The First Statistically Significant DLA survey in the UV range: Constraining Hydrogen and metal evolution from redshift 0 to 1.7

Rubén Sánchez-Ramírez and XQ-100, Russian, and Spanish teams

UCM, 27 October 2017

• An *absorption system* is a set of lines at the same redshift, imprinted on the spectrum of a back-illuminated source, that comes from the same absorber.





- Lyman Alpha Forest: log N(HI) < 17.0</p>
- Lyman Limit Systems (LLS): 17.0 ≤ log N(H I) < 19.0</p>
- Sub-Damped Lyman Alpha Systems (subDLA): 19.0 ≤ log N(H1) < 20.3</p>
- Damped Lyman Alpha Systems (DLA): log N(H I) ≥ 20.3

Sánchez-Ramírez+ 2016





Rubén Sánchez-Ramírez et al.

Sánchez-Ramírez+ 2016



Metal enrichment of the Universe

de Cia+ 2017



Noterdaeme+ 2015

