Date: 2018-05-21
Flight Campaign ID: 2018_P3C1
Airport, FBO ID, City: Asheville Regional Airport (KAVL) - Fletcher, NC

Domain: 07
Sites Flown: None
Days left in Domain: 26

Report Author: Robb Walker
Flight Crew: Robb Walker, Abe Morrison
Ground/GPS: Cameron Chapman
Pilots: Mike Francis, Hans Germann

Flight Hours: 00:00
Hours until maintenance: 125.00

Additional Personnel:
GPS Instruments: 09 - FBO_KAVL, 07- AOP_MLBS, 08-AOP_GRSM, C-TN16, TDOT-TN1A

Summary: Low clouds over flight areas and scattered thunderstorms in the afternoon prevented flights today. Attempted to perform Hg lamp calibration collection, but ran into issues FPA and Waterfall displaying abnormally. Continued testing of camera operation and appears to be operating normally.

Concerns: While performing Hg lamp collection waterfall and FPA display had abnormal blocky appearance. Trouble shooting performed with Ian, but issue is unresolved.

Comments
- Pump was removed from system and attempted to perform Hg lamp calibration collection. Issues with FPA and waterfall displaying abnormally. Trouble-shooting continues.
- Camera testing performed outside hangar and image files appear to be copying to correct file locations.

Flight Screenshots

Blocked appearance of FPA and Waterfall display (blocked appearance of waterfall not captured in this image)
Sky conditions over KAVL.

### Cumulative Domain Coverage

#### GRSM_P1

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>42</td>
<td>43</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>49</td>
<td>50</td>
<td>51</td>
<td>52</td>
<td>53</td>
<td>54</td>
<td>55</td>
<td>56</td>
<td>57</td>
<td>58</td>
<td>59</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>62</td>
<td>63</td>
<td>64</td>
<td>65</td>
<td>66</td>
<td>67</td>
<td>68</td>
<td>69</td>
<td>70</td>
<td>71</td>
<td>72</td>
<td>73</td>
<td>74</td>
<td>75</td>
<td>76</td>
<td>77</td>
<td>78</td>
<td>79</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>82</td>
<td>83</td>
<td>84</td>
<td>85</td>
<td>86</td>
<td>87</td>
<td>88</td>
<td>89</td>
<td>90</td>
<td>91</td>
<td>92</td>
<td>93</td>
<td>94</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>98</td>
<td>99</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>102</td>
<td>103</td>
<td>104</td>
<td>105</td>
<td>106</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flown: 0% (0/106)  
Green: 0% (0/106)  
Yellow: 0% (0/106)  
Red: 0% (0/106)

#### GRSM_P2

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>42</td>
<td>43</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>49</td>
<td>50</td>
<td>51</td>
<td>52</td>
<td>53</td>
<td>54</td>
<td>55</td>
<td>56</td>
<td>57</td>
<td>58</td>
<td>59</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>62</td>
<td>63</td>
<td>64</td>
<td>65</td>
<td>66</td>
<td>67</td>
<td>68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flown: 0% (0/68)  
Green: 0% (0/68)  
Yellow: 0% (0/68)  
Red: 0% (0/68)

#### MLBS

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flown: 0% (0/34)  
Green: 0% (0/34)  
Yellow: 0% (0/34)  
Red: 0% (0/34)

#### ORNL

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flown: 0% (0/34)  
Green: 0% (0/34)  
Yellow: 0% (0/34)  
Red: 0% (0/34)
<table>
<thead>
<tr>
<th></th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>27</th>
<th>28</th>
<th>29</th>
<th>30</th>
<th>31</th>
<th>32</th>
<th>33</th>
<th>34</th>
<th>35</th>
<th>36</th>
<th>37</th>
<th>38</th>
<th>39</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>49</td>
<td>50</td>
<td>51</td>
<td>52</td>
<td>53</td>
<td>54</td>
<td>55</td>
<td>56</td>
<td>57</td>
<td>58</td>
<td>59</td>
<td>60</td>
</tr>
</tbody>
</table>

**Flown:** 100% (61/61)
**Green:** 25% (15/61)
**Yellow:** 61% (37/61)
**Red:** 18% (11/61)

**Weather Forecast**

**Asheville, NC (FBO)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>**77°</td>
<td>61° F**</td>
<td>**82°</td>
<td>60° F**</td>
<td>**80°</td>
<td>62° F**</td>
<td>**79°</td>
<td>62° F**</td>
</tr>
<tr>
<td>PM Thunderstorms 0.43 in</td>
<td>AM Clouds/PM Sun 0 in</td>
<td>PM Thunderstorms 0.03 in</td>
<td>AM Showers 0.19 in</td>
<td>Showers 0.77 in</td>
<td>Rain 0.51 in</td>
<td>Showers 0.21 in</td>
<td></td>
</tr>
</tbody>
</table>

**Oak Ridge, TN (ORNL)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>**83°</td>
<td>66° F**</td>
<td>**86°</td>
<td>64° F**</td>
<td>**89°</td>
<td>66° F**</td>
<td>**88°</td>
<td>66° F**</td>
</tr>
<tr>
<td>PM Thunderstorms 0.31 in</td>
<td>Partly Cloudy 0 in</td>
<td>Sunny 0 in</td>
<td>PM Thunderstorms 0.11 in</td>
<td>Scattered Thunderstorms 0.31 in</td>
<td>Showers 0.3 in</td>
<td>Thunderstorms 0.32 in</td>
<td>Showers 0.18 in</td>
</tr>
</tbody>
</table>

**Blacksburg, VA (MLBS)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>**79°</td>
<td>64° F**</td>
<td>**84°</td>
<td>62° F**</td>
<td>**85°</td>
<td>63° F**</td>
<td>**86°</td>
<td>64° F**</td>
</tr>
<tr>
<td>Thunderstorms 0.68 in</td>
<td>Partly Cloudy 0 in</td>
<td>PM Thunderstorms 0.08 in</td>
<td>PM Thunderstorms 0.13 in</td>
<td>Scattered Thunderstorms 0.29 in</td>
<td>Rain 0.48 in</td>
<td>Thunderstorms 0.52 in</td>
<td>Scattered Thunderstorms 0.34 in</td>
</tr>
</tbody>
</table>

Cloud Cover (%) | Chance of Precip. (%) | Chance of Snow (%)
Flight Collection Plan for 22 May 2018:

**Flyority 1:**
Collection Area: Oak Ridge National Laboratory (ORNL) if Green conditions.
Flight Plan Name: D07_ORNL_C1_P1_v10_east_Q780 / D07_ORNL_C1_P1_v10_west_Q780
On-station Time: 1400 UTC / 1000 L

**Flyority 2:**
Collection Area: Great Smoky Mountains National Park – Priority 1 Flight Box (GRSM_P1)
Flight Plan Name: D07_GRSM_R2_P1_v2_Q780
On-station Time: 1400 UTC / 1000 L

**Flyority 3:**
Collection Area: Great Smoky Mountains National Park – Priority 2 Flight Box (GRSM_P2)
Flight Plan Name: D07_GRSM_R2_P2_v2_east_Q780 / D07_GRSM_R2_P2_v2_west_Q780
On-station Time: 1400 UTC / 1000 L

Cameron Chapman (lidar), Robb Walker (nis), Abe Morrison (ground)

Flight Collection Plan for 23 May 2018

**Flyority 1:**
Collection Area: Oak Ridge National Laboratory (ORNL) if Green conditions.
Flight Plan Name: D07_ORNL_C1_P1_v10_east_Q780 / D07_ORNL_C1_P1_v10_west_Q780
On-station Time: 1400 UTC / 1000 L

**Flyority 2:**
Collection Area: Great Smoky Mountains National Park – Priority 1 Flight Box (GRSM_P1)
Flight Plan Name: D07_GRSM_R2_P1_v2_Q780
On-station Time: 1400 UTC / 1000 L

**Flyority 3:**
Collection Area: Great Smoky Mountains National Park – Priority 2 Flight Box (GRSM_P2)
Flight Plan Name: D07_GRSM_R2_P2_v2_east_Q780 / D07_GRSM_R2_P2_v2_west_Q780
On-station Time: 1400 UTC / 1000 L

Abe Morrison (lidar), Cameron Chapman (nis), Robb Walker (ground)
Starting 25 May 2018
Flyority 1:
Collection Area: Mountain Lake Biological Station (MLBS)
Flight Plan Name: D07_MLBS_R1_P1_v6_Q780
On-station Time: 1340 UTC / 0940 L