APS Long-Range Operations Schedule (Fiscal Year 2017)

Run 2016-3

Run 2017-1

Run 2017-2

User Operation in standard lattice
User Operation in Reduced Horizontal Lattice (RHB)

SOM Periods
1 Hybrid Fill - (singlet)
1 Hybrid Fill RHB - (singlet)
4 324 Singlets - Non Top-Up
4 324 Singlets RHB - Non Top-Up

Machine Studies
Maintenance

Shifts set aside for Studies/ Machines Intervention as Needed

Top-Up Operations is standard unless indicated in fill pattern
Fill pattern is 24 singlets unless otherwise indicated by number

Weekends
Lab Holidays
Slightly Higher Risk to Operations due to Shutdown Activities
### Breakdown of User Shifts by Fill Pattern

**Number of 8-hour User Shifts**

<table>
<thead>
<tr>
<th></th>
<th>24 Singlets - Top-Up</th>
<th>Hybrid Fill - Top-Up</th>
<th>324 Singlets - Non Top-Up</th>
<th>Total Shifts</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2016-3</strong></td>
<td>108</td>
<td>33</td>
<td>54</td>
<td>195</td>
<td>1560</td>
</tr>
<tr>
<td><strong>2017-1</strong></td>
<td>146</td>
<td>33</td>
<td>36</td>
<td>215</td>
<td>1720</td>
</tr>
<tr>
<td><strong>2017-2</strong></td>
<td>123</td>
<td>33</td>
<td>59</td>
<td>215</td>
<td>1720</td>
</tr>
<tr>
<td><strong>SUM</strong></td>
<td>377</td>
<td>99</td>
<td>149</td>
<td>625</td>
<td>5000</td>
</tr>
</tbody>
</table>