|  |  |  |  |
| --- | --- | --- | --- |
| Col# | Heading | Format | Description |
| 1 | Date | integer | yyyymmdd: year-month-day |
| 2 | Time | text | hhmmss: Hour-minute-second |
| 3 | milliseconds |  | Float to nanoseconds |
| 4 | Length/L1 | integer | Length in TAS direction that the event lasted for (in 2DS scale, =number of pixels\*10μm, both 2DS and HVPS) |
| 5 | Width/L2 | integer | Length in array direction for the slice during the event for which the number of shaded pixels is maximized (in 2DS scale, =number of pixels\*10μm, both 2DS and HVPS) |
| 6 | ImageArea | integer | Area of particle: μm2(in 2DS scale, =number of pixels\*100μm2, both 2DS and HVPS) |
| 7 | Particle\_Num | integer | Number of particle in the whole data file |
| 8 | length | integer | Maximum horizontal length in pixel |
| 9 | width | integer | Maximum vertical length in pixel |
| 10 | area | float | Area of particle: mm2 |
| 11 | perimeter | float | Perimeter of particle |
| 12 | longest\_y | integer | Number of pixels in array direction for the slice during the event for which the number of shaded pixels is maximized, similar to L2/10, except it is the total number of pixels between the shaded end pixels instead of just the shaded pixels |
| 13 | diam\_minR | float | The diameter of the circle that just circumscribes the shaded event pixels. |
| 14 | diam\_AreaR | float | Area-equivalent diameter = 2\*sqrt(image\_area/3.1415926) |
| 15 | max\_top\_touching | integer | A variable describing if the particle is projected touching the bop boundary of photodiodes. |
| 16 | max\_bottom\_touching | integer | A variable describing if the particle is projected touching the bottom boundary of photodiodes. |
| 17 | touching\_edge | integer | 0  68 |
| 18 | auto\_reject | integer | 48 = ‘0’, not rejected  97 = ‘a’, reject max. aspect ratio  116 = ‘t’, reject max. aspect ratio touch edge  112 = ‘p’, reject percent shadowed area  104 = ‘h’, reject Hollow image  115 = ‘s’, reject split image  122 = ‘z’, reject 0 area image  102 = ‘f’, reject fake 0 area image |
| 19 | image\_hollow | integer | 0 particle is not hollow  1 particle is hollow |
| 20 | image\_center\_in | integer | 0 particle is not center in  1 particle is center |
| 21 | axis\_ratio | Float | axis\_ratio = max\_vertical\_length\_in\_pixels / max\_horizontal\_length\_in\_pixels |
| 22 | diam\_circle\_fit | Float | Heimsfield-Parish CIRCLE FIT SIZES FOR 2-EDGE & 1-EDGE(CENTER OUT) IMAGES |
| 23 | diam\_horiz\_chord | Float | d0 from horz chord (max\_horizontal\_length\_in\_pixels + 1)  designed for sideways-looking probe, but can be used for any probe orientation center-in image of equil shape |
| 24 | diam\_horiz\_chord\_corr | Float |  |
| 25 | diam\_following\_bamex\_code | Float |  |
| 26 | diam\_vert\_chord | Float | d0 from vert chord (max\_vertical\_length\_in\_pixels) designed for sideways-looking probe  optional size for entire-in images |
| 27 | percent\_shadow\_area | Float | percent\_shadow\_area  = image\_area / (length \* width) \* 100 |
| 28 | edge\_at\_max\_hole | Integer |  |
| 29 | max\_hole\_diameter | Integer | Maximum hole diameter |
| 30 | part\_z | Integer |  |
| 31 | size\_factor | Integer | =1 |
| 32 | area\_hole\_ratio | Float | area\_hole\_ratio = image\_area/max\_hole\_diameter |