

**NRAO/Socorro Colloquium Series****Ken Kellermann***NRAO-CV*

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**Radio Loud and Radio Quiet Quasars**

## Abstract

It has been half a century since the discovery of radio loud quasars and the subsequent recognition of the much larger radio quiet quasar population. Although all quasars are thought to contain a SMBH as the source of their enormous OIR luminosity, it has not been clear if the radio loud quasars are a distinctly different class of object from the radio quiet quasars or if they are just the high end of a smooth radio luminosity function and why only a small fraction are strong radio sources. I will first discuss the bizarre circumstances surrounding the discovery of quasars through their strong radio emission followed by the discovery of their more populous radio quiet counterpart. I will then describe the results of two VLA programs which suggest that the radio emission from radio quiet quasars is mostly due to star formation in the host galaxy and is not directly related to the SMBH and why previous studies were unable to unambiguously recognize the separate population of radio quiet quasars. Finally, I will review what we have learned from VLBA observations of radio loud quasars as well as the challenges presented by the recent space VLBI observations of high brightness temperatures in some quasars which greatly exceed the limits set by inverse Compton scattering.

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**March 27, 2015****11:00 am****Array Operations Center Auditorium****All NRAO employees are invited to attend via video, available in Charlottesville Auditorium, Green Bank Auditorium, and VLA Video Conference Room.**Local Host: Rick Perley

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