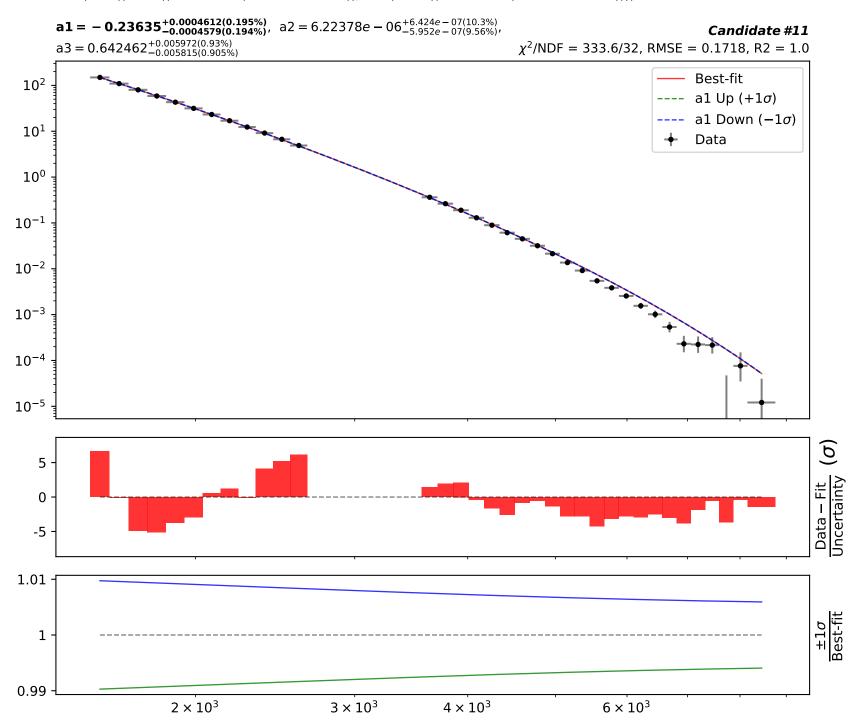


```
1.0*(a2**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
         \mathtt{a1} = -0.235673^{+0.0006649(0.282\%)}_{-0.0006613(0.281\%)}\text{,}
                                                         a2 = 2.49e - 05
         \mathbf{a3} = \mathbf{0.548956}^{+0.001899(0.346\%)}_{-0.001904(0.347\%)},
                                                         a4 = 0.77038^{+0.01944(2.52\%)}_{-0.01942(2.52\%)}
                                                                                                                                                              Candidate #12
                                                                                                                  \chi^2/NDF = 619.8/32, RMSE = 0.2141, R2 = 1.0
                                                                                                                                                           Best-fit
  10^{2}
                                                                                                                                                           a3 Up (+1\sigma)
                                                                                                                                                           a3 Down (-1\sigma)
  10^{1}
                                                                                                                                                           Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
   10
                                                                                                                                                                                        <u>g</u>
                                                                                                                                                                                      Data – Fit
Uncertainty
     0
  -10
1.01
                                                                                                                                                                                      \pm 1\sigma
Best-fit
     1
0.99 -
                                   2 \times 10^3
                                                                       3 \times 10^3
                                                                                                                                      6 \times 10^3
                                                                                                 4 \times 10^3
```

```
1.0*(a2**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
         \mathtt{a1} = -0.235673^{+0.0006649(0.282\%)}_{-0.0006613(0.281\%)}, \ \ \mathtt{a2} = 2.49e - 05,
         a3 = 0.548956^{+0.001899(0.346\%)}_{-0.001904(0.347\%)},
                                                    \mathbf{a4} = \mathbf{0.77038}^{+0.01944(2.52\%)}_{-0.01942(2.52\%)}
                                                                                                                                                           Candidate #12
                                                                                                                 \chi^2/NDF = 619.8/32, RMSE = 0.2141, R2 = 1.0
                                                                                                                                                        Best-fit
  10^{2}
                                                                                                                                                        a4 Up (+1\sigma)
                                                                                                                                                        a4 Down (-1\sigma)
  10^{1}
                                                                                                                                                        Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
   10
                                                                                                                                                                                   Data – Fit
Uncertainty
     0
  -10
1.05
     1
0.95
                                   2 \times 10^{3}
                                                                                                                                    6 \times 10^3
                                                                      3 \times 10^{3}
                                                                                                4 \times 10^3
```



1.0\*(a2\*\*((a1 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a3 + ((x0 - 1568.5) \* 0.000145275))))



SymbolFit 1.0\*(a2\*\*((a1 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a3 + ((x0 - 1568.5) \* 0.000145275)))) $a2 = 6.22378e - 06^{+6.424e - 07(10.3\%)}_{-5.952e - 07(9.56\%)},$  $a1 = -0.23635^{+0.0004612(0.195\%)}_{-0.0004579(0.194\%)},$ Candidate #11  $a3 = 0.642462^{+0.005972(0.93\%)}_{-0.005815(0.905\%)}$  $\chi^2/NDF = 333.6/32$ , RMSE = 0.1718, R2 = 1.0 Best-fit  $10^{2}$ a2 Up  $(+1\sigma)$ a2 Down  $(-1\sigma)$  $10^{1}$ Data 10<sup>0</sup>  $10^{-1}$  $10^{-2}$  $10^{-3}$  $10^{-4}$  $10^{-5}$  $\widehat{\mathcal{Q}}$ 5 Data – Fit Uncertainty 0 -5 1.05 1 0.95

 $4 \times 10^3$ 

 $6 \times 10^3$ 

 $2 \times 10^3$ 

 $3 \times 10^3$ 

SymbolFit 1.0\*(a2\*\*((a1 + ((x0 - 1568.5) \* 0.000145275)))/tanh(a3 + ((x0 - 1568.5) \* 0.000145275)))) $\text{a1} = -0.23635^{+0.0004612(0.195\%)}_{-0.0004579(0.194\%)}\text{,}$  $a2 = 6.22378e - 06^{+6.424e - 07(10.3\%)}_{-5.952e - 07(9.56\%)},$ Candidate #11  $a3 = 0.642462^{+0.005972(0.93\%)}_{-0.005815(0.905\%)}$  $\chi^2/NDF = 333.6/32$ , RMSE = 0.1718, R2 = 1.0 Best-fit 10<sup>2</sup> a3 Up  $(+1\sigma)$ a3 Down  $(-1\sigma)$  $10^{1}$ Data  $10^{0}$  $10^{-1}$  $10^{-2}$  $10^{-3}$  $10^{-4}$  $10^{-5}$  $\widehat{\mathcal{Q}}$ 5 Data – Fit Uncertainty 0 -5 1.02 1 0.98

 $4 \times 10^3$ 

 $6 \times 10^3$ 

 $2 \times 10^3$ 

 $3 \times 10^3$ 



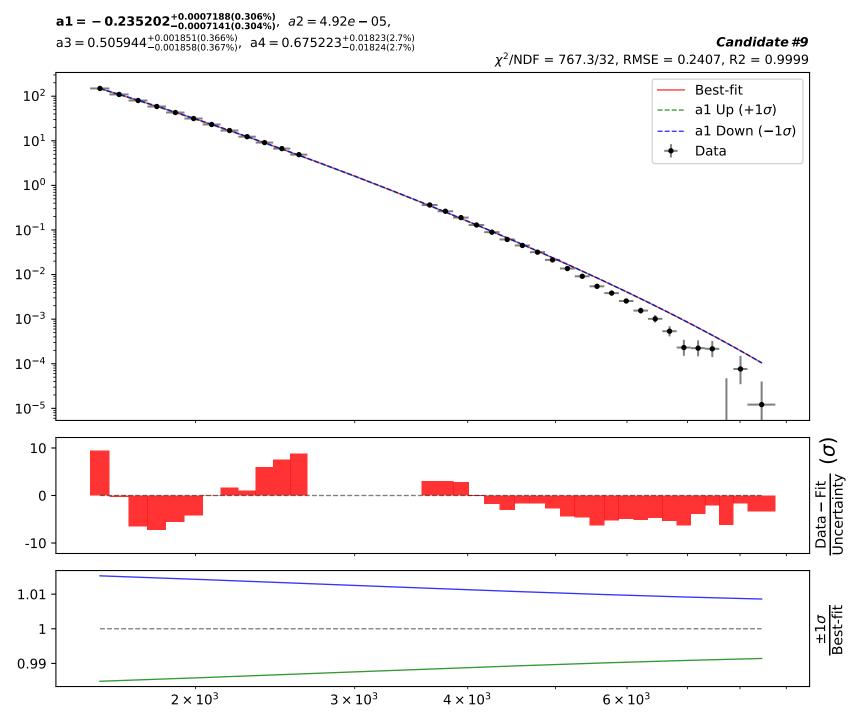
```
1.0*(a2**((a1 + a5*((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
          a1 = -0.343369^{+0.002625(0.765\%)}_{-0.002546(0.742\%)}, a2 = 4.98e - 05,
          \text{a3} = 0.828413^{+0.00937(1.13\%)}_{-0.009539(1.15\%)}\text{, } \text{a4} = 1.70294^{+0.04488(2.64\%)}_{-0.04453(2.61\%)}\text{,}
                                                                                                                                                              Candidate #10
          a5 = 1.43926^{+0.01022(0.71\%)}_{-0.01054(0.732\%)}
                                                                                                                 \chi^2/NDF = 30.02/31, RMSE = 0.02613, R2 = 1.0
                                                                                                                                                           Best-fit
   10<sup>2</sup>
                                                                                                                                                           al Up (+1\sigma)
                                                                                                                                                           al Down (-1\sigma)
   10^{1}
                                                                                                                                                           Data
   10^{0}
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
       2
                                                                                                                                                                                      Data – Fit
Uncertainty
      0
     -2
  1.03
       1
0.975
                                    2 \times 10^3
                                                                         3 \times 10^{3}
                                                                                                  4 \times 10^{3}
                                                                                                                                      6 \times 10^{3}
```

```
1.0*(a2**((a1 + a5*((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
          a1 = -0.343369^{+0.002625(0.765\%)}_{-0.002546(0.742\%)},
                                                          a2 = 4.98e - 05
          \mathbf{a3} = \mathbf{0.828413}^{+0.00937(1.13\%)}_{-0.009539(1.15\%)}, \quad \mathbf{a4} = 1.70294^{+0.04488(2.64\%)}_{-0.04453(2.61\%)},
                                                                                                                                                              Candidate #10
          a5 = 1.43926^{+0.01022(0.71\%)}_{-0.01054(0.732\%)}
                                                                                                                 \chi^2/NDF = 30.02/31, RMSE = 0.02613, R2 = 1.0
                                                                                                                                                            Best-fit
   10<sup>2</sup>
                                                                                                                                                           a3 Up (+1\sigma)
                                                                                                                                                           a3 Down (-1\sigma)
   10^{1}
                                                                                                                                                           Data
   10^{0}
 10^{-1}
 10^{-2}
 10^{-3}
 10^{-4}
 10^{-5}
       2
                                                                                                                                                                                       Data – Fit
Uncertainty
      0
     -2
  1.03
       1
0.975
                                    2 \times 10^3
                                                                         3 \times 10^3
                                                                                                  4 \times 10^{3}
                                                                                                                                      6 \times 10^{3}
```

```
1.0*(a2**((a1 + a5*((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
         \mathtt{a1} = -0.343369^{+0.002625(0.765\%)}_{-0.002546(0.742\%)}, \ \ \mathtt{a2} = 4.98e - 05,
         \text{a3} = 0.828413^{+0.00937(1.13\%)}_{-0.009539(1.15\%)}, \quad \textbf{a4} = \textbf{1.70294}^{+0.04488(2.64\%)}_{-0.04453(2.61\%)},
                                                                                                                                                                  Candidate #10
         a5 = 1.43926^{+0.01022(0.71\%)}_{-0.01054(0.732\%)}
                                                                                                                   \chi^2/NDF = 30.02/31, RMSE = 0.02613, R2 = 1.0
                                                                                                                                                               Best-fit
  10^{2}
                                                                                                                                                              a4 Up (+1\sigma)
                                                                                                                                                              a4 Down (-1\sigma)
  10^{1}
                                                                                                                                                              Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
     2
                                                                                                                                                                                          Data – Fit
Uncertainty
     0
    -2
1.01
     1
0.99
                                    2 \times 10^{3}
                                                                         3 \times 10^3
                                                                                                                                         6 \times 10^3
                                                                                                    4 \times 10^3
```

```
1.0*(a2**((a1 + a5*((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
         a1 = -0.343369^{+0.002625(0.765\%)}_{-0.002546(0.742\%)},
                                                        a2 = 4.98e - 05,
         \text{a3} = 0.828413^{+0.00937(1.13\%)}_{-0.009539(1.15\%)}, \ \ \text{a4} = 1.70294^{+0.04488(2.64\%)}_{-0.04453(2.61\%)},
                                                                                                                                                              Candidate #10
         \mathbf{a5} = \mathbf{1.43926}^{+0.01022(0.71\%)}_{-0.01054(0.732\%)}
                                                                                                                 \chi^2/NDF = 30.02/31, RMSE = 0.02613, R2 = 1.0
                                                                                                                                                           Best-fit
  10^{2}
                                                                                                                                                           a5 Up (+1\sigma)
                                                                                                                                                           a5 Down (-1\sigma)
  10^{1}
                                                                                                                                                           Data
  10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
     2
                                                                                                                                                                                      Data – Fit
Uncertainty
     0
    -2
  1.1
     1
  0.9
                                   2 \times 10^{3}
                                                                                                                                      6 \times 10^3
                                                                        3 \times 10^{3}
                                                                                                  4 \times 10^3
```



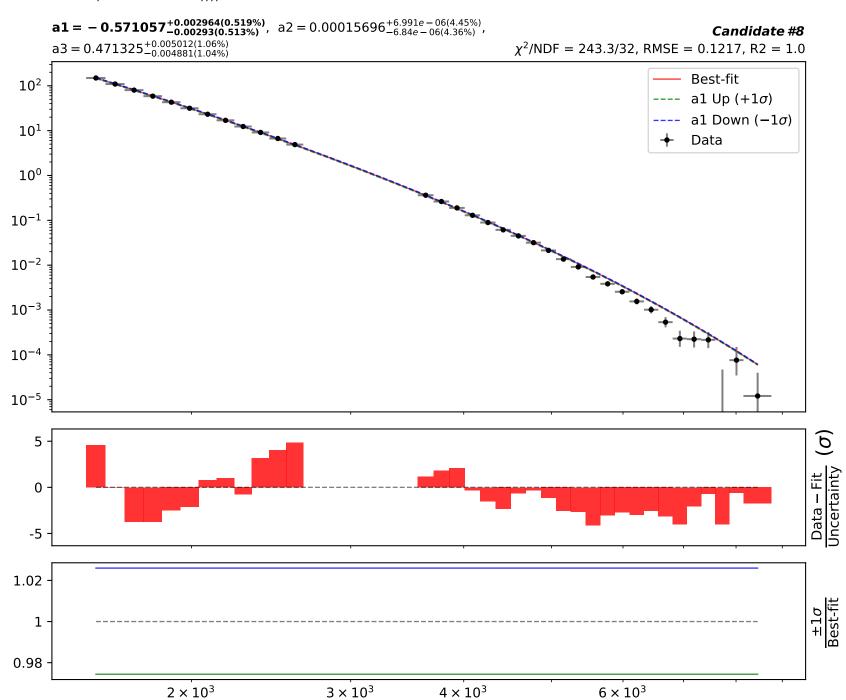


```
1.0*(a2**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
         \mathtt{a1} = -0.235202^{+0.0007188(0.306\%)}_{-0.0007141(0.304\%)},
                                                        a2 = 4.92e - 05
         a3 = 0.505944^{+0.001851(0.366\%)}_{-0.001858(0.367\%)}
                                                       a4 = 0.675223^{+0.01823(2.7\%)}_{-0.01824(2.7\%)}
                                                                                                                                                           Candidate #9
                                                                                                          \chi^2/NDF = 767.3/32, RMSE = 0.2407, R2 = 0.9999
                                                                                                                                                      Best-fit
 10^{2}
                                                                                                                                                      a3 Up (+1\sigma)
                                                                                                                                                      a3 Down (-1\sigma)
 10^{1}
                                                                                                                                                      Data
 10<sup>0</sup>
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
                                                                                                                                                                                  <u>6</u>
   10
                                                                                                                                                                                Data – Fit
Uncertainty
     0
  -10
1.01
                                                                                                                                                                                 \pm 1\sigma
Best-fit
     1
0.99
                                  2 \times 10^{3}
                                                                     3 \times 10^3
                                                                                                                                  6 \times 10^3
                                                                                              4 \times 10^{3}
```

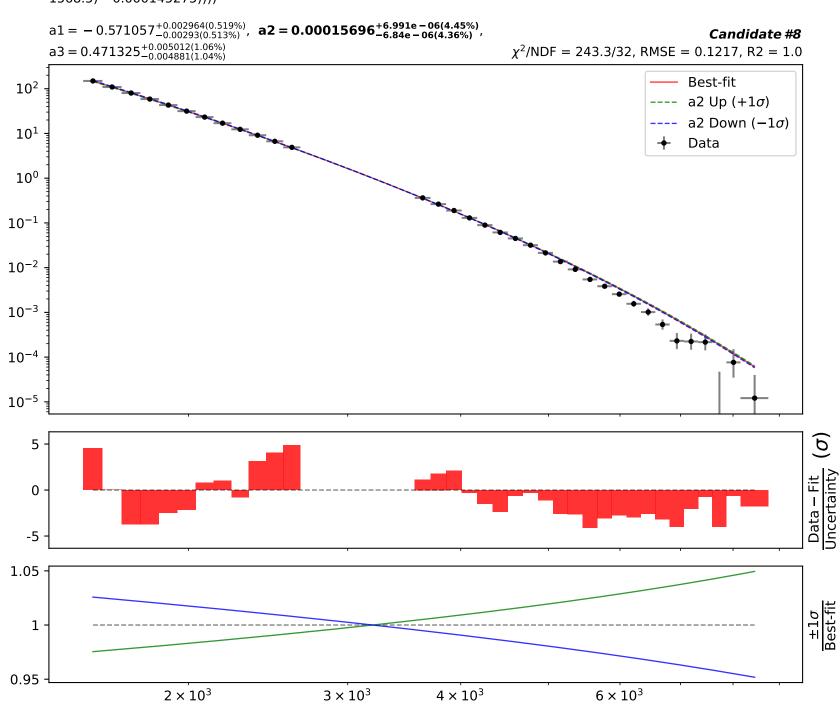
```
1.0*(a2**((a1 + ((x0 - 1568.5) * 0.000145275)))/tanh(a3 + a4*((x0 - 1568.5) * 0.000145275))))
         \mathtt{a1} = -0.235202^{+0.0007188(0.306\%)}_{-0.0007141(0.304\%)}, \ \ \mathtt{a2} = 4.92e - 05,
         a3 = 0.505944^{+0.001851(0.366\%)}_{-0.001858(0.367\%)},
                                                     \mathbf{a4} = \mathbf{0.675223}^{+0.01823(2.7\%)}_{-0.01824(2.7\%)}
                                                                                                                                                                Candidate #9
                                                                                                              \chi^2/NDF = 767.3/32, RMSE = 0.2407, R2 = 0.9999
                                                                                                                                                           Best-fit
  10^{2}
                                                                                                                                                           a4 Up (+1\sigma)
                                                                                                                                                           a4 Down (-1\sigma)
  10^{1}
                                                                                                                                                           Data
  10<sup>0</sup>
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
                                                                                                                                                                                         <u>6</u>
   10
                                                                                                                                                                                      Data – Fit
Uncertainty
     0
  -10
1.05 -
     1
0.95
                                   2 \times 10^{3}
                                                                                                                                      6 \times 10^3
                                                                        3 \times 10^{3}
                                                                                                  4 \times 10^{3}
```



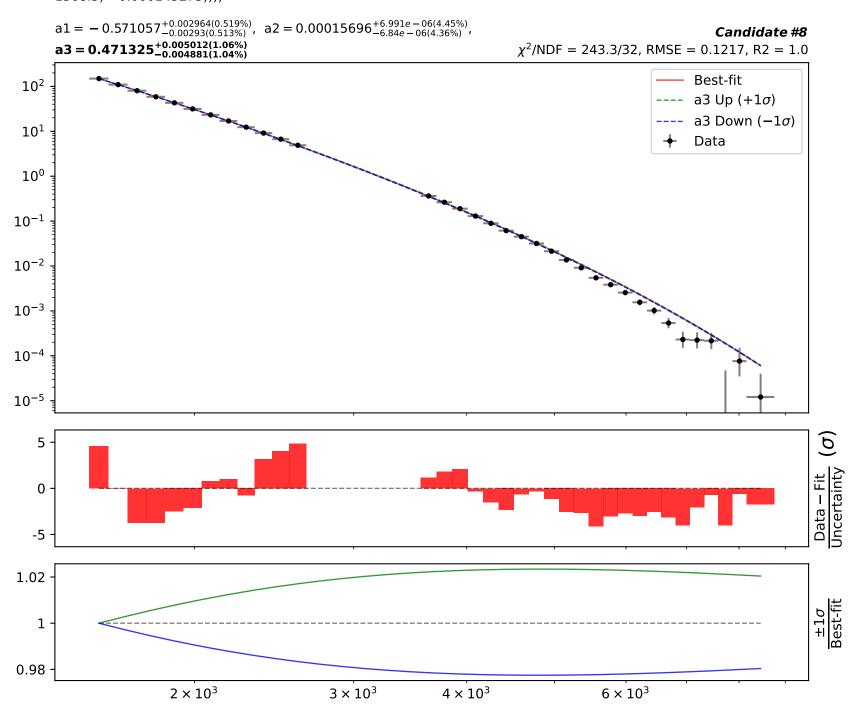
1.0\*(a2\*\*(a1 + ((x0 - 1568.5) \* 0.000145275) + ((x0 - 1568.5) \* 0.000145275)/(a3 + ((x0 - 1568.5) \* 0.000145275))))



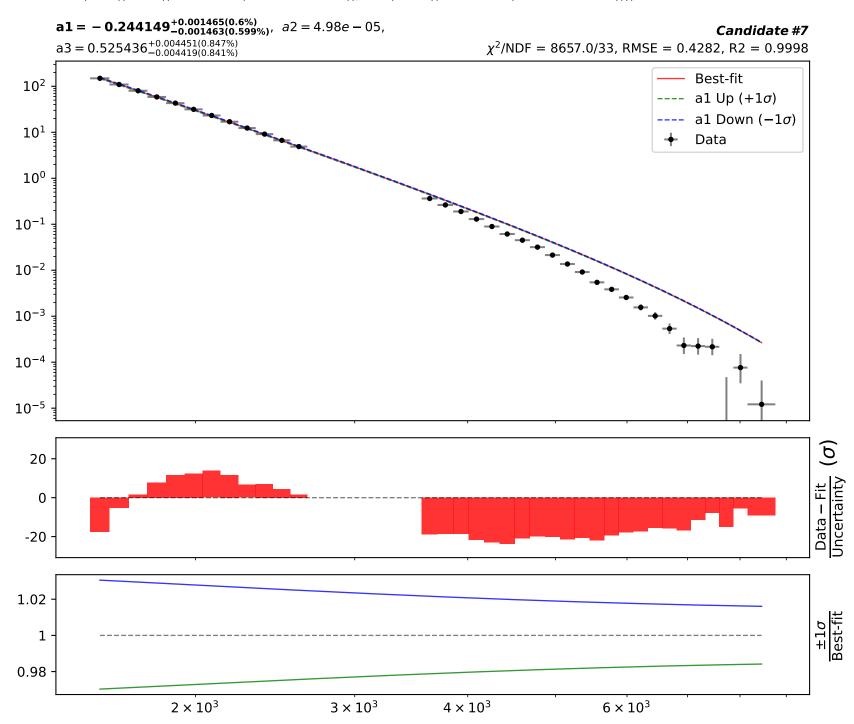
1.0\*(a2\*\*(a1 + ((x0 - 1568.5) \* 0.000145275) + ((x0 - 1568.5) \* 0.000145275)/(a3 + ((x0 - 1568.5) \* 0.000145275))))



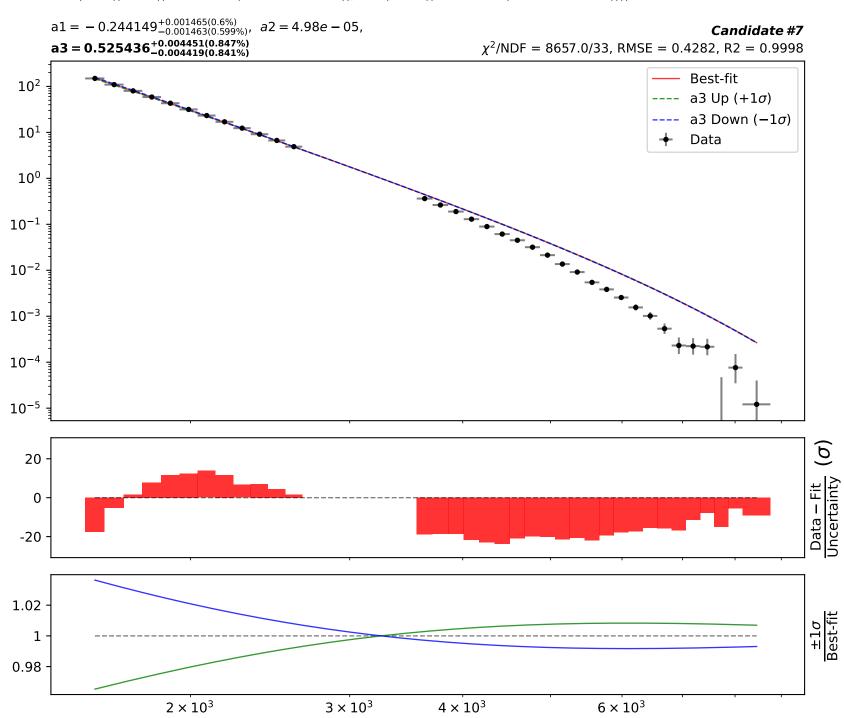
1.0\*(a2\*\*(a1 + ((x0 - 1568.5) \* 0.000145275) + ((x0 - 1568.5) \* 0.000145275)/(a3 + ((x0 - 1568.5) \* 0.000145275))))







1.0\*(a2\*\*((a1 + ((x0 - 1568.5) \* 0.000145275))/tanh(a3 + ((x0 - 1568.5) \* 0.000145275))))





SymbolFit 1.0\*(a2\*\*(a1 + a3\*tanh(((x0 - 1568.5) \* 0.000145275))))a1 = -0.499,  $a2 = 4.86016e - 05^{+1.596e - 06(3.28\%)}_{-1.528e - 06(3.14\%)}$ , Candidate #6  $a3 = 2.38778^{+0.02961(1.24\%)}_{-0.02911(1.22\%)}$  $\chi^2/NDF = 24920.0/33$ , RMSE = 1.442, R2 = 0.9982 Best-fit  $10^{2}$ a2 Up  $(+1\sigma)$ a2 Down  $(-1\sigma)$  $10^{1}$ Data  $10^{0}$  $10^{-1}$  $10^{-2}$  $10^{-3}$  $10^{-4}$ 10<sup>-5</sup>  $10^{-6}$ ð 50 Data – Fit Uncertainty 0 -50

1.03

0.975

1

 $2 \times 10^3$ 

 $3 \times 10^3$ 

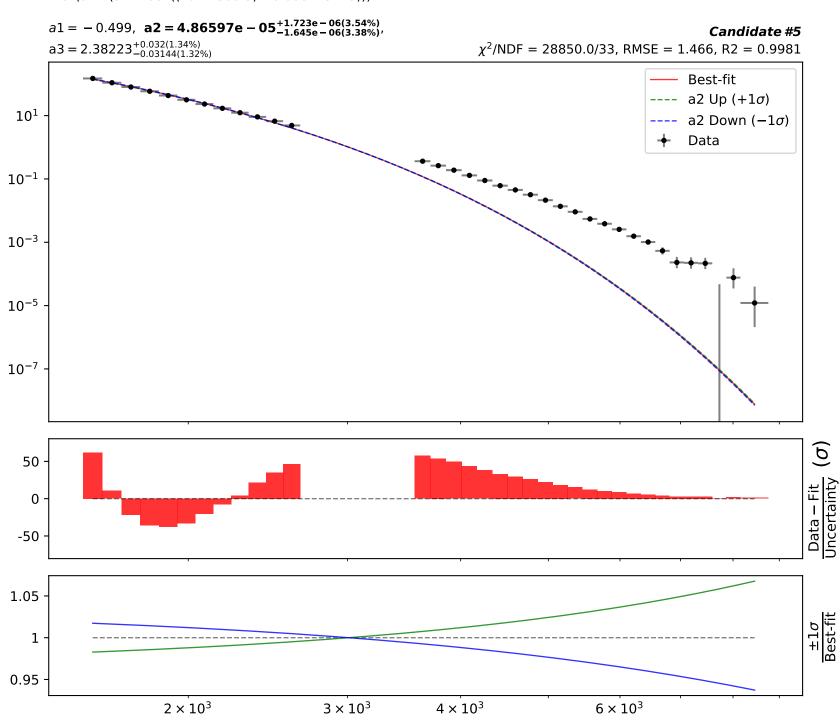
 $4 \times 10^{3}$ 

 $6 \times 10^{3}$ 

1.0\*(a2\*\*(a1 + a3\*tanh(((x0 - 1568.5) \* 0.000145275))))a1 = -0.499,  $a2 = 4.86016e - 05^{+1.596e - 06(3.28\%)}_{-1.528e - 06(3.14\%)}$ , Candidate #6  $a3 = 2.38778^{+0.02961(1.24\%)}_{-0.02911(1.22\%)}$  $\chi^2/NDF = 24920.0/33$ , RMSE = 1.442, R2 = 0.9982 Best-fit  $10^{2}$ a3 Up  $(+1\sigma)$ a3 Down  $(-1\sigma)$  $10^{1}$ Data  $10^{0}$  $10^{-1}$  $10^{-2}$  $10^{-3}$  $10^{-4}$  $10^{-5}$  $10^{-6}$  $\widehat{\mathcal{Q}}$ 50 Data – Fit Uncertainty 0 -50 1.2 1 8.0  $2 \times 10^3$  $3 \times 10^3$  $4 \times 10^3$  $6 \times 10^3$ 



1.0\*(a2\*\*(a1 + a3\*((x0 - 1568.5) \* 0.000145275)))



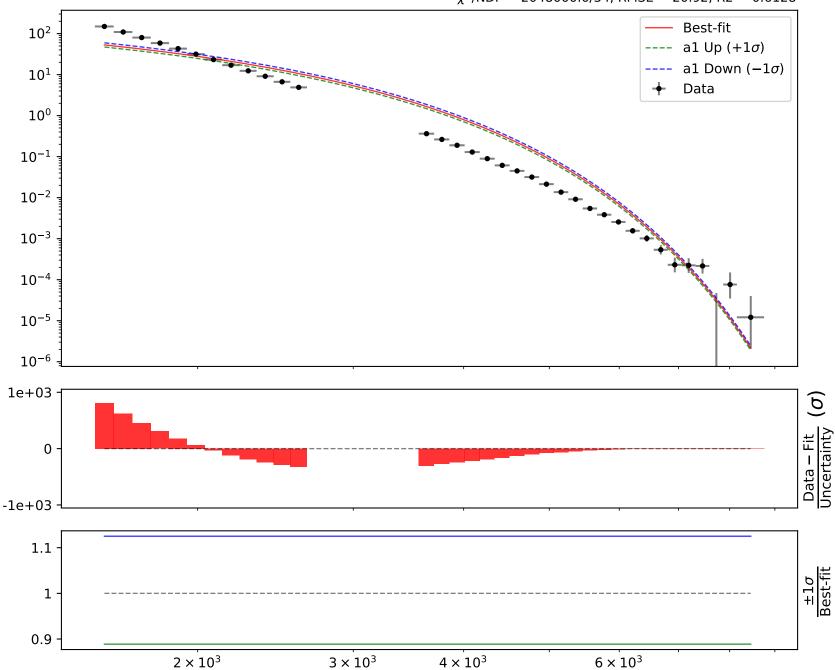
1.0\*(a2\*\*(a1 + a3\*((x0 - 1568.5) \* 0.000145275)))a1 = -0.499,  $a2 = 4.86597e - 05^{+1.723e - 06(3.54\%)}_{-1.645e - 06(3.38\%)}$ Candidate #5  $a3 = 2.38223^{+0.032(1.34\%)}_{-0.03144(1.32\%)}$  $\chi^2/NDF = 28850.0/33$ , RMSE = 1.466, R2 = 0.9981 Best-fit -- a3 Up  $(+1\sigma)$  $10^{1}$ a3 Down  $(-1\sigma)$ Data  $10^{-1}$  $10^{-3}$  $10^{-5}$  $10^{-7}$  $\widehat{\mathcal{Q}}$ 50 Data – Fit Uncertainty 0 -50 1.2  $\pm 1\sigma$ Best-fit 1 8.0  $2 \times 10^3$  $6 \times 10^3$  $3 \times 10^{3}$  $4 \times 10^3$ 

Candidate function #4

1.0\*(a2\*\*(a1 + exp(((x0 - 1568.5) \* 0.000145275))))

 $a1 = -1.4008^{+0.0119(0.85\%)}_{-0.0119(0.85\%)}, a2 = 4.98e - 05$ 

Candidate #4  $\chi^2$ /NDF = 2048000.0/34, RMSE = 20.92, R2 = 0.6128





 $a1 = -0.349981^{+0.0193(5.51\%)}_{-0.0193(5.51\%)}$ , a2 = 4.67e - 05

Candidate #3

