SOAR for Astronomers/Observers

This page is intended to provide scientists with an up to date quick glance on the instrumentation currently available on the SOAR telescope and modes of operation.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Type</th>
<th>Wavelength Range</th>
<th>Field_of_View (arcmin)</th>
<th>Scale (arcsec/pixel)</th>
<th>Resolution (R)</th>
<th>Filters</th>
<th>Data Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOAR Imager (SOI) [1]</td>
<td>U-sensitive optical [2] imager</td>
<td>310-1000nm</td>
<td>5.2 x 5.2</td>
<td>0.077</td>
<td>N/A</td>
<td>UBVRI, ugriz, ubvy, Ha, [SII], others (see Filters [3])</td>
<td>IRAF Mosaic Reduction, and also PyRAF script - basic image processing</td>
</tr>
<tr>
<td>SOAR Adaptive Optics Module (SAM) [4]</td>
<td>Laser-guided optical [2] Adaptive Optics imager</td>
<td>400-1000nm</td>
<td>3.1 x 3.1</td>
<td>0.045</td>
<td>N/A</td>
<td>BVRI, griz, ubvy, Ha, [SII], others (see Filters [3])</td>
<td>PyRAF script - basic image processing</td>
</tr>
<tr>
<td>SPARTAN Near-IR Camera [8]</td>
<td>Near-IR [9] imager</td>
<td>1-2.4 um</td>
<td>f/12: 5.04 x 5.04 f/21: 3.05 x 3.05</td>
<td>f/12: 0.066 f/21: 0.040</td>
<td>N/A</td>
<td>YZJHK</td>
<td></td>
</tr>
</tbody>
</table>
Optical High-speed Imager 400-1000nm 16 x 16 arcsec 0.01575 N/A BVRI Custom IDL-based pipeline by A. Tokovinin

NOT CURRENTLY AVAILABLE
Fabry-Perot Etalon 400-1000nm 3.1 x 3.1 0.045 4100, 11200 Filters for SAM-FP [14] Custom pipeline

SOAR Integral-Field Unit Spectrograph (SIFS) [15]
Integral-Field Unit Spectrograph 400-780nm (during SV) 15 x 7.8 arcsec (during SV) 0.3 arcsec/fiber (during SV) 4200 (during SV) -- Custom PyRAF/MSCRED pipeline

Ohio State IR Imager/Spectrograph (OSIRIS) [16] RETIRED - NO LONGER AVAILABLE
Near-IR [9] imaging spectrograph 0.9-2.2 um f/7: 2.37 x 2.37 f/3: 5.65 x 5.65 f/7: 0.139 f/3: 0.331 1200-3000 Y (1.04um), JHK,Ks, He I (1.083um & 2.06um), Fe II (1.644um), 2.03um, BrGamma (2.17um), H2 (2.122um)

OBSERVING MODES:
SOAR offers both classical (on-site) observing [17], and remote observing [18] (for experienced users). This provides with ample scheduling flexibility, making feasible complicated programs, especially those involving sporadic time sampling, that are otherwise normally not feasible in other facilities.

Once you have decided which instrument is best suited for your science program, the following links will help you in preparing your proposal, and later for your SOAR observing run:

1. Preparing your proposal for requesting time with the SOAR telescope [19]
2. Preparing for your SOAR observing run: this section will tell you what you need to do for your upcoming run, depending on whether you will be coming to carry out your observations directly at the telescope, [17] or observing remotely via Internet, [18]
3. Reducing your data. [20]

Please, do not hesitate to contact us [21] if you note errors, or you consider that important information is missing.

Source URL: http://www.ctio.noao.edu/soar/content/soar-astronomersobservers

Links