

Near-infrared spectroscopy of AGNs in CDFS using Subaru/FMOS (J. Silverman)

FMOS

- 200 science fibers
- Wavelength range: 1-1.8 μm
- 0.19 sq. deg FOV (a single footprint covers the entire ECDFS)

Observations

Dec 2010 (2 pointings)

Dec - Jan 2011 (2 pointings)

+ additional observations acquired by E. Treister

Observed

XMM186

XMM350

XMM82

XMM376

Primary targets:

Type 1 and 2 AGNs that have emission lines falling within the following observed spectral NIR windows based on secure optical spectroscopic redshifts

Wavelength	H α	H β	MgII
1.0-1.33 μm	$0.52 < z < 1.02$	1.06-1.74	2.57-3.75
1.42-1.75 μm	$1.16 < z < 1.67$	1.92-2.60	4.1-5.2

Magnitude cuts

Priority 1: $J_{AB} < 21$; Priority 2: $21 < J_{AB} < 23$

Other targets: Any X-ray sources lacking spectroscopic redshifts including those in the 4Ms catalog or members of X-ray detected galaxy groups

Observations

Dec 2010: CDFS (2 pointings) 40 type 1s
 28 type 2s
 -see examples on the following pages

Dec 2011: CDFS (2 pointings)
 observed XMM186, XMM350, XMM82, XMM376
 - all are not detected in Dec data (poor weather)
 - reobserved in Jan-[not yet reduced]

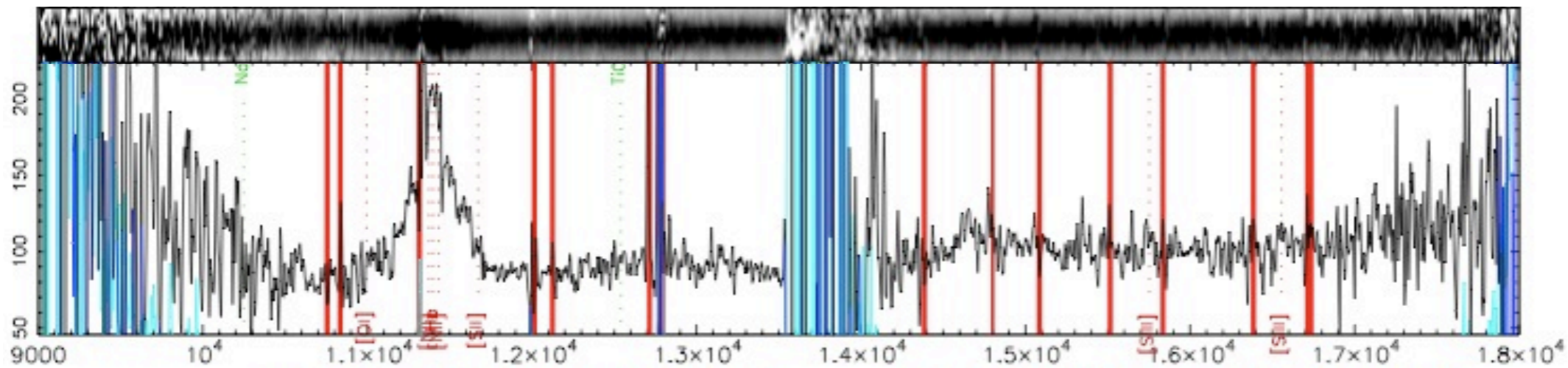
Dec 2012/Jan 2013:

5 more nights awarded

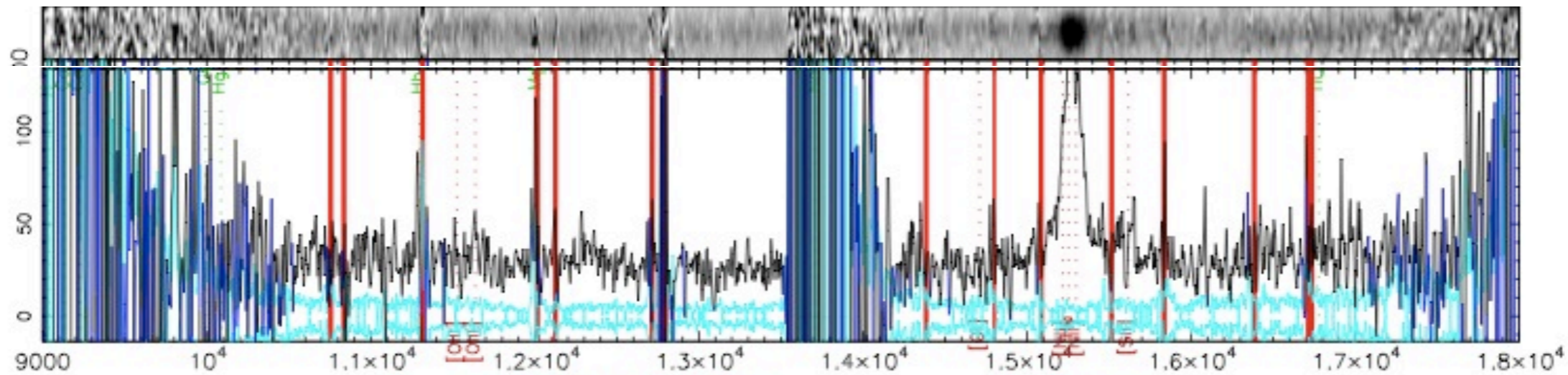
- 2 nights (Silverman - Subaru program for COSMOS)
- 3 nights (Sanders)
- high resolution mode ($R \sim 2000$) that covers 1.4-1.8 μm
- higher throughput than low resolution mode (all previous CDFS data)
- can observe CDFS at the beginning of each night before COSMOS is up

Dec 2013/Jan 2014: 3 nights to be awarded (Silverman-Subaru program)

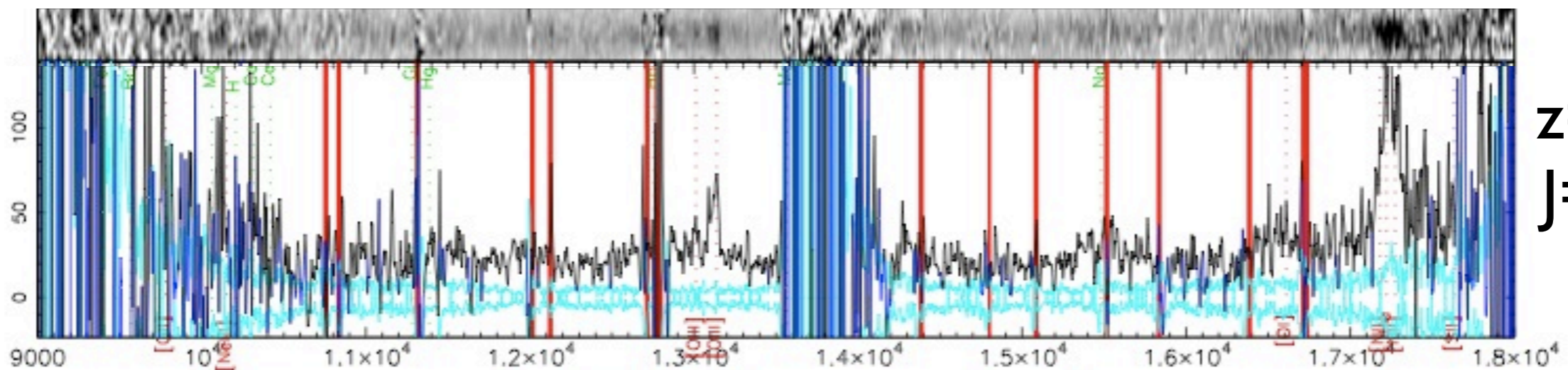
CDFs type I AGNs



$z=0.73$
 $J=19.3$

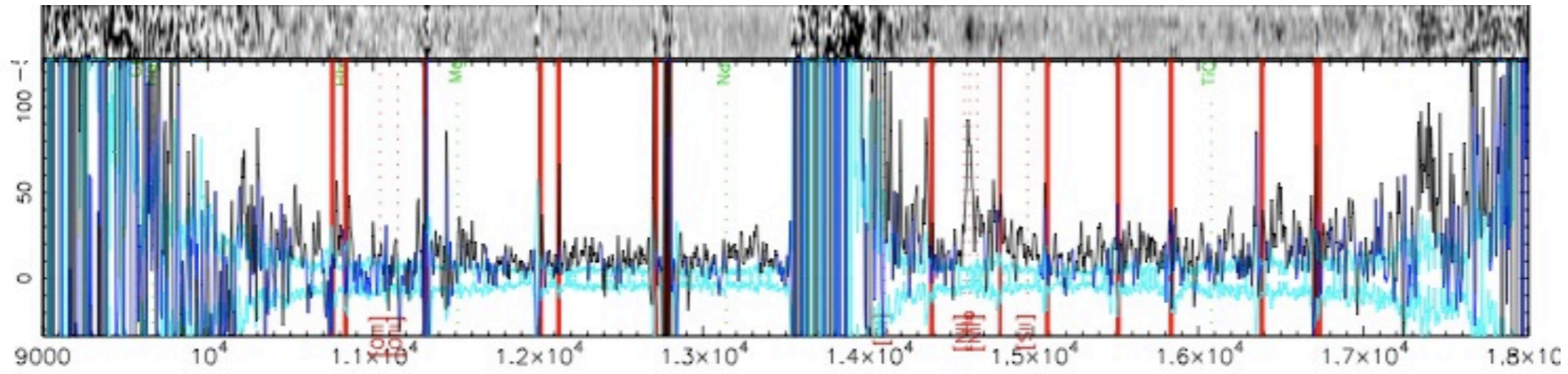


$z=1.32$
 $J=19.9$

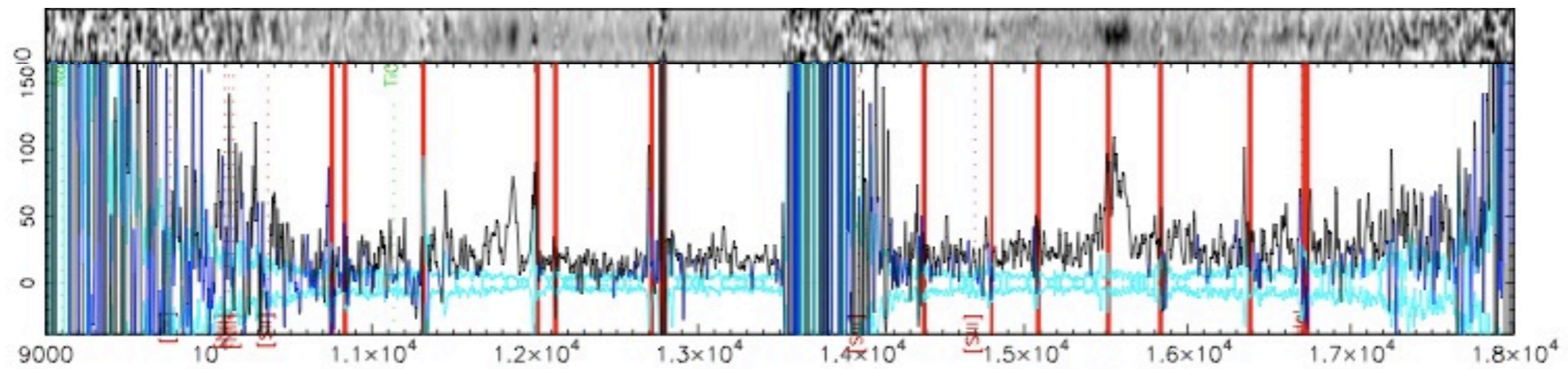


$z=1.62$
 $J=20.8$

CDFs type 2 AGNs



$z=1.23$
 $J=21.8$



$z=1.37$
 $J=22.4$

First papers

Comparative analysis of different black hole mass indicators
(Matsuoka, JDS et al.)

Mass-luminosity plane of quasars using COSMOS and CDFS
(Steinhardt et al.)

Obscured AGNs in CDFs and COSMOS
(Mainieiri, JDS, et al.)

X-ray spectral slope vs. Eddington ratio using CDFS and
COSMOS AGNs
(Brightman, JDS, Mainieri et al.)