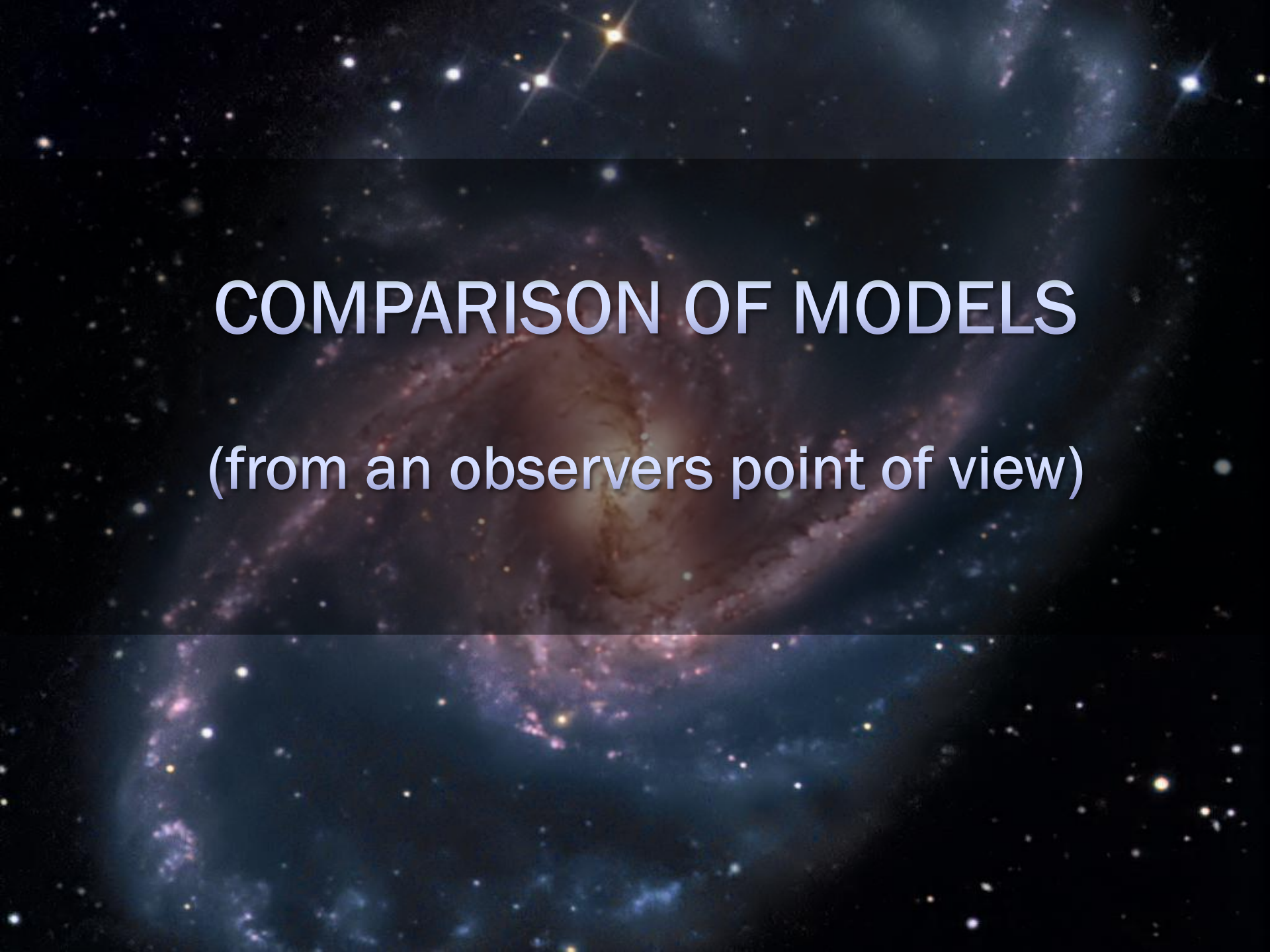
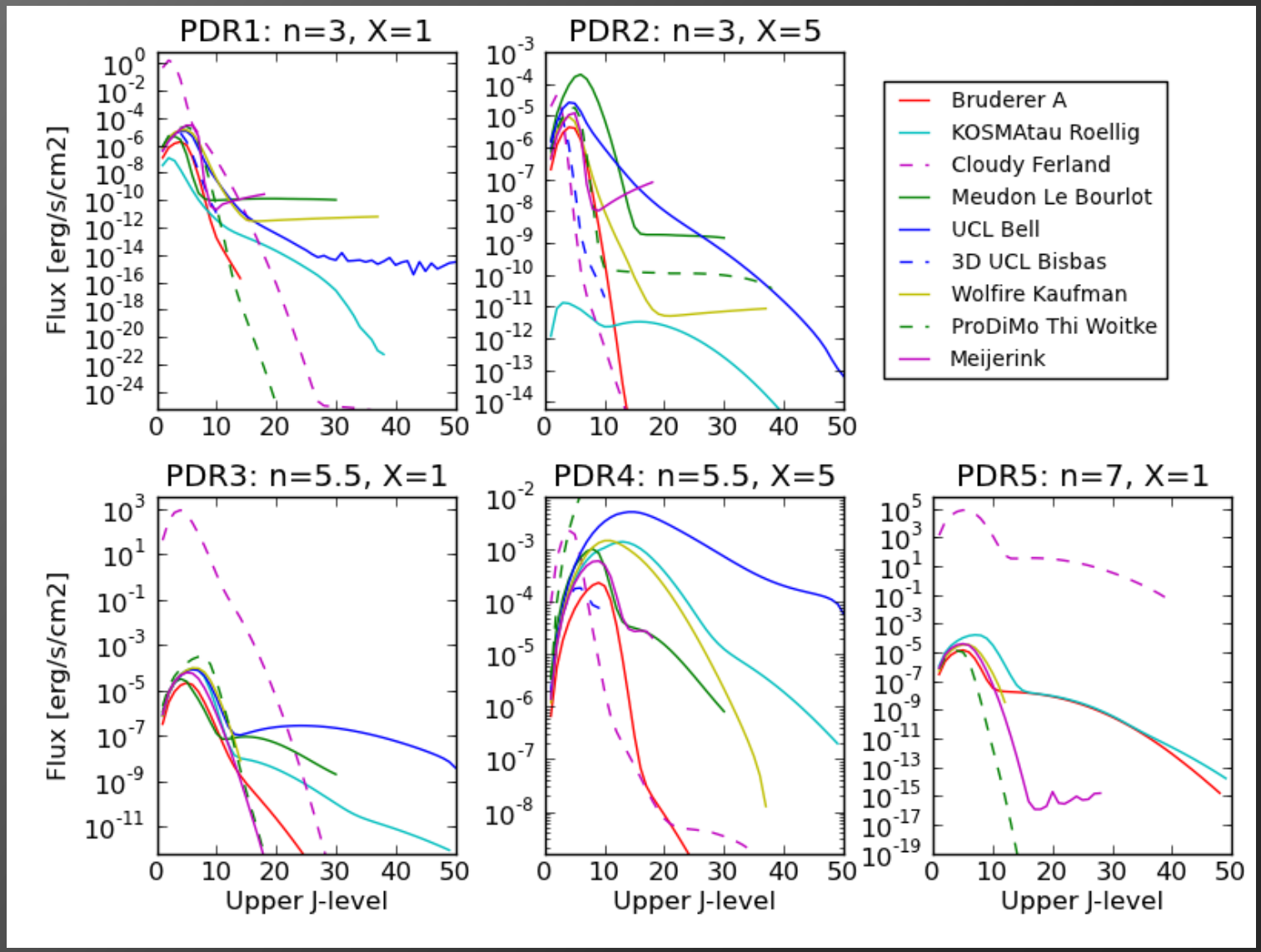

COMPARISON OF MODELS
(from an observers point of view)

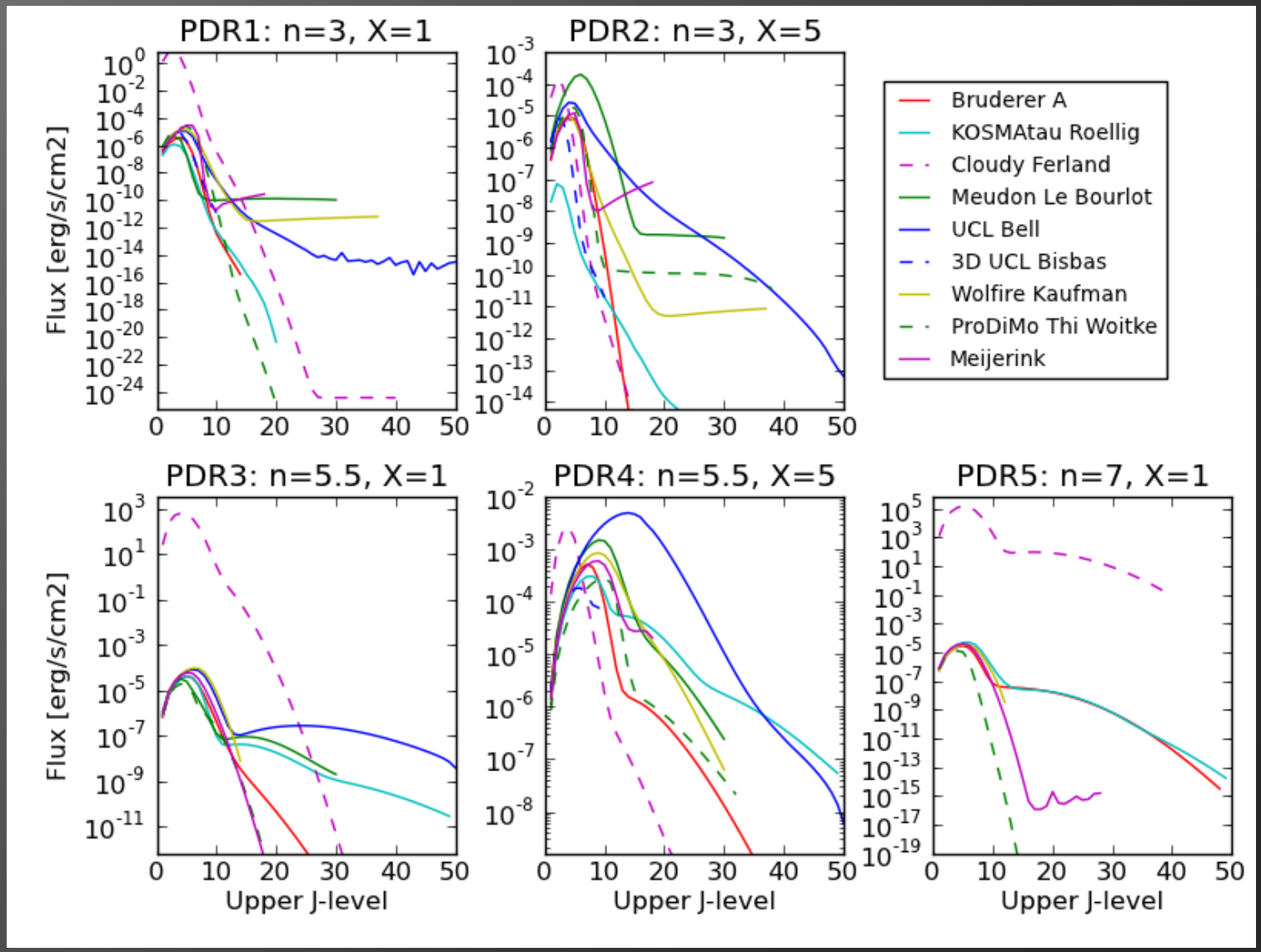
PDRs

Name	Log density (cm^{-3})	Log UV flux (X)
PDR1	3	1
PDR2	3	5
PDR3	5.5	1
PDR4	5.5	5
PDR5	7	1

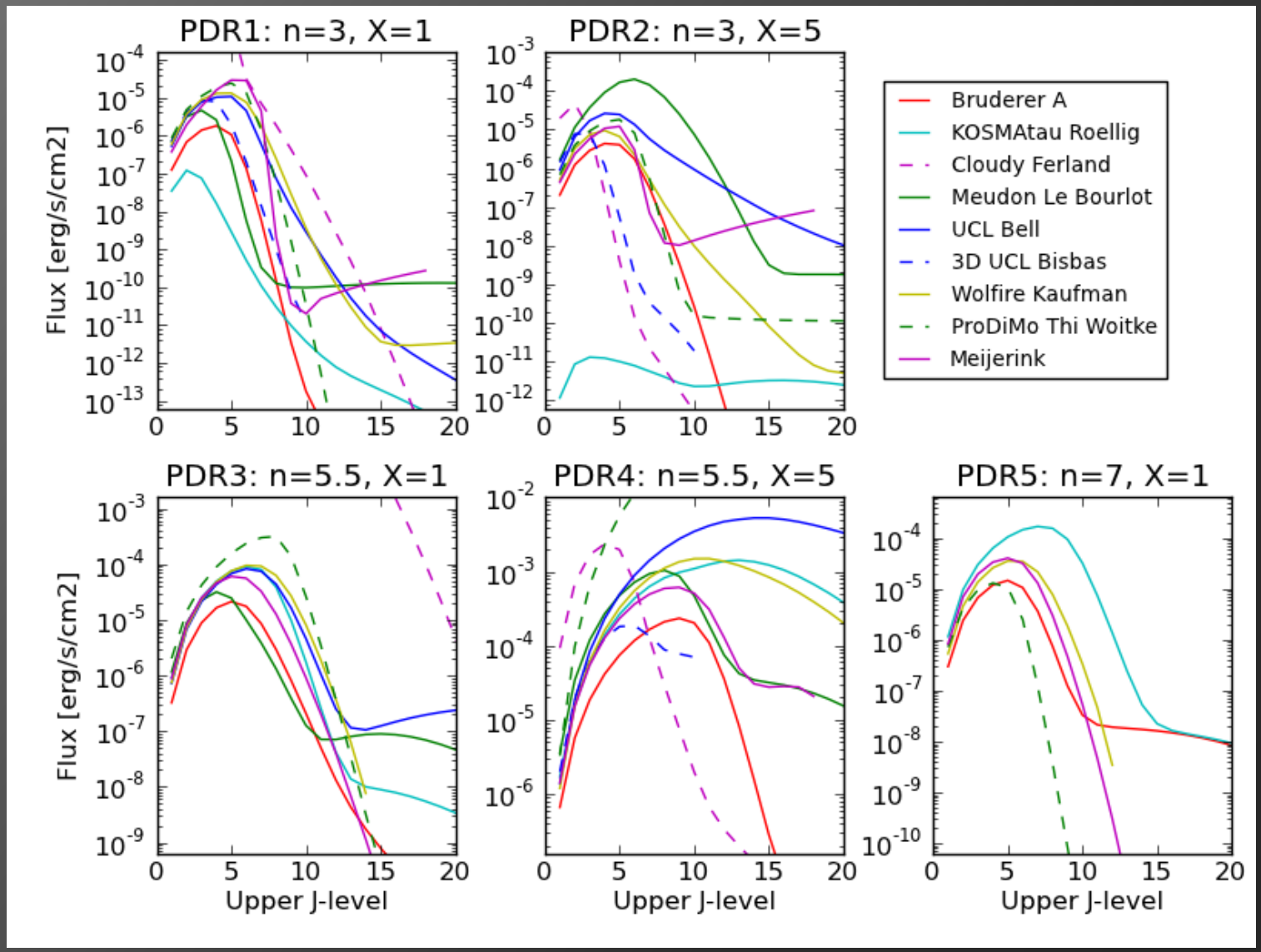
PDRs: before


PDR1: n=3, X=1
PDR2: n=3, X=5
PDR3: n=5.5, X=1
PDR4: n=5.5, X=5
PDR5: n=7, X=1
Flux [erg/s/cm2]
Upper J-level
Bruderer A
KOSMAtau Roellig
Cloudy Ferland
Meudon Le Bourlot
UCL Bell
3D UCL Bisbas
Wolfire Kaufman
ProDiMo Thi Woitke
Meijerink

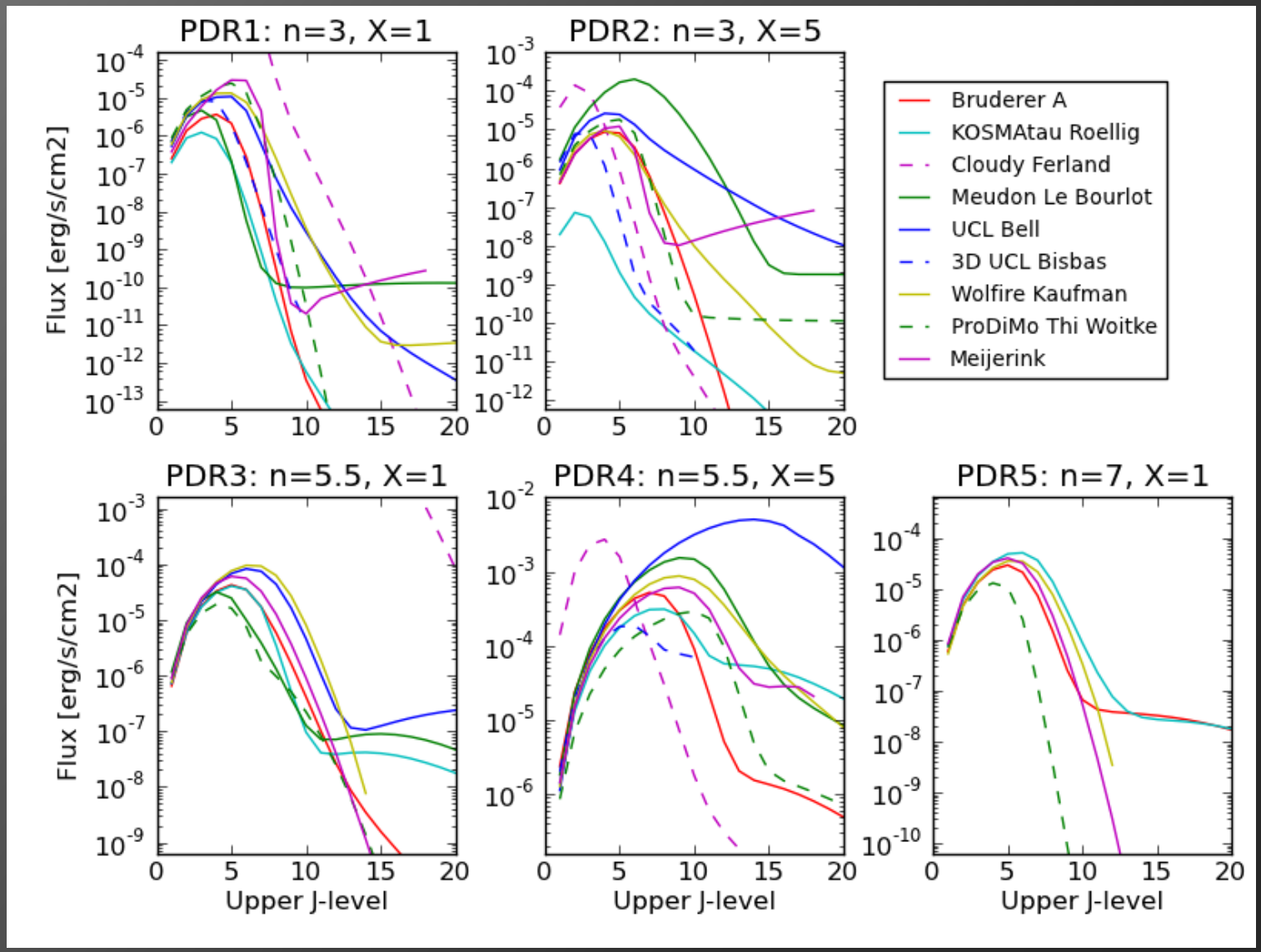
PDRs: after


PDR1: n=3, X=1
PDR2: n=3, X=5
PDR3: n=5.5, X=1
PDR4: n=5.5, X=5
PDR5: n=7, X=1
Flux [erg/s/cm2]
Upper J-level
Bruderer A
KOSMAtau Roellig
Cloudy Ferland
Meudon Le Bourlot
UCL Bell
3D UCL Bisbas
Wolfire Kaufman
ProDiMo Thi Woitke
Meijerink

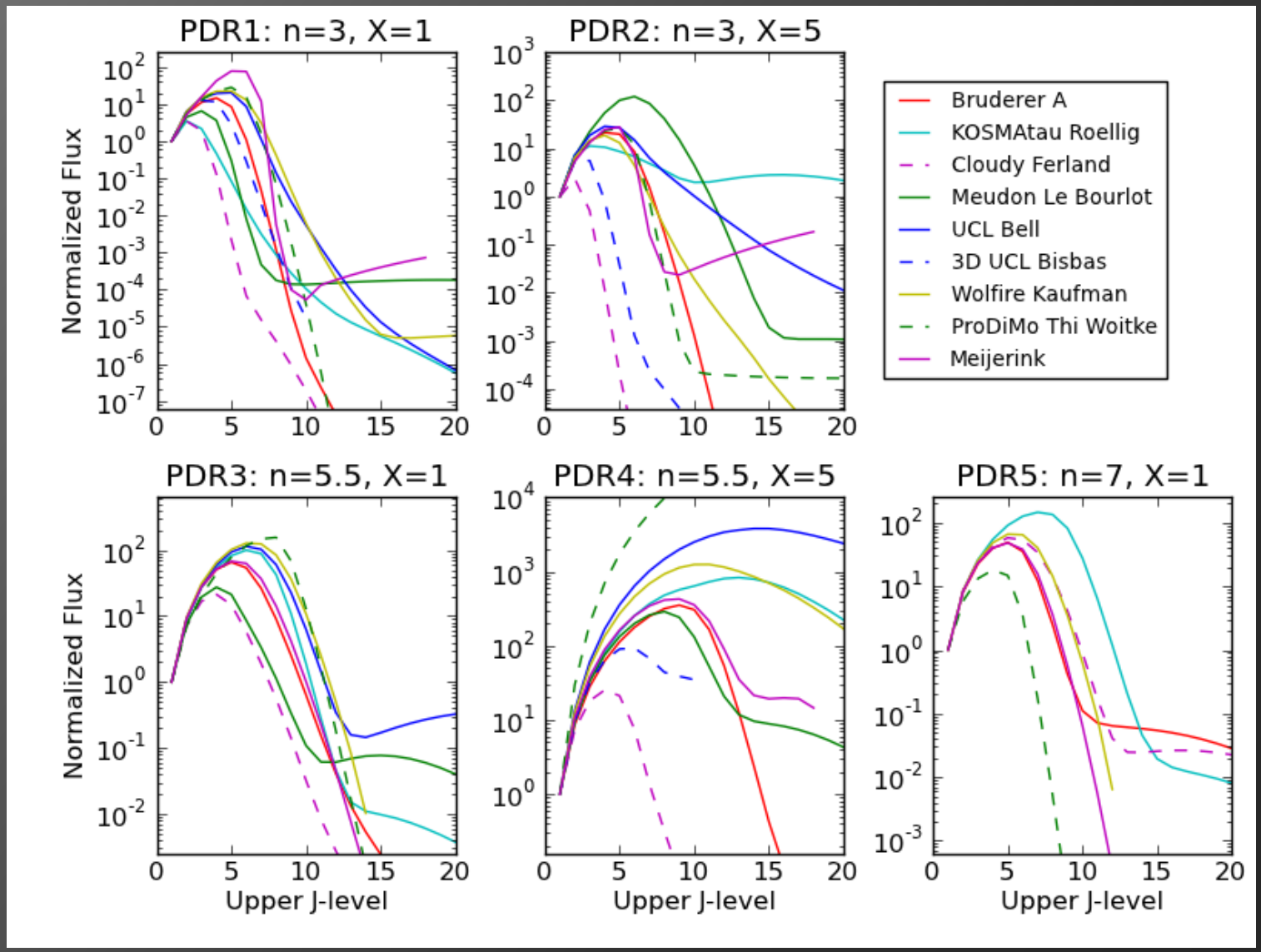
PDRs: before, zoom



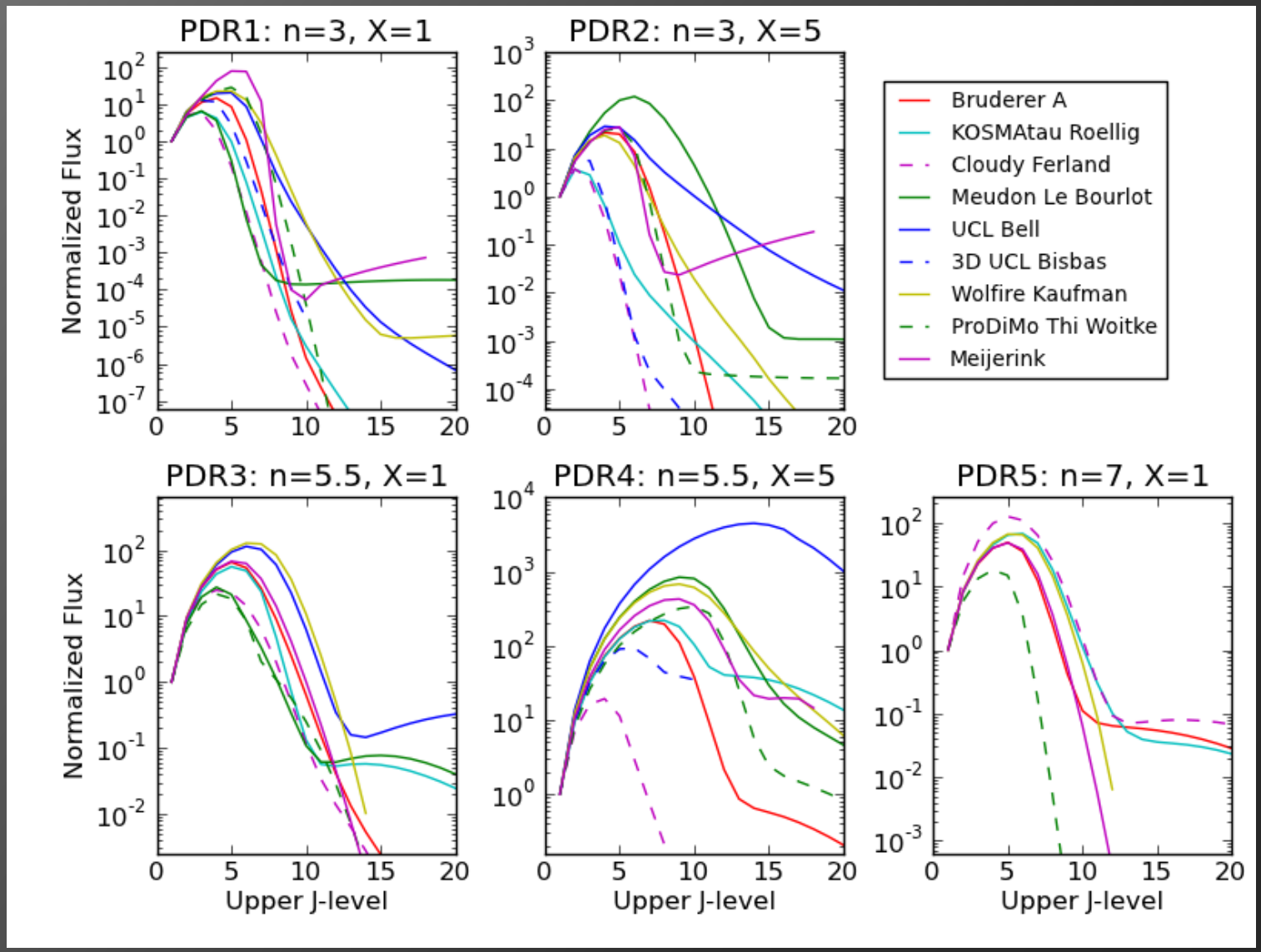
PDRs: after, zoom



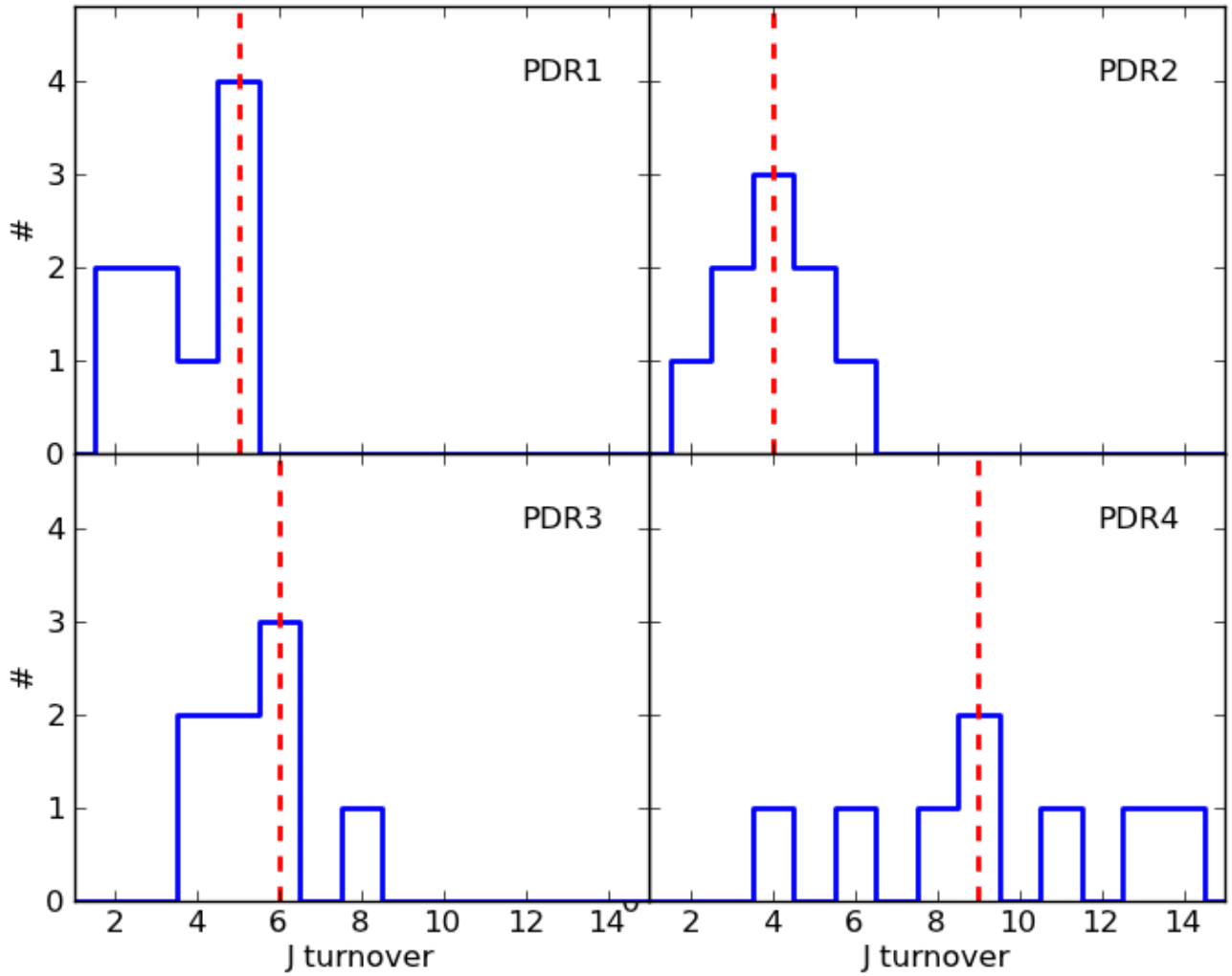
PDRs: before, normalized



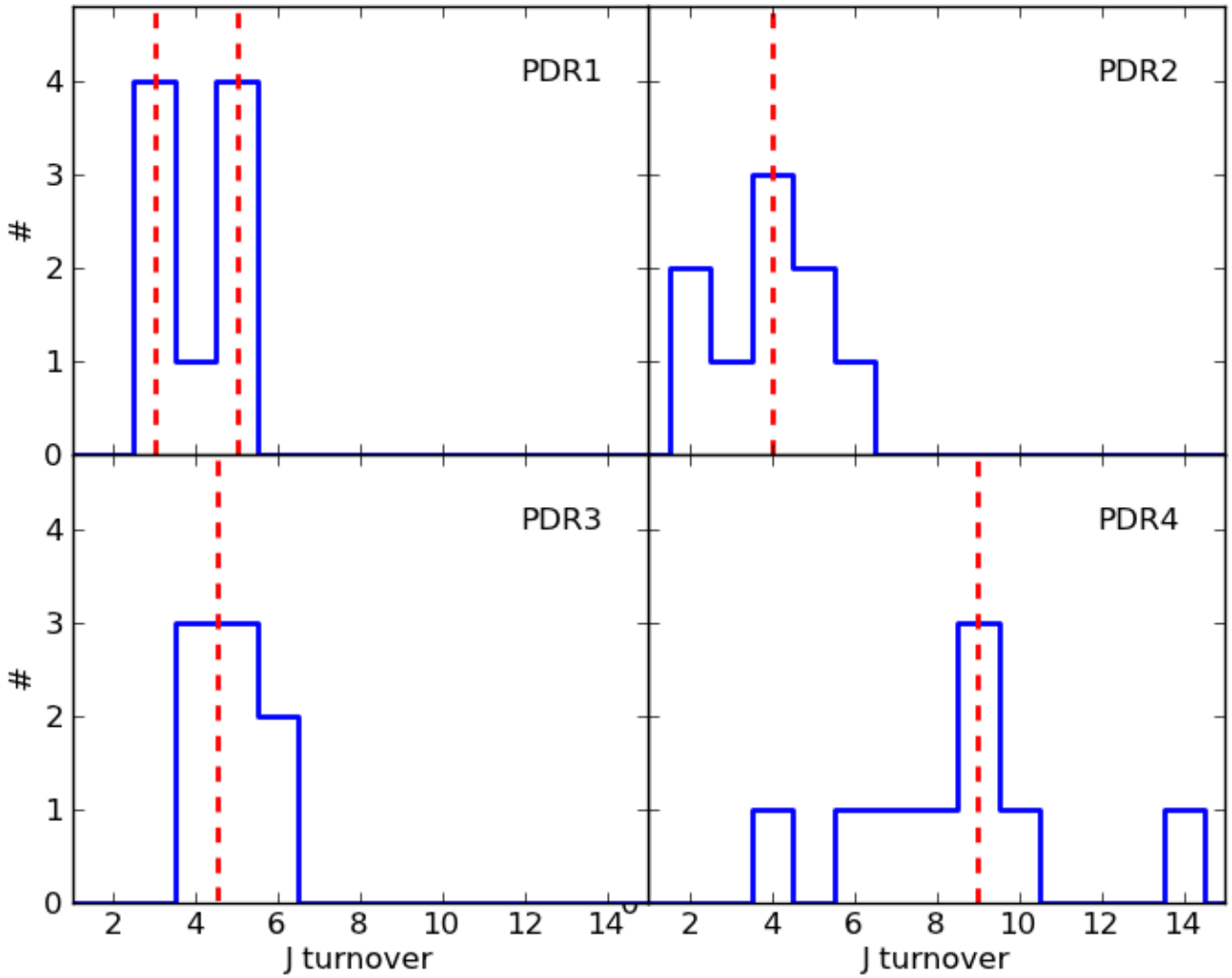
PDRs: after, normalized



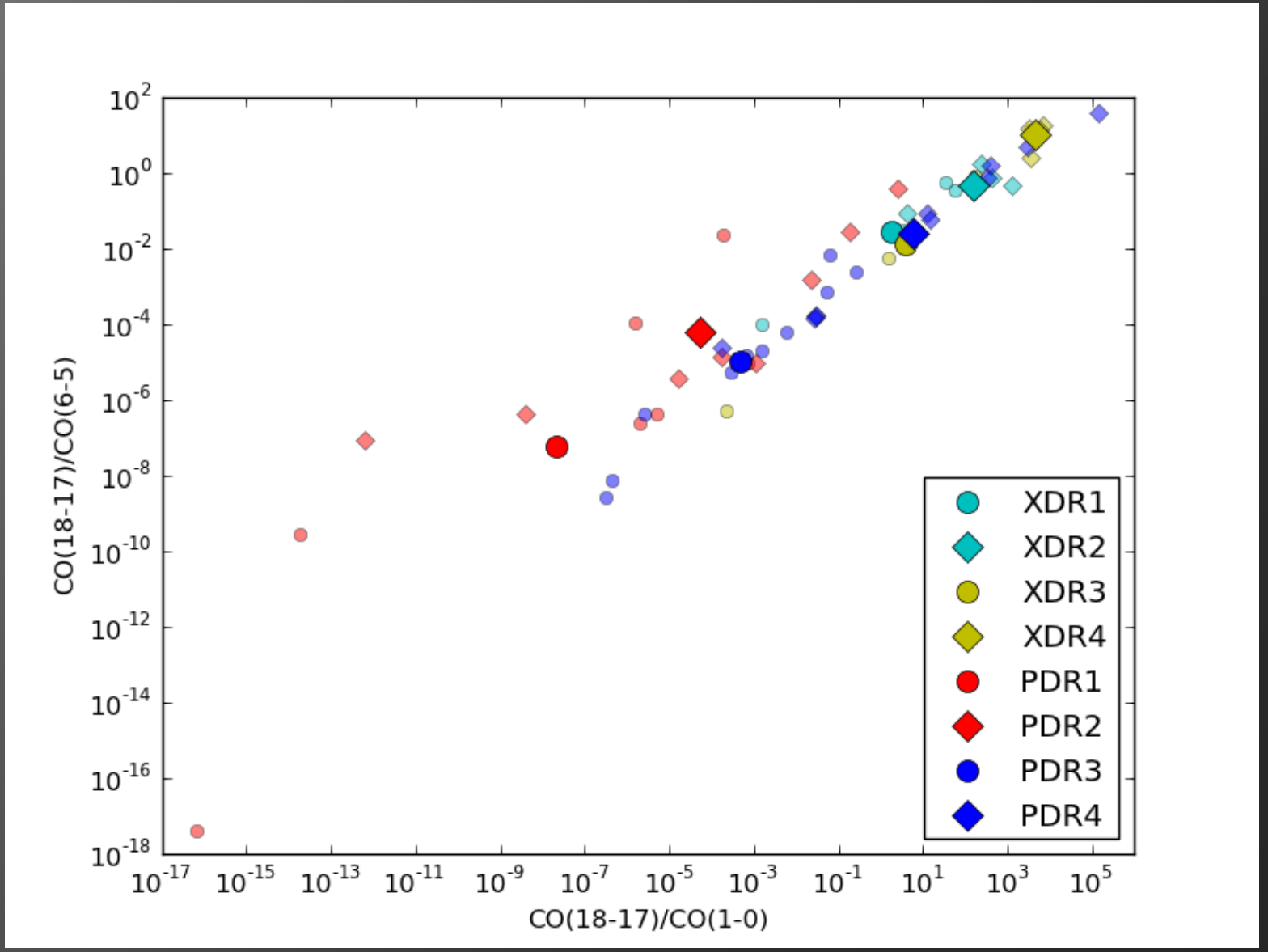
PDRs: turnover point, before



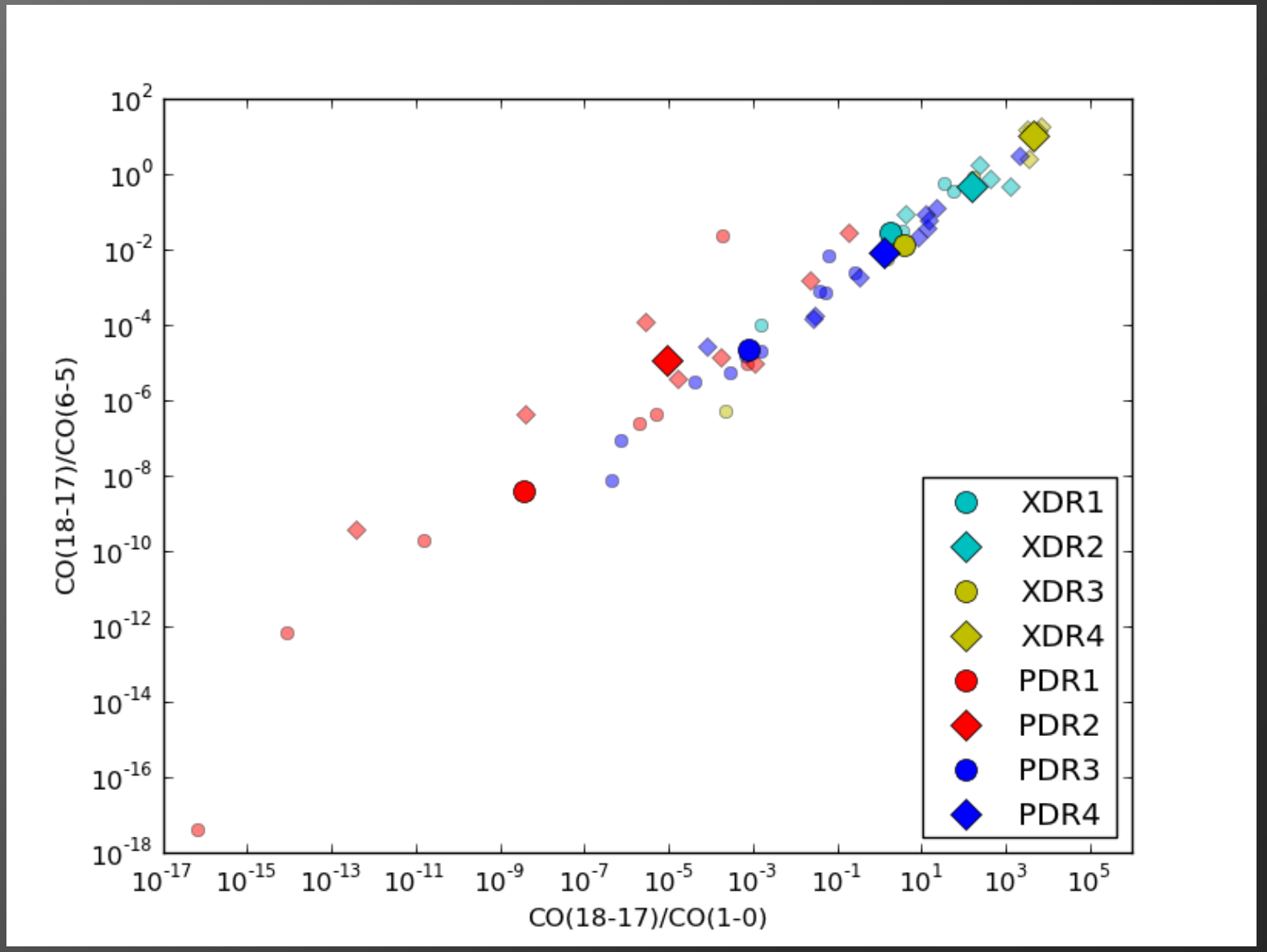
PDRs: turnover point, after



PDRs: ratio plot, before



PDRs: ratio plot, after



So what does this mean?

- Good news:
  - Models are converging, trends are (a bit) clearer
  - There are still differences, but we start to understand them
- Bad news:
  - Determining physical parameters is still difficult
  - Be aware that solutions may not be unique

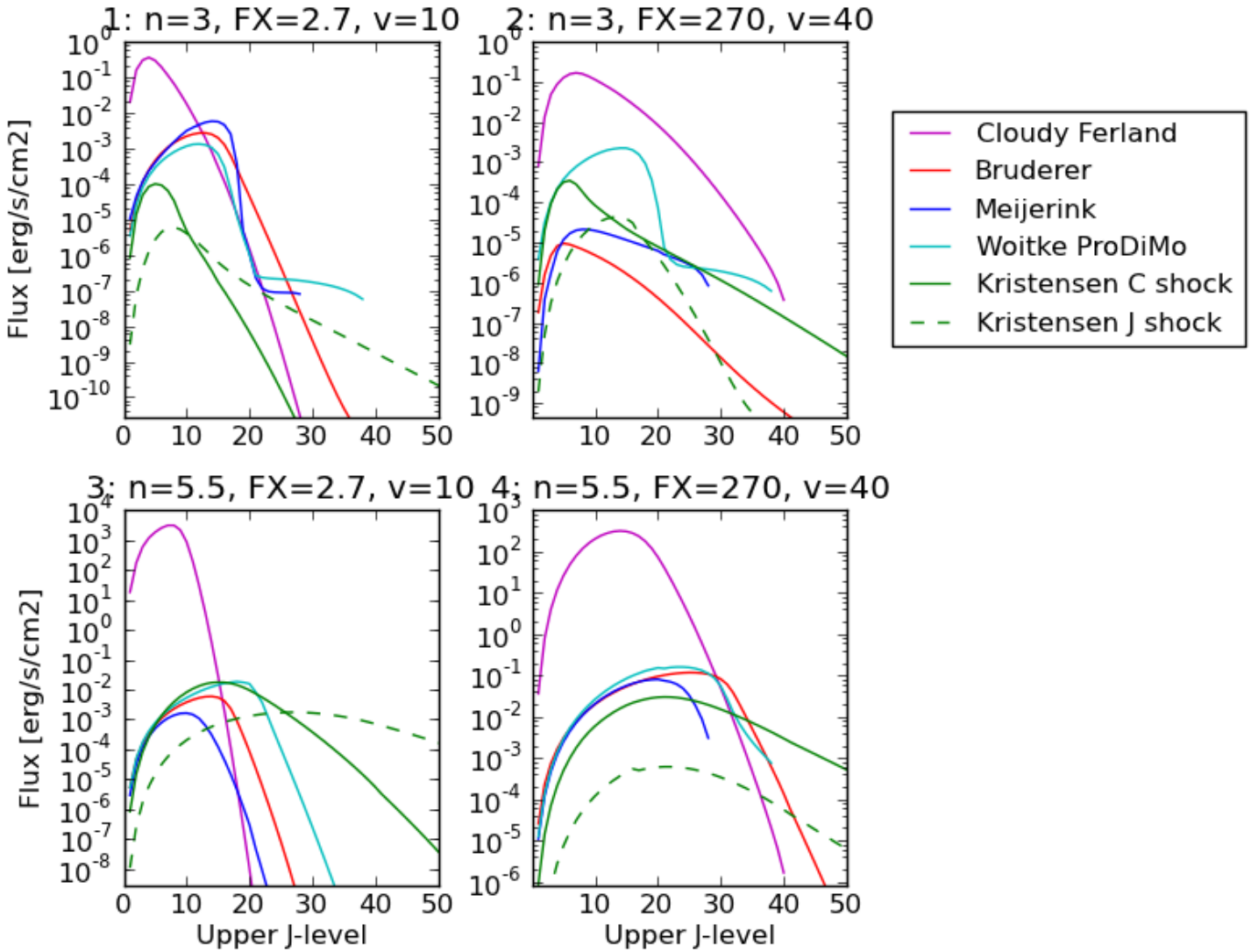
“If you ask a simple question to a complex model, the answer is not necessarily simple”

Extra: XDRs & shocks

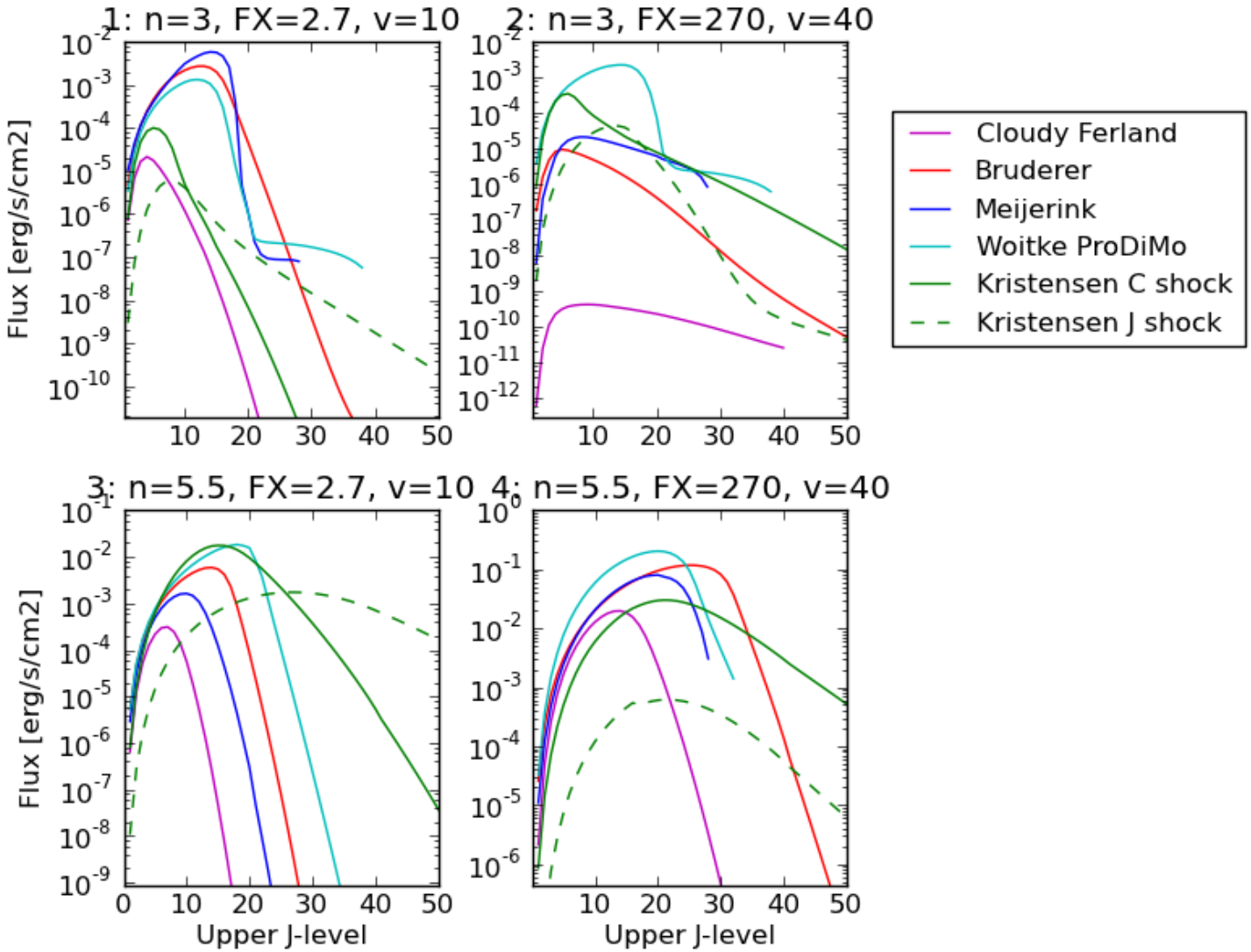
Name	Log density (cm^{-3})	X-ray flux ($erg/s/cm^2$)
XDR1	3	2.7
XDR2	3	270
XDR3	5.5	2.7
XDR4	5.5	270

Name	Log density (cm^{-3})	Velocity (km/s)
J/Cshock1	3	10
J/Cshock2	3	40
J/Cshock3	5.5	10
J/Cshock4	5.5	40

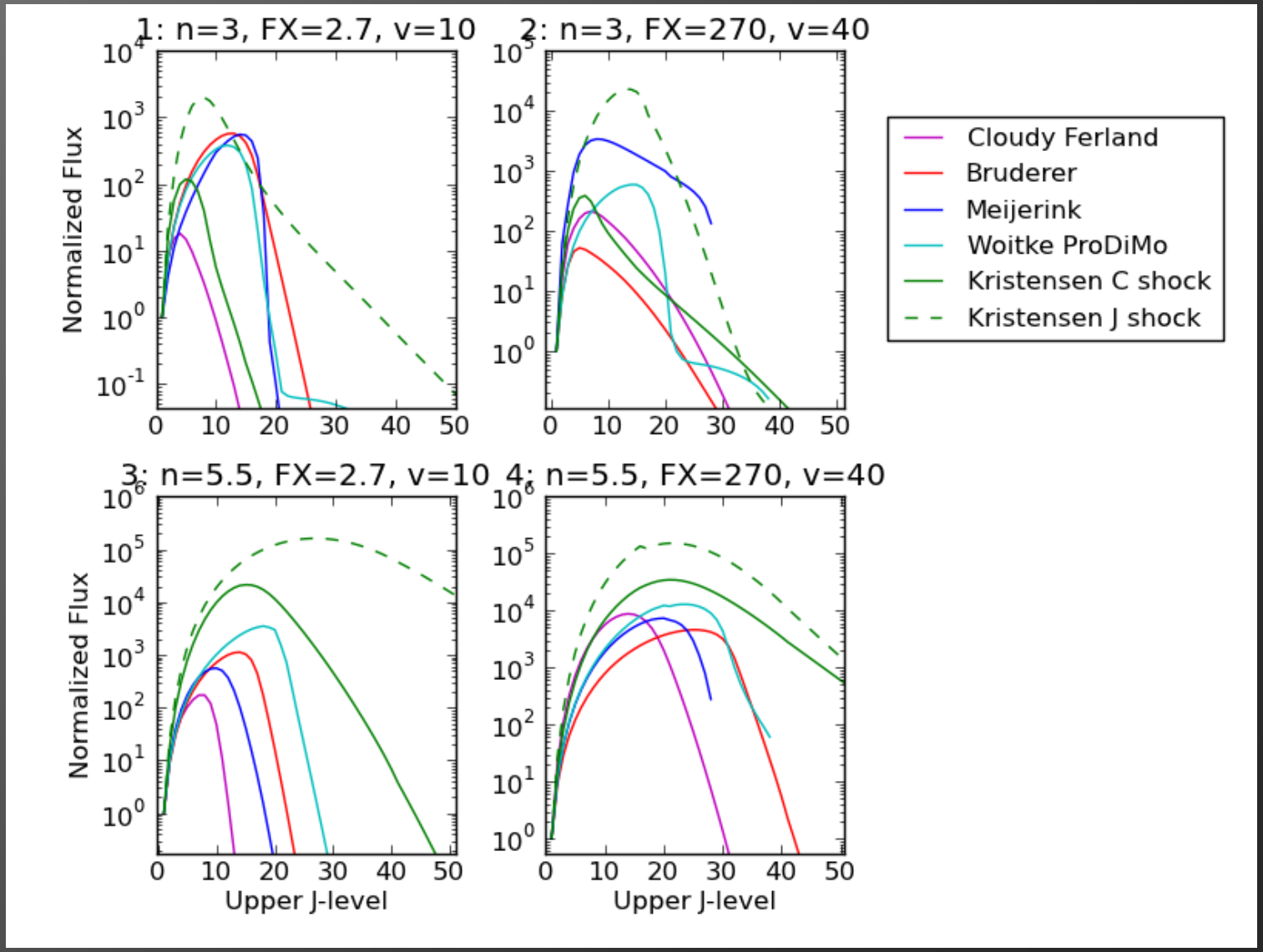
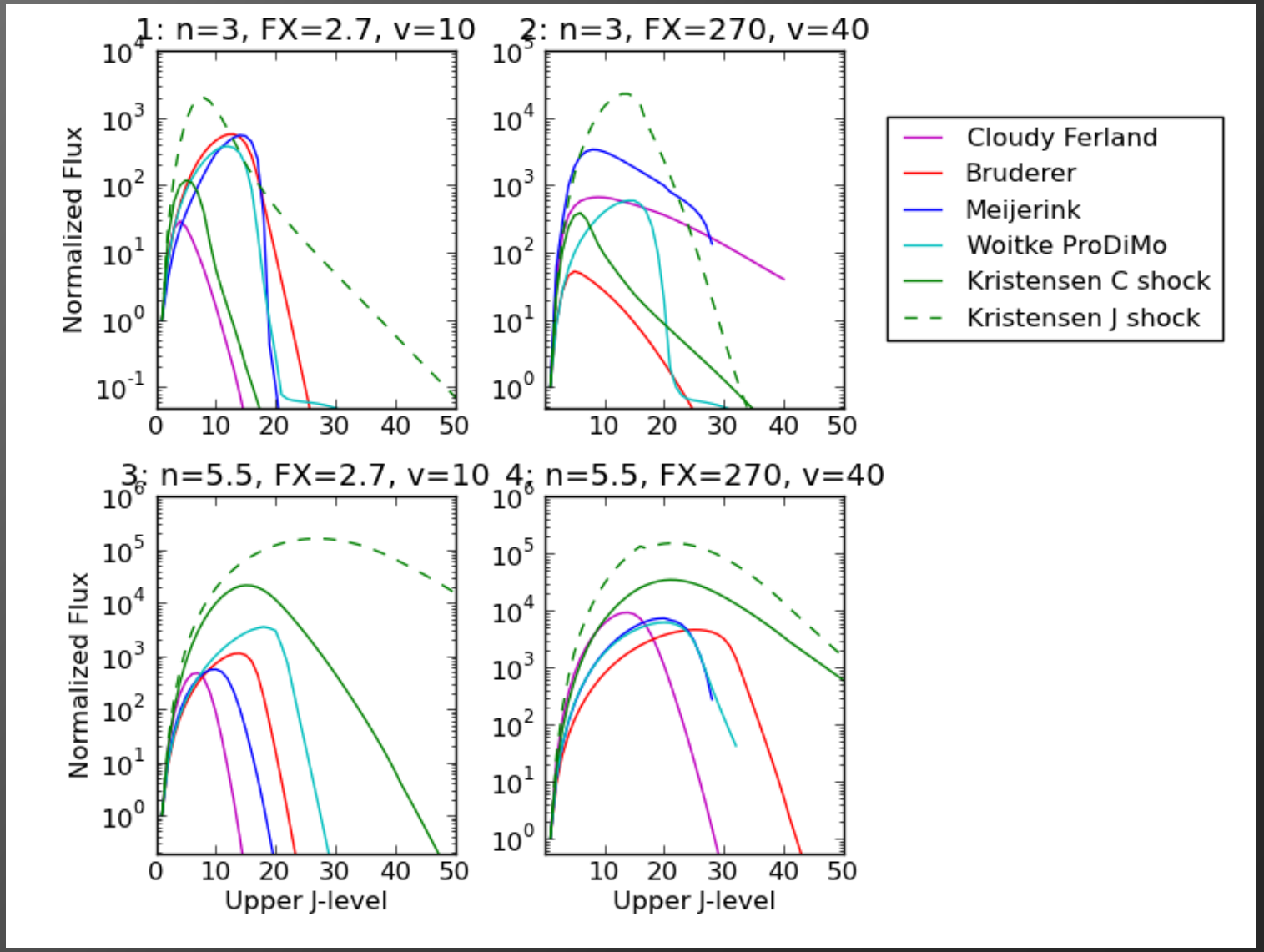
XDRs & shocks: before



XDRs & shocks: after



XDRs & shocks: before, normalized



XDRs & shocks: before, normalized