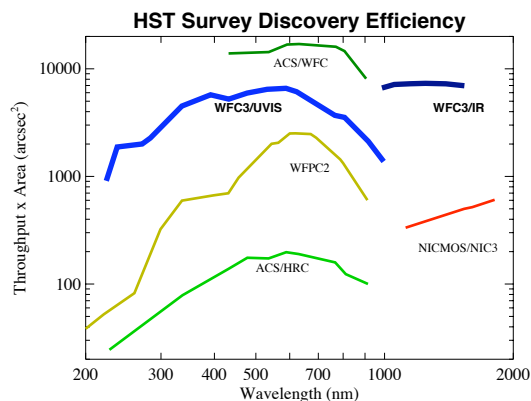


The HST focal plane, showing the instrument complement after Servicing Mission 4. The WFC3 UVIS and IR channels view the same patch of sky, but not simultaneously. All instrument apertures are shown to scale, except for COS, which has been enlarged by a factor of five for clarity.



The discovery efficiency of the HST cameras. Here, the discovery efficiency is proportional to the total system throughput at the pivot wavelength of the broadband filters and proportional to the field of view.

### IR Channel Filters

| Name  | Description                                | Wavelength (nm) |       |
|-------|--|-----------------|-------|
|       |  | pivot           | width |
| F105W | Wide Y                                     | 1058            | 292   |
| F110W | Wide YJ                                    | 1159            | 503   |
| F125W | Wide J                                     | 1249            | 302   |
| F140W | Wide JH gap & red grism ref.               | 1396            | 399   |
| F160W | WFC3 H                                     | 1544            | 288   |
| G102  | Blue grism high resolution                 | 1025            | 250   |
| G141  | Red grism low resolution                   | 1410            | 600   |
| F098M | Blue grism reference                       | 988             | 169   |
| F127M | H <sub>2</sub> O/CH <sub>4</sub> continuum | 1274            | 69    |
| F139M | H <sub>2</sub> O/CH <sub>4</sub> line      | 1384            | 65    |
| F153M | H <sub>2</sub> O & NH <sub>3</sub>         | 1532            | 69    |
| F126N | [FeII]                                     | 1259            | 11    |
| F128N | Paschen β                                  | 1283            | 14    |
| F130N | Paschen β continuum                        | 1300            | 13    |
| F132N | Paschen β redshifted                       | 1319            | 13    |
| F164N | [FeII]                                     | 1641            | 17    |
| F167N | [FeII] continuum                           | 1665            | 17    |

### Science Oversight Committee

|   |                             |                     |
|---|-----------------------------|---------------------|
| Bruce Balick  | Howard E. Bond              | Daniela Calzetti    |
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| Randy A. Kimble (Ex Officio, WFC3 Instrument Scientist)         |                             |                     |
| John W. MacKenty (Ex Officio, WFC3 Deputy Instrument Scientist) |                             |                     |

# WFC3

## WIDE FIELD CAMERA 3

### Ultraviolet-Visible (UVIS) Channel

- Two 2k x 4k CCDs
- 162 arcsec x 162 arcsec field of view
- 62 filters, 1 grism
- 200 - 1000 nm spectral coverage
- 0.039 arcsec pixels

### Infrared (IR) Channel

- 1k x 1k HgCdTe array with 1.7 μm cutoff
- 123 arcsec x 136 arcsec field of view
- 15 filters, 2 grisms
- 800 - 1700 nm spectral coverage
- 0.13 arcsec pixels

NASA's new Wide Field Camera 3 has been built for installation during HST Servicing Mission 4. Equipped with state-of-the-art detectors and optics, WFC3 will provide wide-field imaging with continuous spectral coverage from the ultraviolet into the infrared, dramatically increasing both the survey power and the panchromatic science capabilities of HST.

For further information, visit:  
<http://www.stsci.edu/hst/wfc3>



January 24, 2008

### UVIS Channel Filters - Broad

| Name   | Description                   | Wavelength (nm) |       |
|--------|-------------------------------|-----------------|-------|
|        |                               | pivot           | width |
| F200LP | Clear                         | 516             | 800   |
| F218W  | ISM feature                   | 224             | 35    |
| F225W  | UV Wide                       | 238             | 55    |
| F275W  | UV Wide                       | 272             | 48    |
| G280   | UV Grism                      | 278             | 185   |
| F300X  | Extremely wide UV             | 285             | 75    |
| F336W  | <i>U</i> , Stromgren <i>u</i> | 336             | 55    |
| F350LP | Long Pass                     | 592             | 450   |
| F390W  | Washington <i>C</i>           | 393             | 95    |
| F438W  | WFPC2 <i>B</i>                | 432             | 68    |
| F475W  | SDSS <i>g'</i>                | 478             | 149   |
| F475X  | Extremely wide blue           | 496             | 220   |
| F555W  | WFPC2 <i>V</i>                | 532             | 160   |
| F600LP | Long Pass                     | 751             | 400   |
| F606W  | WFPC2 Wide <i>V</i>           | 588             | 230   |
| F625W  | SDSS <i>r'</i>                | 622             | 158   |
| F775W  | SDSS <i>i'</i>                | 766             | 149   |
| F814W  | WFPC2 Wide <i>I</i>           | 807             | 254   |
| F850LP | SDSS <i>z'</i>                | 916             | 150   |

### UVIS Channel Filters - Medium

| Name  | Description        | Wavelength (nm) |       |
|-------|--------------------|-----------------|-------|
|       |                    | pivot           | width |
| F390M | Call continuum     | 390             | 21    |
| F410M | Stromgren <i>v</i> | 411             | 18    |
| F467M | Stromgren <i>b</i> | 468             | 22    |
| F547M | Stromgren <i>y</i> | 545             | 71    |
| F621M | 11% passband       | 621             | 63    |
| F689M | 11% passband       | 688             | 71    |
| F763M | 11% passband       | 761             | 80    |
| F845M | 11% passband       | 844             | 89    |

### UVIS Channel Filters - Narrow

| Name  | Description                   | Wavelength (nm) |       |
|-------|-------------------------------|-----------------|-------|
|       |                               | pivot           | width |
| F280N | MgII 2795,2802                | 284             | 3     |
| F343N | [NeV] 3426                    | 344             | 14    |
| F373N | [OII] 3726/3728               | 373             | 4     |
| F395N | Call 3933/3968                | 395             | 7     |
| F469N | HeII 4686                     | 469             | 4     |
| F487N | H $\beta$ 4861                | 487             | 5     |
| F502N | [OIII] 5007                   | 501             | 6     |
| F631N | [OI] 6300                     | 630             | 4     |
| F645N | Continuum                     | 645             | 9     |
| F656N | H $\alpha$ 6562               | 656             | 1     |
| F657N | Wide H $\alpha$ + [NII]       | 656             | 10    |
| F658N | [NII] 6583                    | 658             | 2     |
| F665N | <i>z</i> (H $\alpha$ + [NII]) | 665             | 11    |
| F673N | [SII] 6717/6731               | 676             | 10    |
| F680N | <i>z</i> (H $\alpha$ + [NII]) | 688             | 32    |
| F953N | [SIII] 9532                   | 953             | 8     |

### UVIS Channel Filters - Quad

| Name   | Description              | Wavelength (nm) |       |
|--------|--------------------------|-----------------|-------|
|        |                          | pivot           | width |
| FQ232N | CII] 2326                | 246*            | 3     |
| FQ243N | [NeIV] 2425              | 250*            | 3     |
| FQ378N | <i>z</i> ([OII] 3727)    | 379             | 9     |
| FQ387N | [NeIII] 3868             | 387             | 2     |
| FQ422M | Continuum                | 422             | 11    |
| FQ436N | H $\gamma$ + [OIII] 4363 | 437             | 4     |
| FQ437N | [OIII] 4363              | 437             | 2     |
| FQ492N | <i>z</i> (H $\beta$ )    | 493             | 10    |
| FQ508N | <i>z</i> ([OIII] 5007)   | 509             | 12    |
| FQ575N | [NII] 5754               | 576             | 1     |
| FQ619N | CH $_4$ 6194             | 620             | 6     |
| FQ634N | 6194 continuum           | 635             | 7     |
| FQ672N | [SII] 6717               | 672             | 1     |
| FQ674N | [SII] 6731               | 673             | 1     |
| FQ727N | CH $_4$ 7270             | 727             | 6     |
| FQ750N | 7270 continuum           | 750             | 7     |
| FQ889N | CH $_4$ 25/km-agt        | 889             | 9     |
| FQ906N | CH $_4$ 2.5/km-agt       | 906             | 9     |
| FQ924N | CH $_4$ 0.25/km-agt      | 925             | 9     |
| FQ937N | CH $_4$ 0.025/km-agt     | 937             | 9     |

\*Pivot wavelength falls outside of bandpass due to red leak.