



Quasi-Stellar Objects

(Quasars, QSOs)

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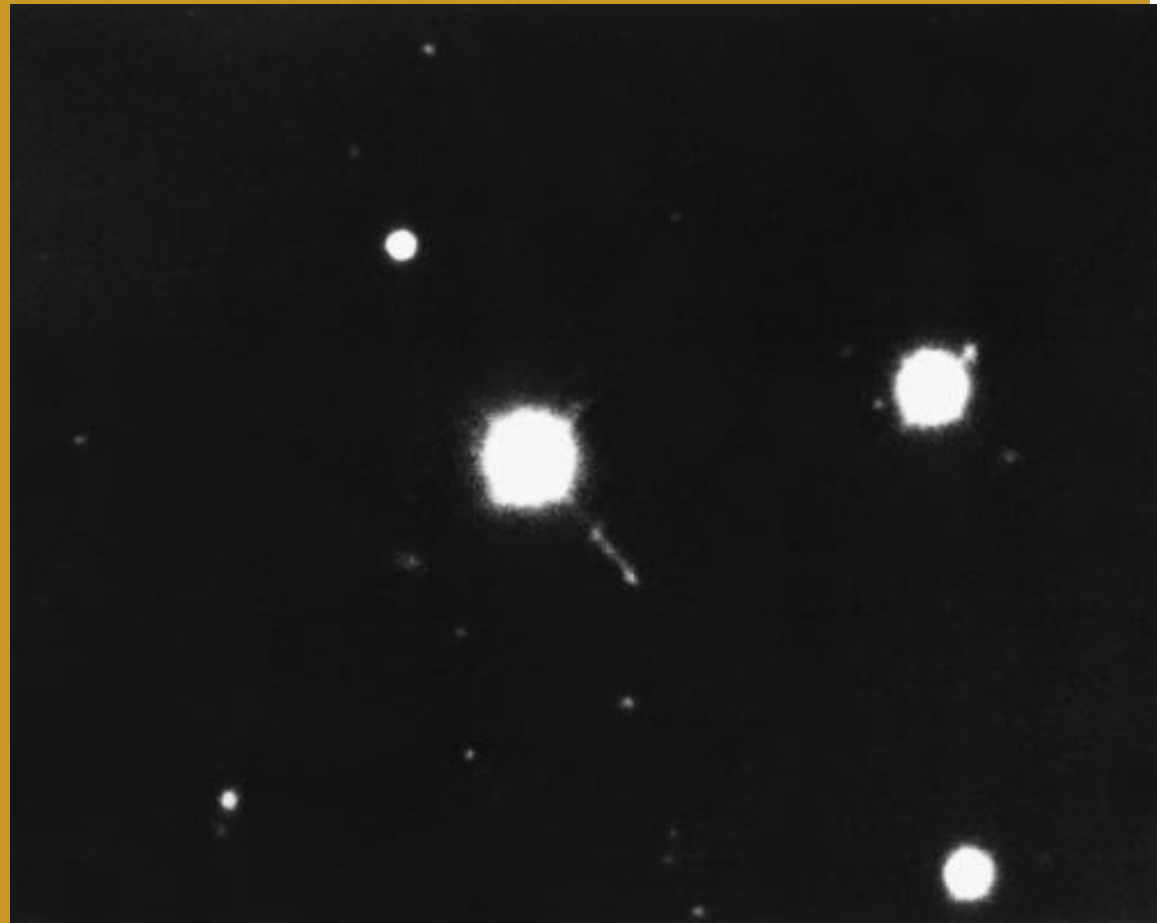
What are Quasars?

Quasar is short for QUASi-stellAR radio source

- ? Astronomical Source of Energy (including light) that is brighter than some stars.
- ? In optical telescopes, quasars look like faint stars.
- ? The closest quasar is over 240 Mpc away.
- ? Brightest Quasar is 3C 273.
- ? Quasars can be observed in many parts of the electromagnetic spectrum, however, most quasars emit in the infrared range.
- ? They are the brightest objects in the known universe.

Quasar 3C273

The Brightest Optical Quasar



The Project Goal

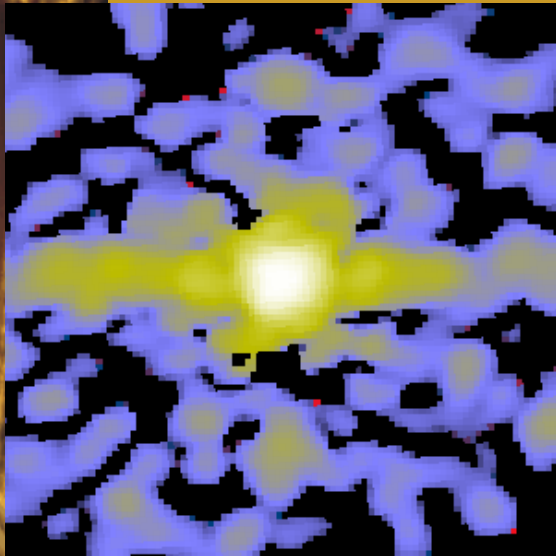
The goal of the project was to determine the power law for a multitude of quasars; and find the relative magnetic field strength with relation to Cygnus A.

Method

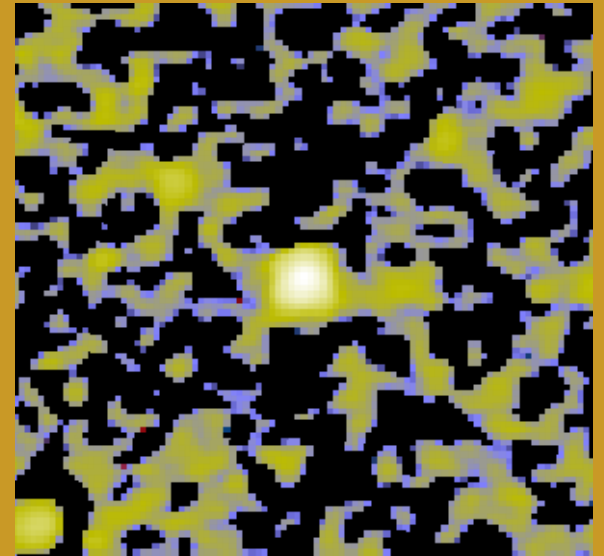
- ? First Quasars were found using a pair of quasar catalogs for fluxes and locations in the celestial sphere.
- ? Next, the quasars were found in 26-W.
- ? Certain data points were recorded from the spectrometer.
- ? Using an equation given by Dr. Castelaz, the power law was found for each quasar.
- ? After the power law was found, we compared the power of the magnetic fields of other quasars to our observed quasar, Cygnus A.

Data

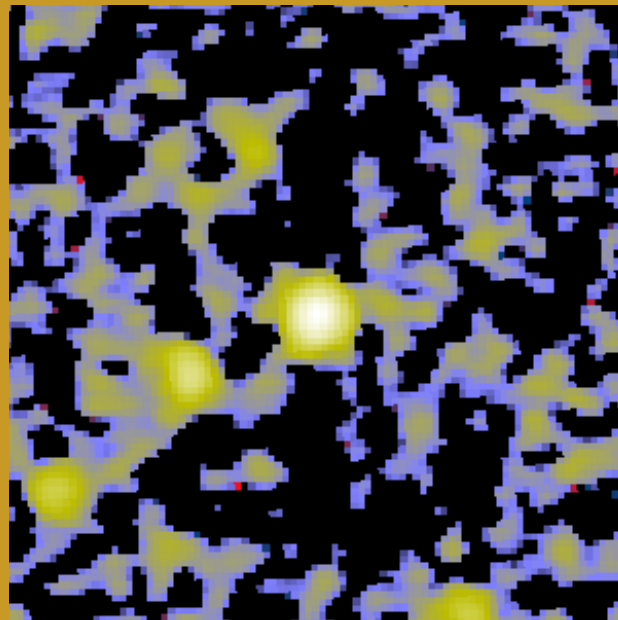
Quasar Name	Power Law	Relative Magnetic Field Strength
S5 0014+81	-11.2868525896414	1863.7
TEX0004+171	-11.0517928286853	1531.9
UM 46	-9.13147410358566	339.8
UM 30	-7.73705179282869	114.2
PKS 0035+23	-7.25099601593626	77.8
UM 18	-6.50597609561753	43.5
3C 9.0	-5.82470119521912	25.3
4C 09.01	-5.80876494023904	25.1
PKS 0045-000	-5.72111553784861	23.4
PKS 0038-019	-5.61752988047809	21.7
PKS 0010-408	-5.0597609561753	13.9
PKS 0027-426	-4.9003984063745	12.3
PKS 0006+014	-4.8406374501992	11.7
PKS 0041+001	-3.97609561752988	5.9
NAB 0024+22	-3.65737051792829	4.7
PKS 0035-252	-3.56972111553785	4.3
PKS 0005-239	-3.50597609561753	4.1
3C 14.0	-3.41832669322709	3.9
PKS 0013-00	-3.12350597609562	3.1
PKS 0000-17	-2.05179282868526	1.3
Cygnus A	-1.7381308411215	1
OB 565	-1.64940239043825	0.9
PKS 0008+171	-1.63745019920319	0.9
PKS 0038-020	-1.53784860557769	0.8
PKS 0008-264	-1.12749003984064	0.6



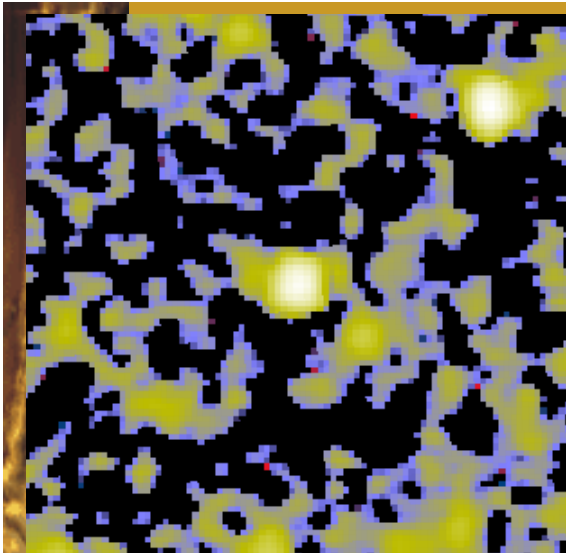
Cygnus A
PL: -1.74
RMFS: 1



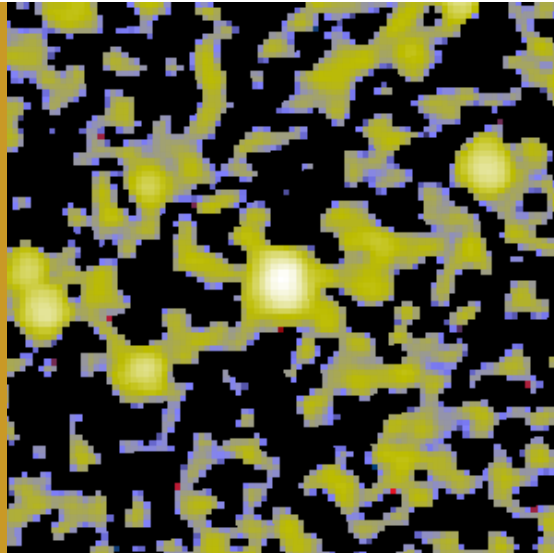
3C 9.0
PL: -5.82
RMFS: 25.3



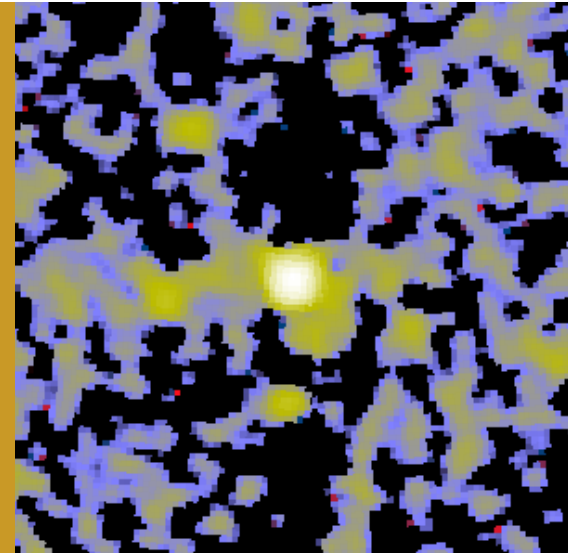
3C 14.0
PL: -3.42
RMFS: 3.9



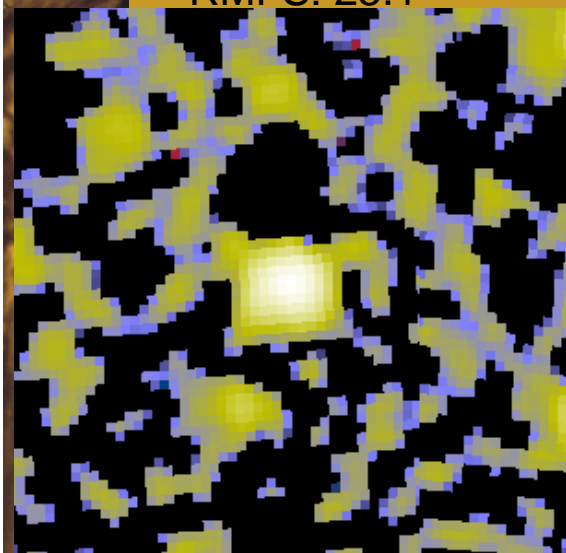
4C 09.01
PL: -5.81
RMFS: 25.1



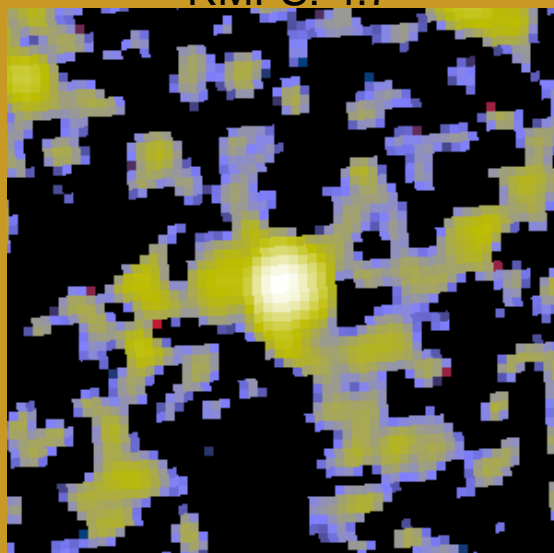
NAB 0024+22
PL: -3.66
RMFS: 4.7



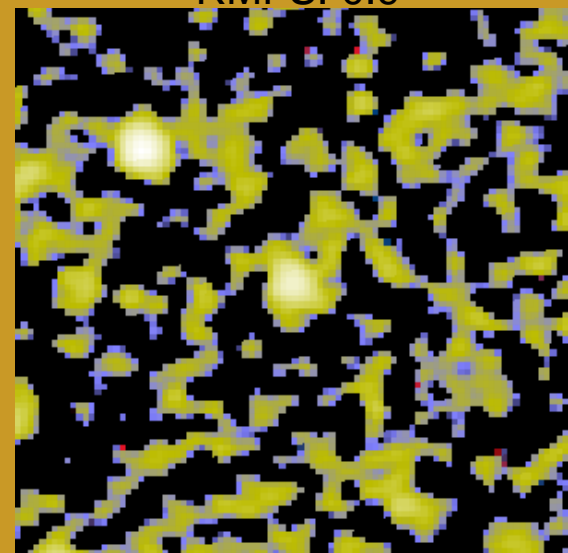
OB 565
PL: -1.65
RMFS: 0.9



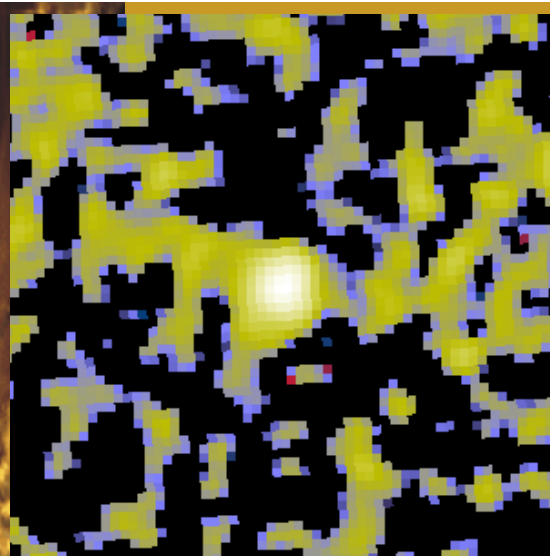
PKS 0000-17
PL: -2.05
RMFS: 1.3



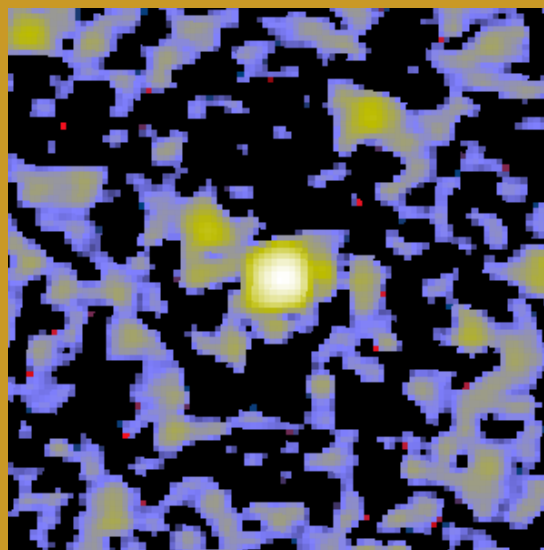
PKS 0005-239
PL: -3.51
RMFS: 4.1



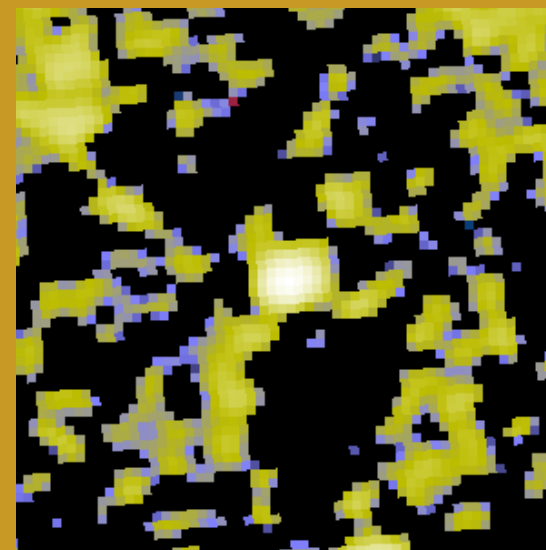
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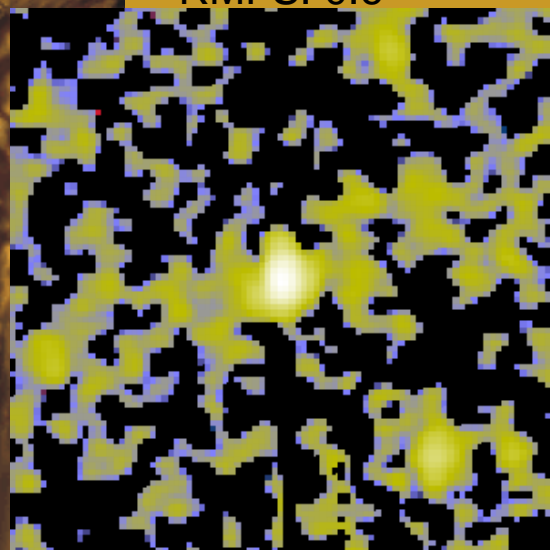
PKS 0008-264
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RMFS: 0.6



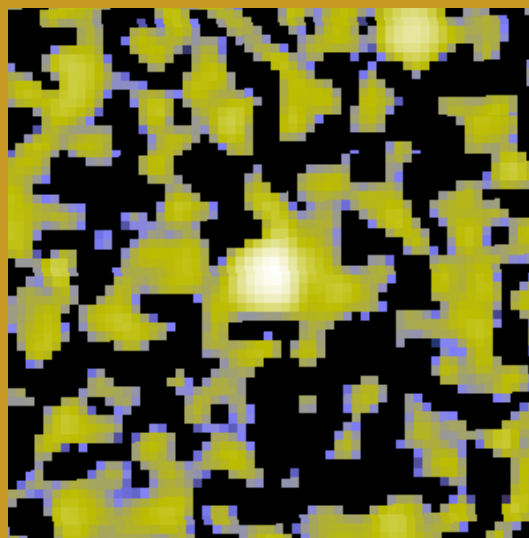
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PL: -1.64
RMFS: 0.9



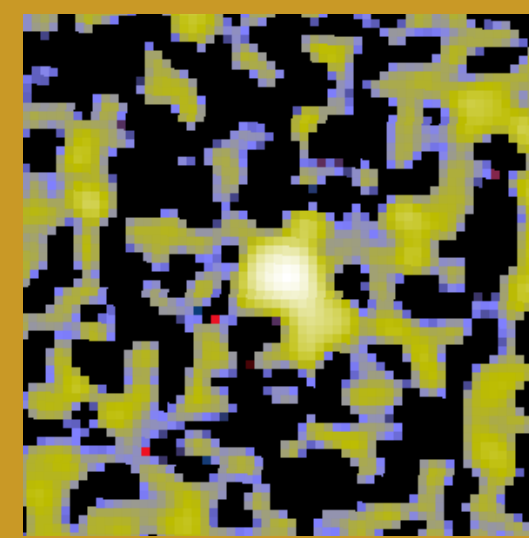
PKS 0010-408
PL: -5.06
RMFS: 13.9



PKS 0013-00
PL: -3.12
RMFS: 3.1

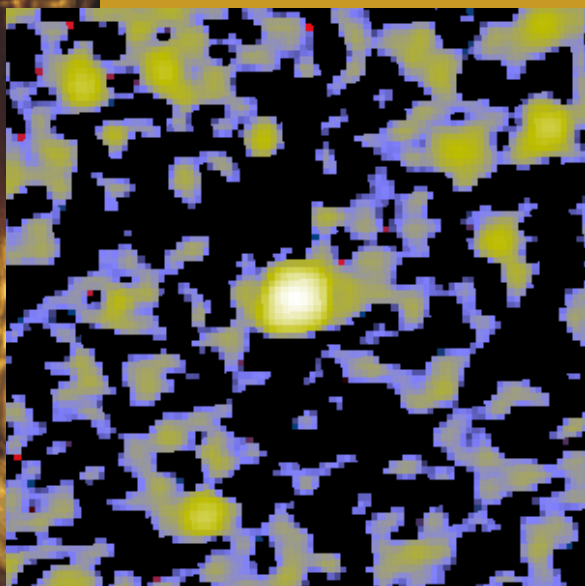


PKS 0027-426
PL: -4.90
RMFS: 12.3

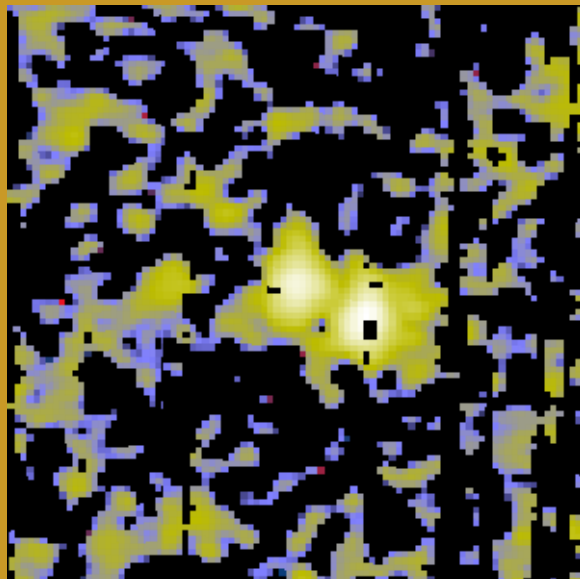


PKS 0035-252
PL: -3.57
RMFS: 4.3

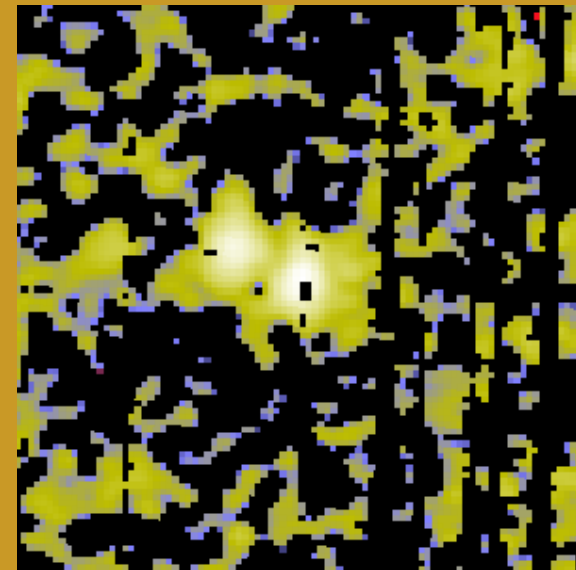




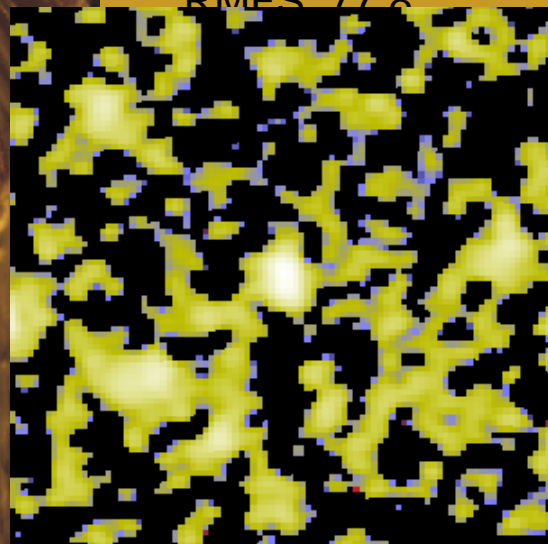
PKS 0035+23
PL: -7.25
RMFS: 77.8



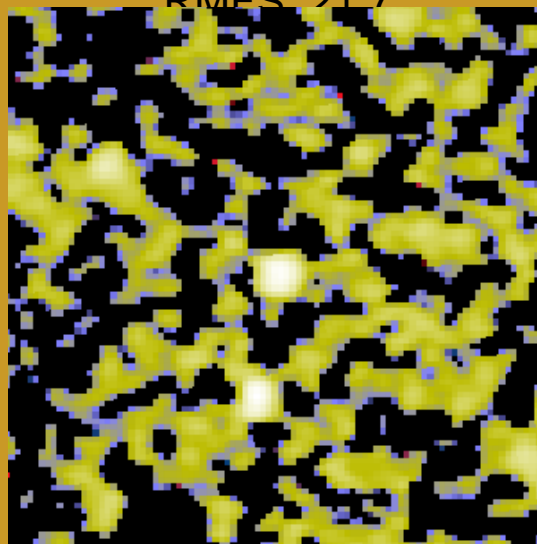
PKS 0038-019
PL: -5.62
RMFS: 21.7



PKS 0038-020
PL: -1.54
RMFS: 0.8



PKS 0041+001
PL: -3.98
RMFS: 5.9



PKS 0045-000
PL: -5.72
RMFS: 23.4

No Image Available

S5 0014+81
PL: -11.29
RMFS: 1863.7



