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## What does this warning mean?

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Couldn't determine chip position for pixel: (1013.000000,0.000000)
with value=1.000000. Skipping pixel
```

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The issue is that the conversion from detector coordinates (i.e. those used to create the WMAP) to chip coordinates needs the SIM\_Z values. In reality, SIM\_Z varies with time, but as we have an image (hence no time information) and the SIM\_Z variations are usually small, a single value stored in the image header is used for the transformation.

This means that there's actually some ambiguity in the mapping from the WMAP to chip location. In reality this isn't a concern, since we already bin on larger scales than introduced by the SIM\_Z variation (i.e. we are only concerned with 32x32 pixel regions on the chip). However, it does mean that those pixels close to the chip boundaries can end up as apparently not falling on a chip. In this case, we issue the warning shown and ignore the counts from this pixel in the WMAP.

If the ignored counts are small compared to the total signal in the WMAP, as in the vast majority of situations, then it's not a problem. It can be a problem if most of the counts in the WMAP end up being ignored. In reality, this situation is unlikely to occur; two possible situations would be where the source region is narrow and lies along the chip boundary (this is a truly extreme case) or if you are using mkwarf to calculate "point source" responses near chip boundaries (e.g. acisspec).

The Weighting ARFs and RMFs Imaging Spectroscopy threads contain analyses in which this error may occur.

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URL:  
[http://cxc.harvard.edu/ciao3.4/faq/mkwarf\\_skippix.html](http://cxc.harvard.edu/ciao3.4/faq/mkwarf_skippix.html)

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