

- AGN as cosmological probes – measuring geometric distances to supermassive black holes to determine H_0 . Physical sizes of the hot-dust region around AGN inferred from K-band reverberation mapping, with angular sizes estimated by K-band interferometry
 - Optical (griz) and NIR (JHK) imaging obtained of 12 local Seyfert galaxies over 3 years with the robotic 60 cm REM telescope. Analysis made difficult by the large ($>10''$) and irregular PSF that also varies a lot within each image, and by the position angles being random; right now working on mapping the PSF variations to improve the light curves
- The high-redshift lensed galaxy MACS1149-JD, where Hashimoto+2018 found $z([OIII]88\mu m, ALMA) = 9.1096$ and $z(Ly\alpha, X\text{-shooter}) = 9.0944$: careful reanalysis of the X-shooter data assessing the claimed $Ly\alpha$ line (work in progress)
- The UltraVISTA survey of the COSMOS field in YJHK_s and a narrow-band filter NB118. Now a smaller part of my work; I have worked on characterising the NB118 data, and on running the survey in the last 10+ years
- A bit of EM follow-up of GW sources

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