# Sample Images for Stack File Format

## *BIGSTK.ZIP*

This zip contains: ZSERIES.STK

## *SMSTK.ZIP*

This zip contains: ZSER8.STK, ZSER16.STK, and ZSER24.STK

## *CALSTK.ZIP*

This zip contains: DIATOMS3D.STK, 10XCALIB.TIF

## *ZSERIES.STK*

<table>
<tr><th>Image Parameter</th><th>Value</th></tr>
<tr><td>Width</td><td>320</td></tr>
<tr><td>Height</td><td>256</td></tr>
<tr><td>Depth</td><td>16 bits per pixel</td></tr>
<tr><td>Number of Planes</td><td>11</td></tr>
<tr><td>Stage Label</td><td><none> for all planes</td></tr>
<tr><td>Stage Position</td><td>(0, 0) for all planes</td></tr>
<tr><td>Camera Offset</td><td>(0, 0) for all planes</td></tr>
<tr><td>Wavelength</td><td>490 for all planes</td></tr>
<tr><td>Z Distance</td><td>2.5 microns (25/10) for all planes</td></tr>
<tr><td>Z Position</td><td><table>
<tr><th>Plane</th><th>Z Position</th></tr>
<tr><td>1</td><td>125.0</td></tr>
<tr><td>2</td><td>127.5</td></tr>
<tr><td>3</td><td>130.0</td></tr>
<tr><td>4</td><td>132.5</td></tr>
<tr><td>5</td><td>135.0</td></tr>
<tr><td>6</td><td>137.5</td></tr>
<tr><td>7</td><td>140.0</td></tr>
<tr><td>8</td><td>142.5</td></tr>
<tr><td>9</td><td>145.0</td></tr>
<tr><td>10</td><td>147.5</td></tr>
<tr><td>11</td><td>150.0</td></tr>
</table></td></tr>
<tr><td>Annotation</td><td>Acquired from MV-1500<br>Exposure: 2 ms<br>Region: 1280 x 1024, offset at (0,0)<br>Binning: 4 x 4<br>Gain: 1<br>Bit Depth: 12</td></tr>
</table>

Min Gray (for whole stack) = 566
Max Gray (for whole stack) = 1592

### *ZSER8.STK*

<table>
<tr><th>Image Parameter</th><th>Value</th></tr>
<tr><td>Width</td><td>160</td></tr>
<tr><td>Height</td><td>128</td></tr>
<tr><td>Depth</td><td>8 bits per pixel</td></tr>
<tr><td>Number of Planes</td><td>11</td></tr>
<tr><td>Stage Label</td><td><none> for all planes</td></tr>
<tr><td>Stage Position</td><td>(0, 0) for all planes</td></tr>
<tr><td>Camera Offset</td><td>(320, 256) for all planes</td></tr>
<tr><td>Wavelength</td><td>490 for all planes</td></tr>
<tr><td>Z Distance</td><td>2.5 microns (25/10) for all planes</td></tr>
<tr><td>Z Position</td><td>
<table>
<tr><th>Plane</th><th>Z Position</th></tr>
<tr><td>1</td><td>125.0</td></tr>
<tr><td>2</td><td>127.5</td></tr>
<tr><td>3</td><td>130.0</td></tr>
<tr><td>4</td><td>132.5</td></tr>
<tr><td>5</td><td>135.0</td></tr>
<tr><td>6</td><td>137.5</td></tr>
<tr><td>7</td><td>140.0</td></tr>
<tr><td>8</td><td>142.5</td></tr>
<tr><td>9</td><td>145.0</td></tr>
<tr><td>10</td><td>147.5</td></tr>
<tr><td>11</td><td>150.0</td></tr>
</table>
</td></tr>
<tr><td>Annotation</td><td>Acquired from MV-1500<br>Exposure: 2 ms<br>Region: 640 x 512, offset at (320, 256)<br>Binning: 4 x 4<br>Gain: 1<br>Bit Depth: 12</td></tr>
</table>

(Note: the Annotation actually is incorrect here because the stack was converted to 8 bits after the acquisition was completed. So it is really Bit Depth 8).
Min Gray (for whole stack) = 0
Max Gray (for whole stack) = 255

### *ZSER16.STK*

| Image Parameter | Value |
|---|---|
| Width | 160 |

| | |
|---|---|
| Height | 128 |
| Depth | 16 bits per pixel |
| Number of Planes | 11 |
| Stage Label | <none> for all planes |
| Stage Position | (0, 0) for all planes |
| Camera Offset | (320, 256) for all planes |
| Wavelength | 490 for all planes |
| Z Distance | 2.5 microns (25/10) for all planes |
| Z Position | |

| **Plane** | **Z Position** |
|---|---|
| 1 | 125.0 |
| 2 | 127.5 |
| 3 | 130.0 |
| 4 | 132.5 |
| 5 | 135.0 |
| 6 | 137.5 |
| 7 | 140.0 |
| 8 | 142.5 |
| 9 | 145.0 |
| 10 | 147.5 |
| 11 | 150.0 |

| | |
|---|---|
| Annotation | Acquired from MV-1500<br>Exposure: 2 ms<br>Region: 640 x 512, offset at (320, 256)<br>Binning: 4 x 4<br>Gain: 1<br>Bit Depth: 12 |

Min Gray (for whole stack) = 602
Max Gray (for whole stack) = 1397

## *ZSER24.STK*

| **Image Parameter** | **Value** |
|---|---|
| Width | 160 |
| Height | 128 |
| Depth | 24 bits per pixel |
| Number of Planes | 11 |
| Stage Label | <none> for all planes |
| Stage Position | (0, 0) for all planes |
| Camera Offset | (320, 256) for all planes |
| Wavelength | 510 for all planes |

| | |
|---|---|
| Z Distance | 2.5 microns (25/10) for all planes |
| Z Position | |

| Plane | Z Position |
|---|---|
| 1 | 125.0 |
| 2 | 127.5 |
| 3 | 130.0 |
| 4 | 132.5 |
| 5 | 135.0 |
| 6 | 137.5 |
| 7 | 140.0 |
| 8 | 142.5 |
| 9 | 145.0 |
| 10 | 147.5 |
| 11 | 150.0 |

| | |
|---|---|
| Annotation | <none> |

(Stack is simply a red-green combination of two z series. Blue channel is all zeros).

## *DIATOMS3D.STK*

| Image Parameter | Value |
|---|---|
| Width | 196 |
| Height | 191 |
| Depth | 8 bits per pixel |
| Number of Planes | 10 |
| Stage Label | <none> for all planes |
| Stage Position | (0, 0) for all planes |
| Camera Offset | (206, 148) for all planes |
| Wavelength | 440 for all planes |
| Z Distance | 3.54545 microns for all planes |
| Z Position | |

| Plane | Z Position |
|---|---|
| 1 | 12866.2 |
| 2 | 12869.8 |
| 3 | 12873.3 |
| 4 | 12876.8 |
| 5 | 12880.4 |
| 6 | 12884 |
| 7 | 12887.5 |
| 8 | 12891 |
| 9 | 12894.6 |
| 10 | 12898.2 |

| | |
|---|---|
| Annotation | Acquired from Flashbus. No averaging.Illumination: |

| | |
|---|---|
| | Trans<br>Multi Dimensional Experiment |

The spatial calibration for the DIATOMS3D Stack and the 10XCALIB Tiff are:
X: 1.25627 um/pixel
Y: 1.25627 um/pixel