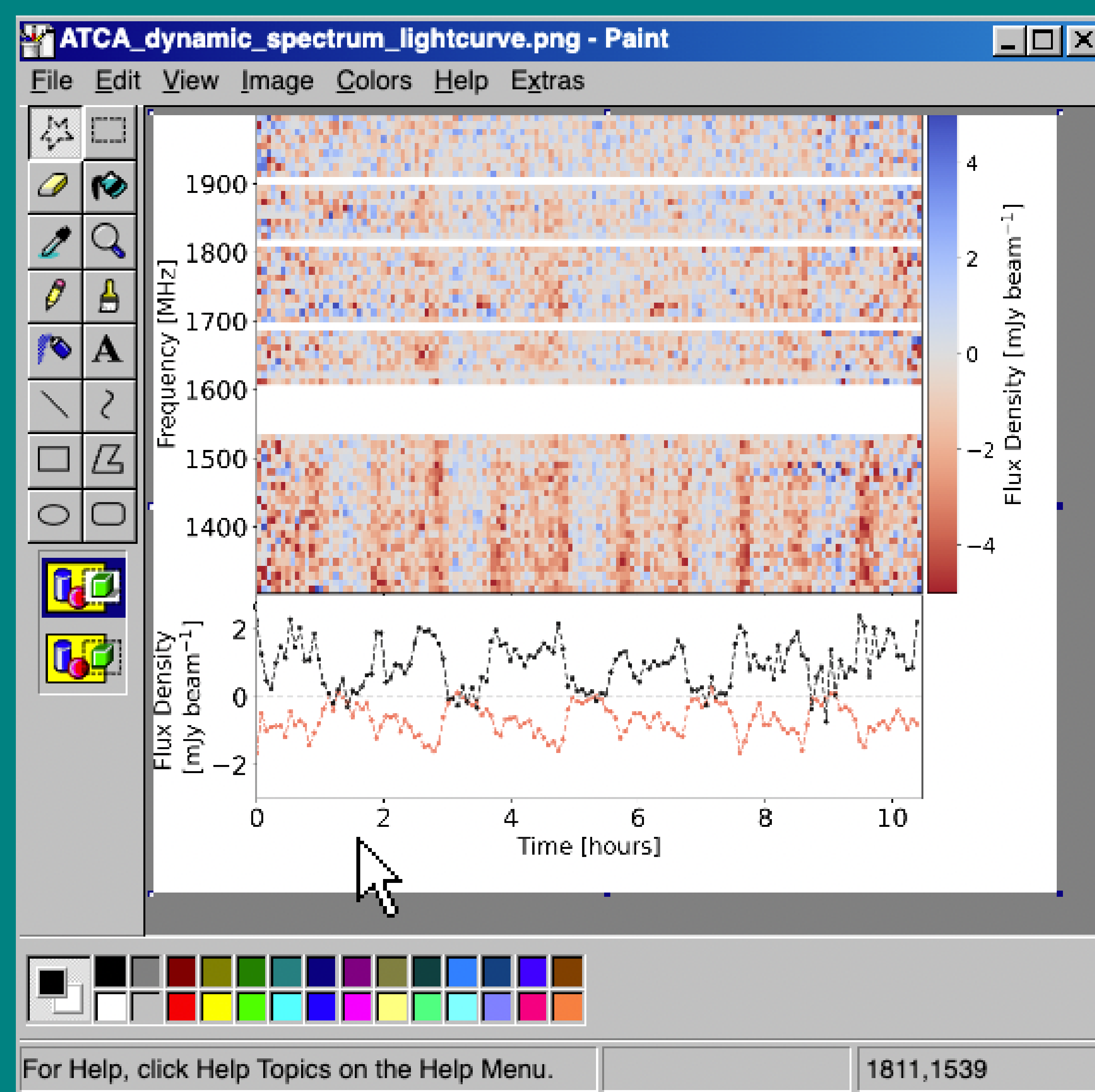


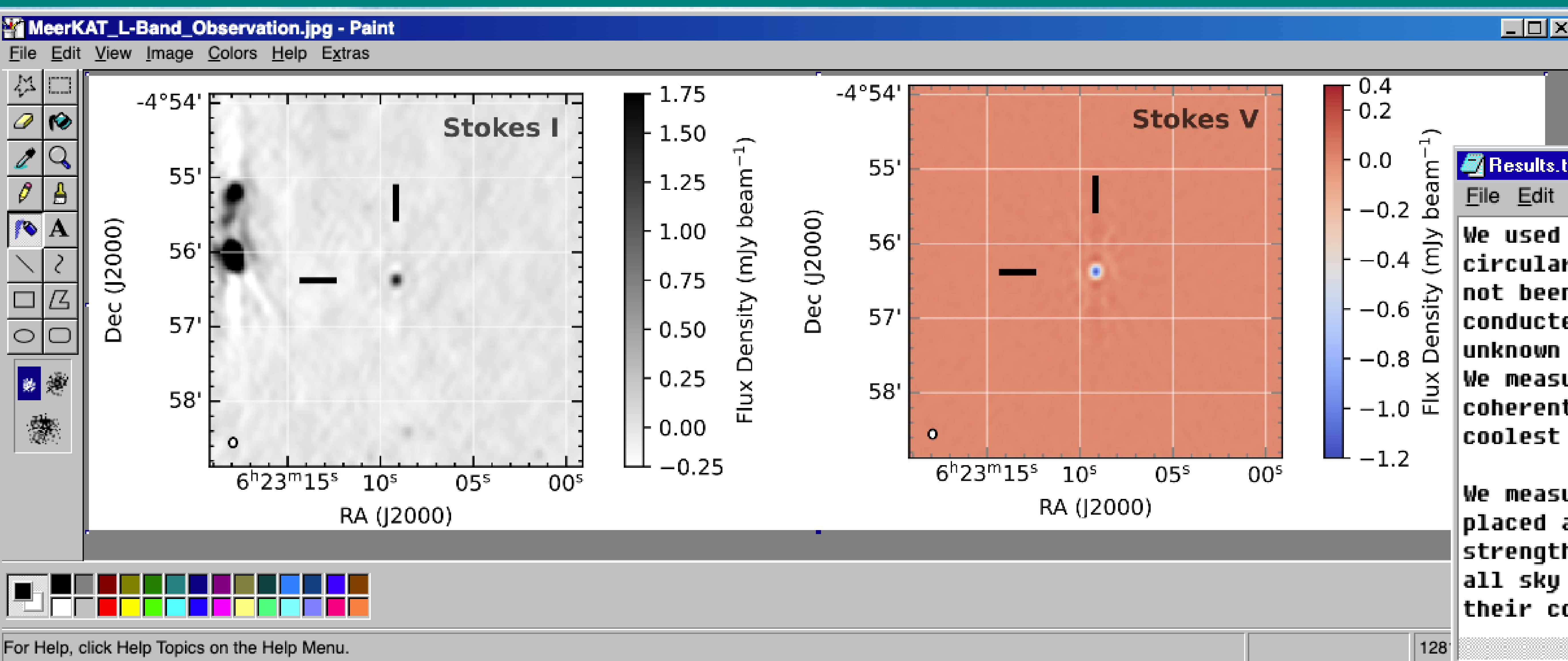
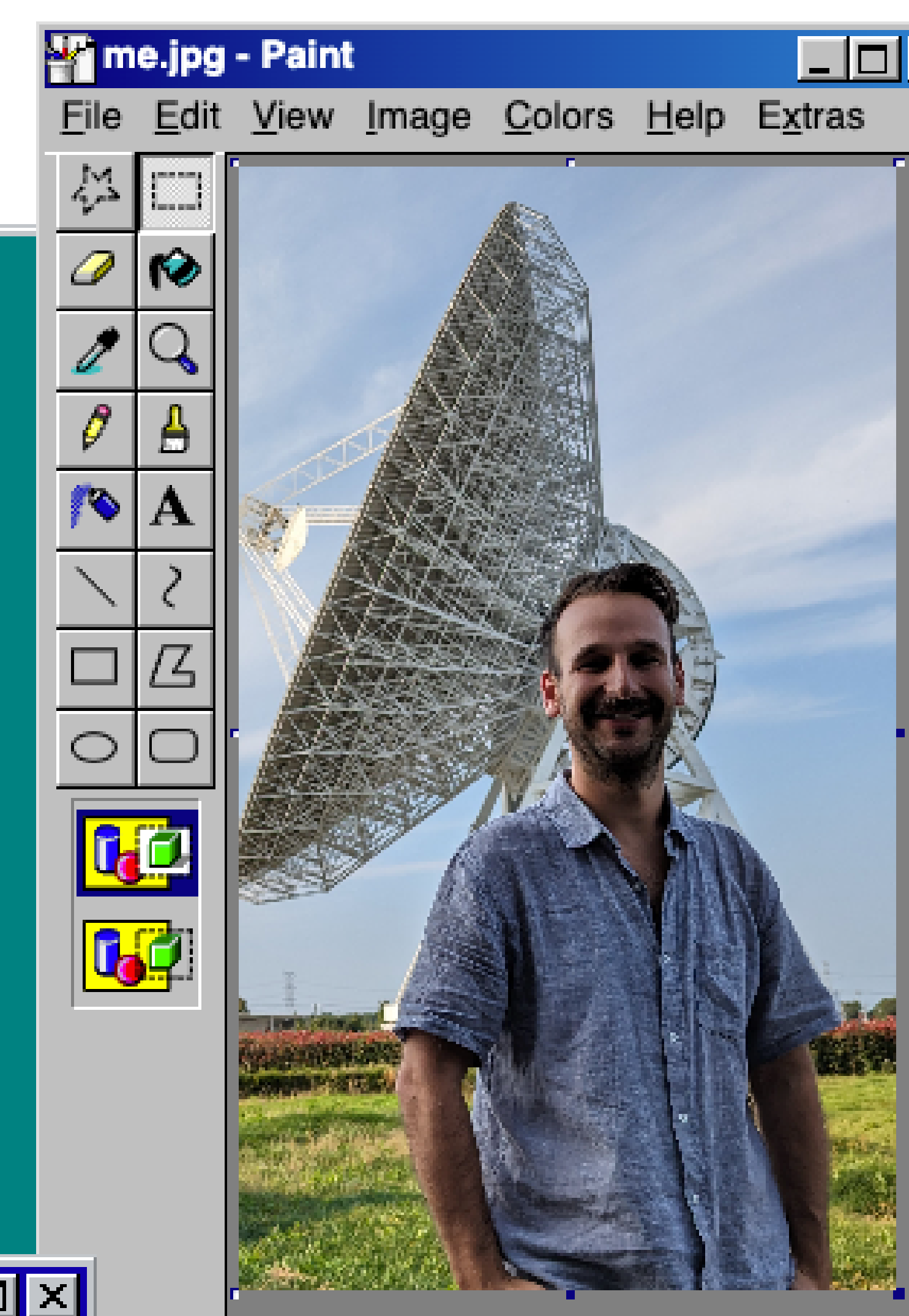
```
MS-DOS Prompt
C:\>The detection of radio emission from the latest type ultracool dwarf in a circular polarisation search
```

Introduction.txt - Notepad
File Edit Search Help
I present the coolest dwarf detected in radio and describe a method for identifying radio emission from ultracool dwarfs (UCDs) in all sky MHz to GHz surveys.
Stars and pulsars are the only known sources of significant circularly polarised emission. Coherent emission from UCDs tends to be highly circularly polarised and is tied to UCD magnetospheric dynamics. This emission is often rotationally modulated and can be used to measure UCD rotational periods. Auroral currents driving UCD emission are generated by co-rotational breakdown between the magnetosphere and circumstellar plasma, or as the result of magnetospheric interaction with a companion. Radio studies of UCDs can thus be used to probe magnetic fields and to identify binaries or exoplanets.



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Joshua Pritchard, Tara Murphy, Manisha Caleb, Dougal Dobie, Laura Driessen, Stefan W. Duchesne, David L. Kaplan, Emil Lenc, Ziteng Wang

Hi, I'm Kovi Rose. A PhD student at the University of Sydney. Please chat to me or send me an email: kovi.rose@sydney.edu.au



Results.txt - Notepad
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We used the ASKAP RACS-mid survey to identify circularly polarised sources, most of which had not been previously detected in radio. We conducted ATCA and MeerKAT observations of an unknown source later identified as a T8 dwarf. We measured periodic, rotationally modulated coherent emission from this object - the coolest dwarf detected in radio.
We measured the T8 dwarf's rotation period and placed a lower limit on its magnetic field strength. Our method can be used with future all sky surveys to detect and study UCDs and their companions.

