ICRAR & ICRAR-Pawsey Summer Studentships 2018-2019
Project Proposal

Project Details	
Project Title	**Exploring the spectral energy distribution from 70MHz to 10GHz of radio compact sources in GLASS**
Primary Supervisor	**Guillaume Drouart**
Primary Supervisor Availability	**I will be in Perth all the time, although partly in parental leave from early December on.**
Contact Details	Guillaume.drouart@curtin.edu.au
Additional Supervisors & Contact Details	Nick Seymour, nick.seymour@curtin.edu.au
Additional Resources Required	Desktop computer
Pawsey Centre Hardware Use	NA
Software Required	List all software requirements here. Student Desktop Requirements: • Topcat, Python, ds9 Pawsey Centre software installations required: • NA
Student Location for project	ICRAR-Curtin
Project Description	The recently completed first sixth of GLASS --- a 5-9GHz survey with the ATCA on the well-covered GAMA 23 field --- allows us to start exploring the radio spectral energy distributions (SEDs) of thousands of radio sources over more than two decades of frequency. The characterization of the radio SEDs in complement of the wealth of multi-wavelength dataset (from optical to far-IR) will reveal properties of supermassive black holes and their galaxy hosts. In this project, we focus on isolating a catalogue on compact radio sources selected at 9GHz and building their radio SEDs. We will explore the properties of their radio SEDs by fitting different models and compare their optical/infrared properties to search for trends in this specific population.

Student Attributes	
Academic Background	Physics, Computing degrees
Computing Skills	Python and bash
Training Requirement	Python and bash (if not known)

Project Timeline	
Week 1	**Pawsey training (or inductions and project introduction)**
Week 2	Literature and catalogue creation (ADS, Topcat)
Week 3	Literature and catalogue creation (ADS, Topcat)
Week 4	SED fitting (MrMoose)
Week 5	SED fitting (MrMoose)
Week 6	Interpretation – literature search (ADS)

Week 7	Interpretation – literature search (ADS)
Week 8	Writing (Word, LibreOffice or Latex) and presentation
Week 9	Writing (Word, LibreOffice or Latex) and presentation
Week 10	**Final Presentation and Reporting**