

Chapter 6

Conclusions

This thesis studies the OH maser in the star-forming (OH 330.953-0.182) which can only be observed by the radio telescopes in southern hemisphere. The high resolution observations of 1.6-GHz OH masers in OH 330.953-0.182 were made possible by using the Long Baseline Array, ATNF, CSIRO. The results from this work complement the previous observations at lower resolution. The position distributions suggest a ring shape structure which includes the previously observed as a separated source, OH 330.954-0.182. The velocity distribution of OH masers show radial velocity gradient along in RA axis implying the rotating disk structure. The diameter of the region is ~ 1700 au at an assumed distance of 8.5 kpc. of maser disk is 2.02 arcsec (1700 au at 8.5 kpc) Seven Zeeman pairs were found and indicates the magnetic field strength ranging from -3.66 to -5.83 mG (direction toward us). These fields are strong enough to be dynamically important in the star formation process. It will be interesting to study multi-transitions of OH masers in more detail to learn more about the source structure (e.g. disk and outflow). Full polarization observations will allow us to study the magnetic field configuration in three dimensions.