

The Bright Extragalactic ALMA Redshift Survey (BEARS) 1: redshifts of bright gravitationally-lensed galaxies from the *Herschel* ATLAS and the importance of open access data

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We present spectroscopic measurements for 71 galaxies associated with 62 of the brightest high-redshift submillimeter sources from the Southern fields of the *Herschel* Astrophysical Terahertz Large Area Survey (H-ATLAS), while targeting 85 sources which resolved into 142. We have obtained robust redshift measurements for all sources using the 12-m Array and an efficient tuning of ALMA to optimise its use as a redshift hunter, with 73 per cent of the sources having a robust redshift identification. Nine of these redshift identifications also rely on observations from the Atacama Compact Array. The spectroscopic redshifts span a range $1.41 < z < 4.53$ with a mean value of 2.75, and the CO emission line full-width at half-maxima range between $110 \text{ km s}^{-1} < \text{FWHM} < 1290 \text{ km s}^{-1}$ with a mean value of 500 km s^{-1} in line with other high- z samples. The derived CO(1-0) luminosity is significantly elevated relative to line-width to CO(1-0) luminosity scaling relation, which is suggestive of lensing magnification across our sources. In fact, the distribution of magnification factors inferred from the CO equivalent widths is consistent with expectations from galaxy-galaxy lensing models, though there is a hint of an excess at large magnifications that may be attributable to the additional lensing optical depth from galaxy groups or clusters. Science ready data products are available on the ALMA science archive following the FAIR principles of the European Open Science Cloud.