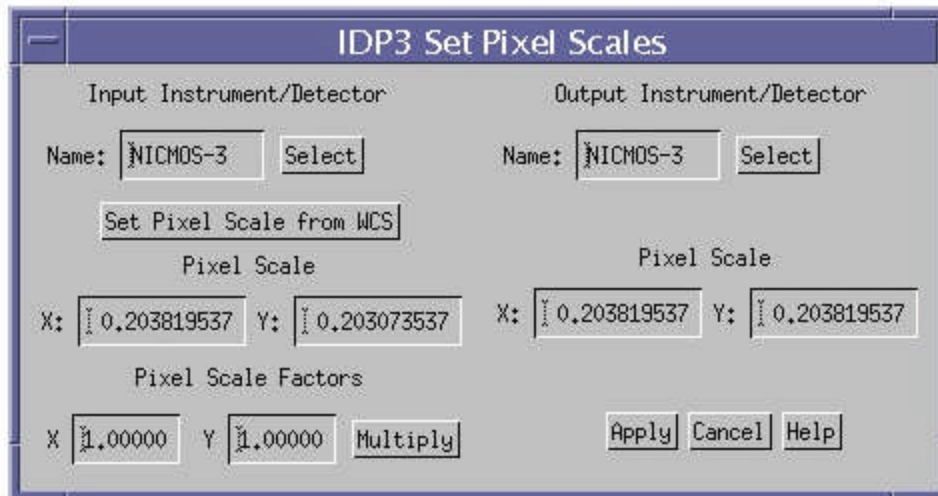


Adjusting the Image Pixel Scale

(Button Selection from the Adjust Position Widget)

The purpose of the **Set Pixel Scales** widget is to modify the pixel scale of the current reference image. The user may resample the image pixels to the pixel size of another instrument/detector, rectify non-square pixels, or apply any arbitrary factor to the pixel size. When image pixels are rectified the Y-axis is resampled to square the pixels to X pixel size.

It is important to note that the Set Pixel Scales widget is modal, i.e., until the widget is closed the user has no access to the rest of idp3.



The screenshot shows the 'IDP3 Set Pixel Scales' dialog box. It is divided into two main sections: 'Input Instrument/Detector' and 'Output Instrument/Detector'. Each section has a 'Name' field with 'NICMOS-3' entered and a 'Select' button. Below these is a 'Set Pixel Scale from WCS' button. Underneath are two 'Pixel Scale' sections, each with 'X' and 'Y' input fields. The 'Input' section has X: 0.203819537 and Y: 0.203073537. The 'Output' section has X: 0.203819537 and Y: 0.203819537. At the bottom, there is a 'Pixel Scale Factors' section with 'X' and 'Y' input fields both set to 1.00000, and a 'Multiply' button. On the far right, there are 'Apply', 'Cancel', and 'Help' buttons.

Setting the Input Pixel Scale: IDP3 attempts to identify the Instrument/Detector from the image header (**INSTRUME**, **CAMERA**, **DETECTOR** keywords). IDP3 has predefined pixel sizes for most HST and Spitzer Telescope Instruments: namely **NICMOS-1**, **NICMOS-2**, **NICMOS-3**, **STIS-CCD**, **WFPC2-1**, **WFPC2-2**, **WFPC2-3**, **WFPC2-4**, **MIPS-1**, **MIPS-2**, **MIPS-3**, **MIPS-4**, **MIPS-5**, **IRAC-1**, **IRAC-2**, **IRAC-3**, and **IRAC-4**. NICMOS pixel sizes are determined from a time table. The other instruments named above have static values. If IDP3 cannot identify the Instrument/Detector from the image header, the user may select the appropriate instrument from the pull-down menu from the **Select** button. If the instrument/detector is not among the above list the user may select **Other** and have the pixel scale computed from the world coordinates defined in the image header with the **Set Pixel Scale from WCS button**. In all of these cases the **X and Y Pixel Scale** fields will be populated automatically. Otherwise, the user may also enter the values of the pixel scales in these **X and Y** fields..

Pixel Scale Factors: The user may apply an arbitrary scale factor to the X and/or Y pixel scales for the output scale factors.

Setting the Output Pixel Size: The user may select the desired name of the output Instrument/Detector from the pulldown list of the **Select** button. If the desired output Instrument/Detector is any name in the list besides Other, the values will be populated from the internal tables as with the input. If the same instrument is selected for the output as input, both X and Y output pixel scales are set to the value of the input X pixel scale so that the image is rectified Y to X. If the desired Instrument/Detector is not in the pulldown list, the user must select **Other** and populate the **Output X and Y Pixel Scale** Values.

Applying the Pixel Scale Adjustment: Once the input and output pixel scale values are populated, the user may **Apply** the desired change by resampling the image. The input and output pixel scales as well as the resampling factor/s applied to the image are documented in the Xterm window. If no correction is desired the user may cancel the operation with the **Cancel** button. Both options will exit the widget.

Help: The **Help** button will display this file.