1061 薄透镜和单球面镜焦距测量 数据处理报告

一、像距物距法

原始数据记录：

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
| u1/mm | #u\_1\_1# | # u\_1\_2# | # u\_1\_3# | # u\_1\_4# |
|  | 6 | 7 | 8 | 9 |
| v1/mm | # v\_1\_1# | # v\_1\_2# | # v\_1\_3# | # v\_1\_4# |
|  | 1 | 2 | 3 | 4 |
| u2/mm | # u\_2\_1# | # u\_2\_2# | # u\_2\_3# | # u\_2\_4# |
|  | 6 | 7 | 8 | 9 |
| v2/mm | # v\_2\_1# | # v\_2\_2# | #v\_2\_3# | # v\_2\_4# |

数据处理：

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
| f1/mm | #f1\_1# | # f1\_2# | #f1\_3# | #f1\_4# |
|  |  |  |  |  |
| f2/mm | # f2\_1# | # f2\_2# | # f2\_3# | # f2\_4# |

焦距的计算：

f\_1 = = #f\_1#mm

f\_2 = = #f\_2#mm

二、自准直法：

原始数据记录：

物体位置：#x# mm

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |
| x1/mm | #x\_1\_1# | # x\_1\_1# | # x\_1\_1# | # x\_1\_1# | # x\_1\_1# |
|  |  |  |  |  |  |
| x2/mm | # x\_2\_1# | # x\_2\_1# | # x\_2\_1# | # x\_2\_1# | # x\_2\_1# |

数据处理：

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |
| f[i]/mm | #list\_f\_1# | # list\_f\_2# | # list\_f\_3# | # list\_f\_4# | # list\_f\_5# |

不确定度计算：

#num\_u\_f# mm

焦距的计算：

#final\_f# (mm)

三、共轭法

原始数据记录：

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |
| a/mm | #a\_1# | # a\_2# | # a\_3# | # a\_4# | # a\_5# |
|  |  |  |  |  |  |
| b/mm | # b\_1# | # b\_2# | # b\_3# | # b\_4# | # b\_5# |

数据处理：

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |
| f[i]/mm | #3\_f\_1# | # 3\_f\_2# | # 3\_f\_3# | #3\_f\_4# | #3\_f\_5# |

不确定度计算：

#u\_3\_f# mm

焦距的计算：

#final\_3\_f# (mm)