

The Baldwin effect in IR

What is the BE?

- “Luminosity Indicators in the Spectra of Quasi-Stellar Objects”

Baldwin, Jack A.

1977, ApJ, 214, 679

- Definition: $W_{\lambda} = \alpha L_{\lambda}^{\beta}$

W_{λ} : EW

β : slope of the anti-correlation

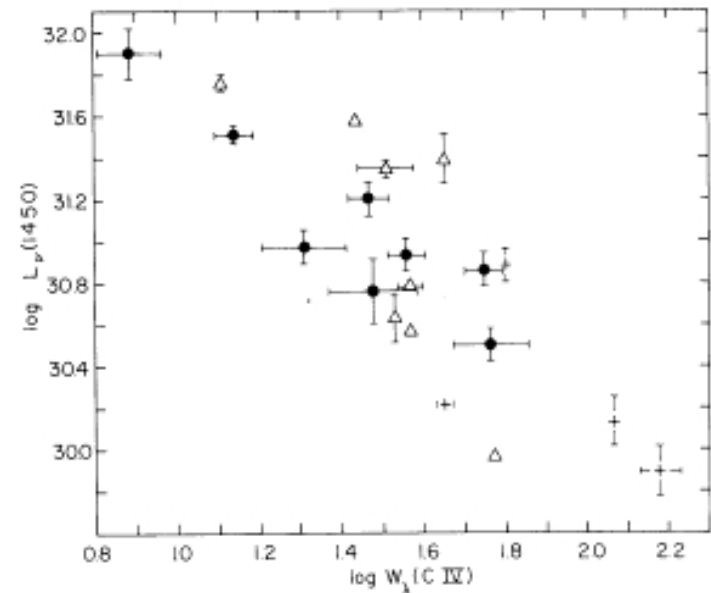


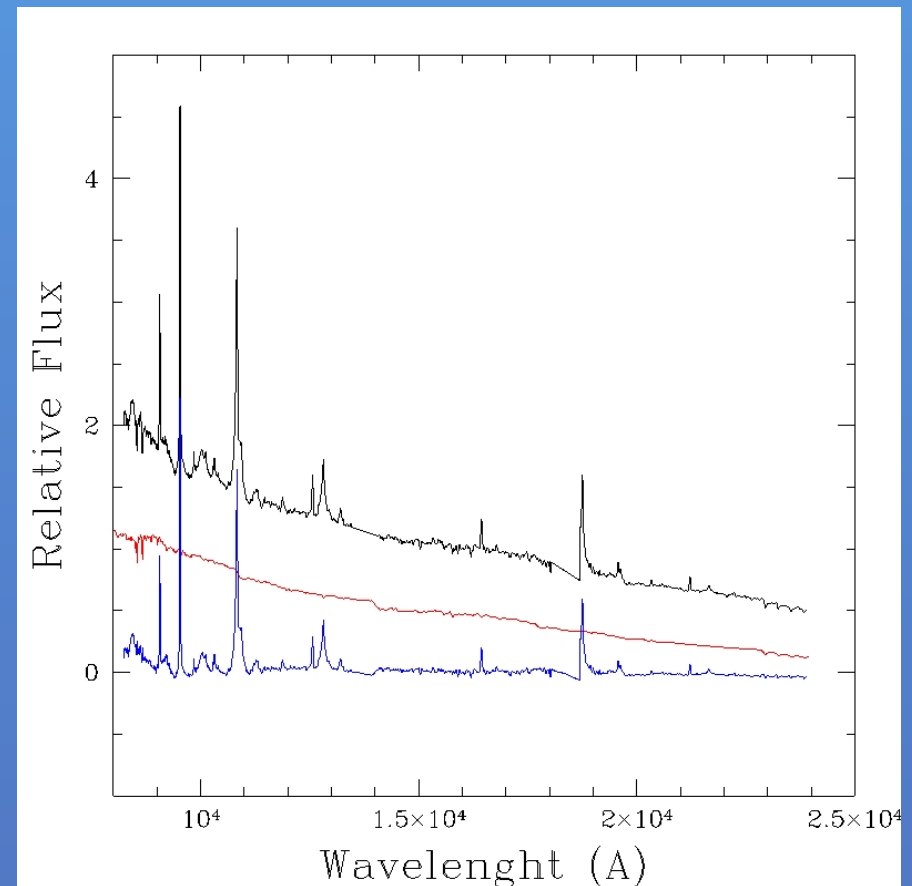
FIG. 2.—The relationship between the computed continuum luminosity at 1450 Å and the equivalent width of C IV $\lambda 1550$ in the rest frame. The symbols have the same meaning as in Fig. 1.

- The BE was extended to other lines
- Differs for different lines
 - Fell show “inverse BE”
- The AGN present different correlations
- The BE is intrinsic or extrinsic to a quasar?
- No yet understood

Our work

- Alberto Rodriguez Ardila, LNA Bz
- The sample:
 - 50 AGN IR spectra (Sy1, Sy2 and NLS1)
- Range 8000A- 24000A
- $0,02 < z < 0,55$

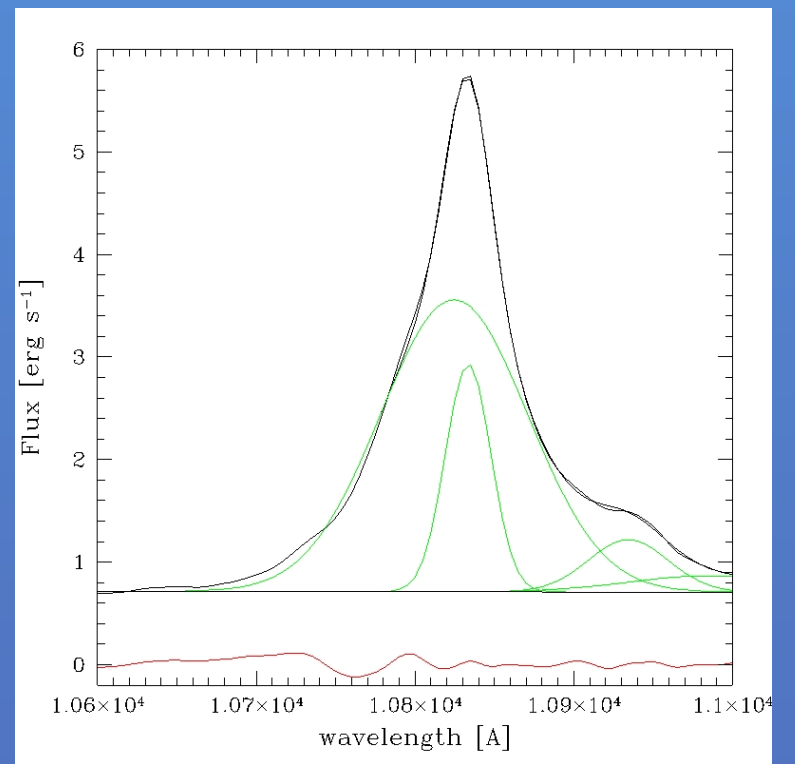
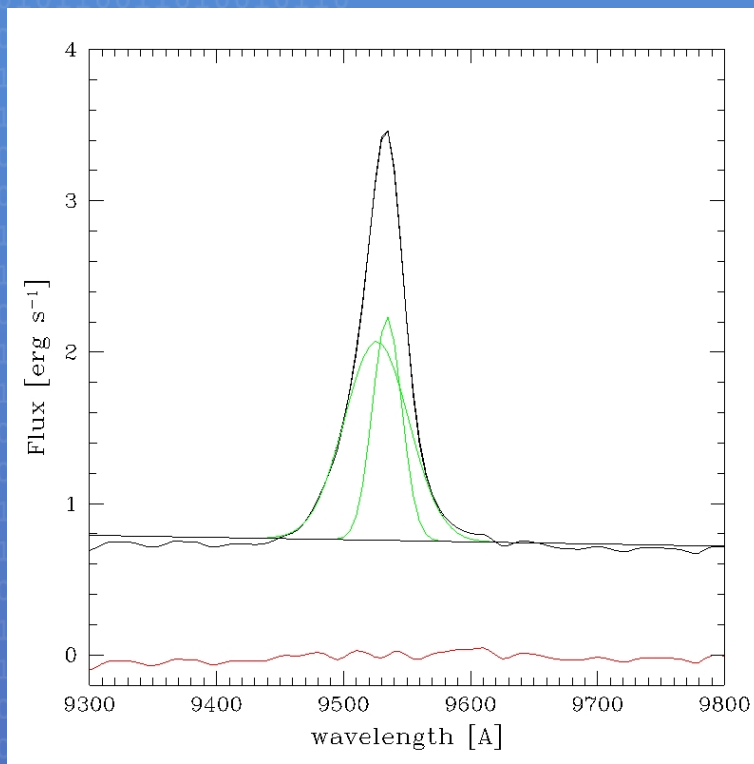
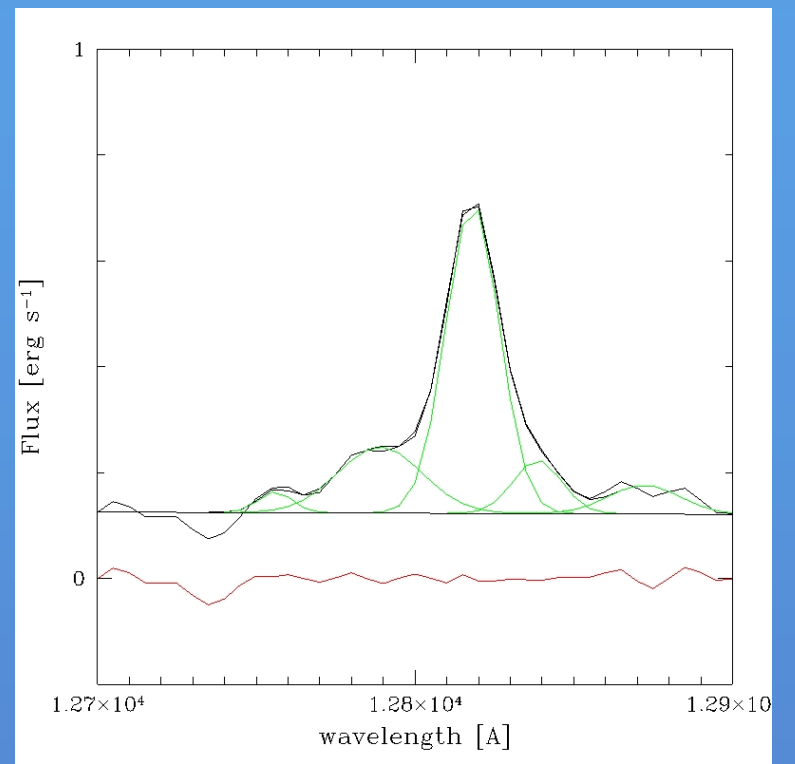
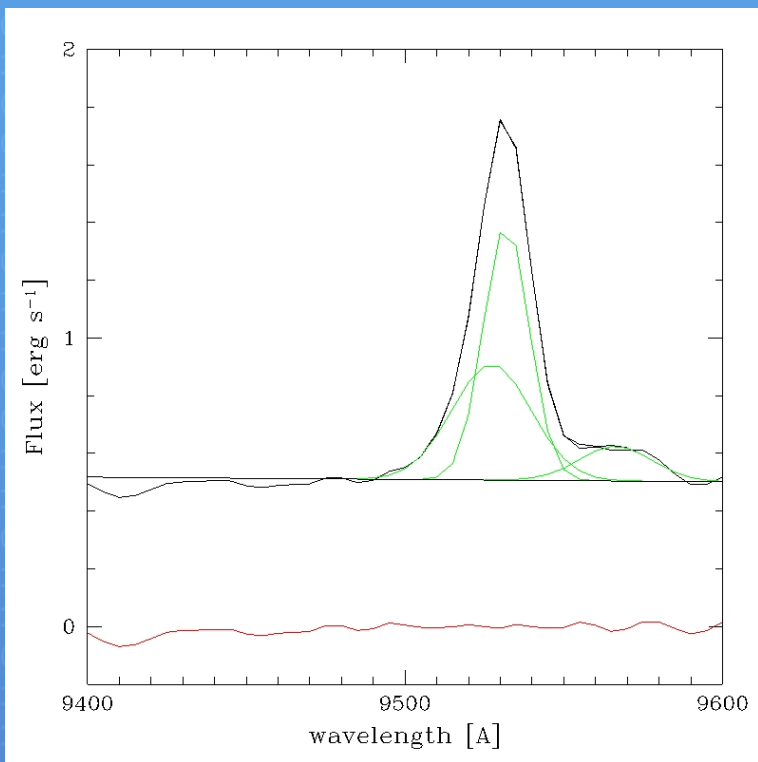
- Observed spectro (black)
- Stellar population (red)
- “Pure emission” (blue)



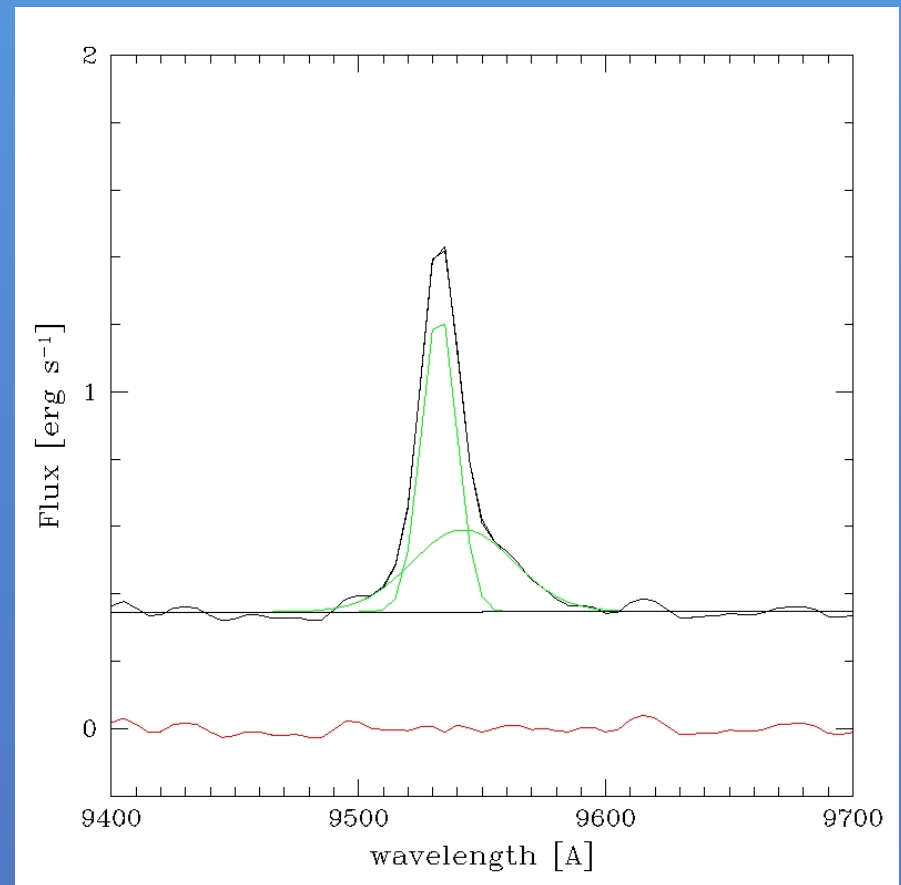
List of forbidden and permitted lines

- Ca I 8640
- [S III] 9531
- Fe II 10500
- He I 10830
- Fe II 11126
- O I 11287
- [Fe II] 12570
- Pa β 12820
- [S iv] 19641
- He I 20580
- H₂ 21213
- Br γ 21654

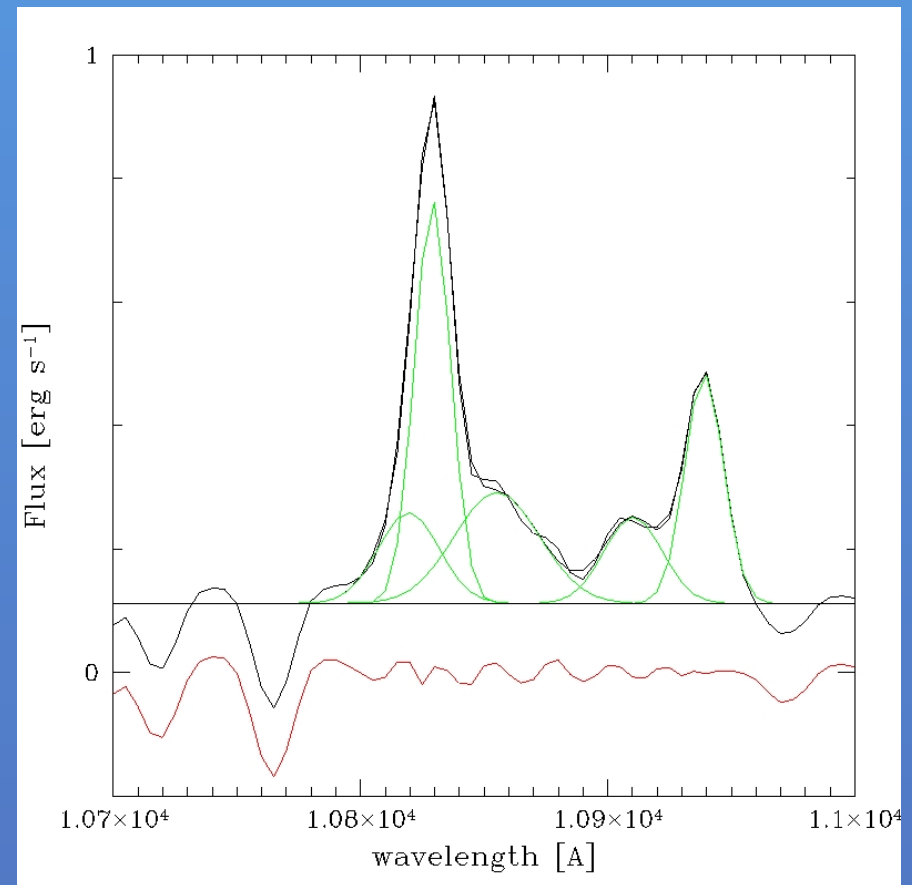
- We use software LINER developed by Richard Pogge
- Adjust narrow and/or broad line component.



- Any problems in Sy1 and NLS1
- [S III] 9531
 - HI 9545



- Other problem, in NLS1
- Fe II 10863 is important
- He I 10830



Results

Comming soon