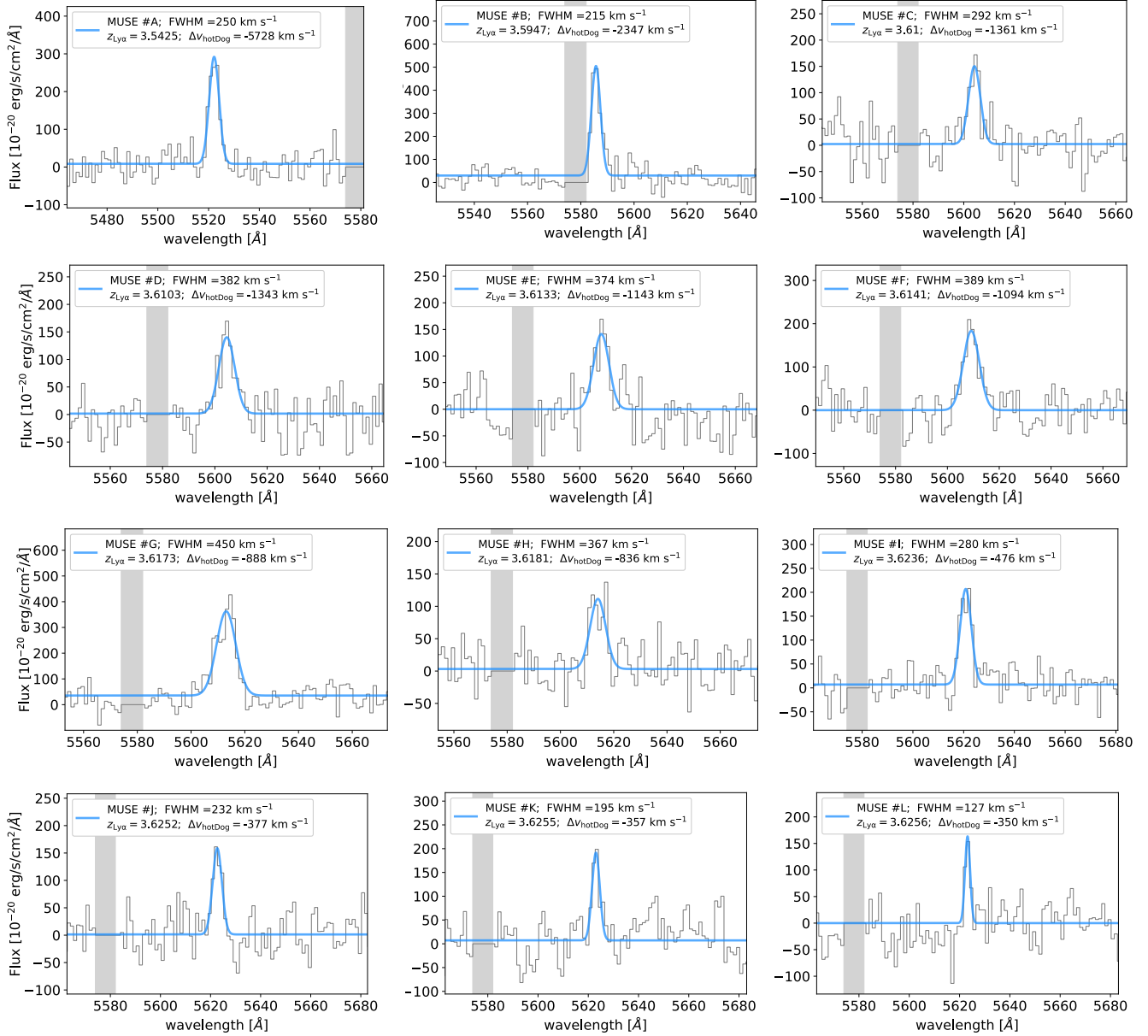
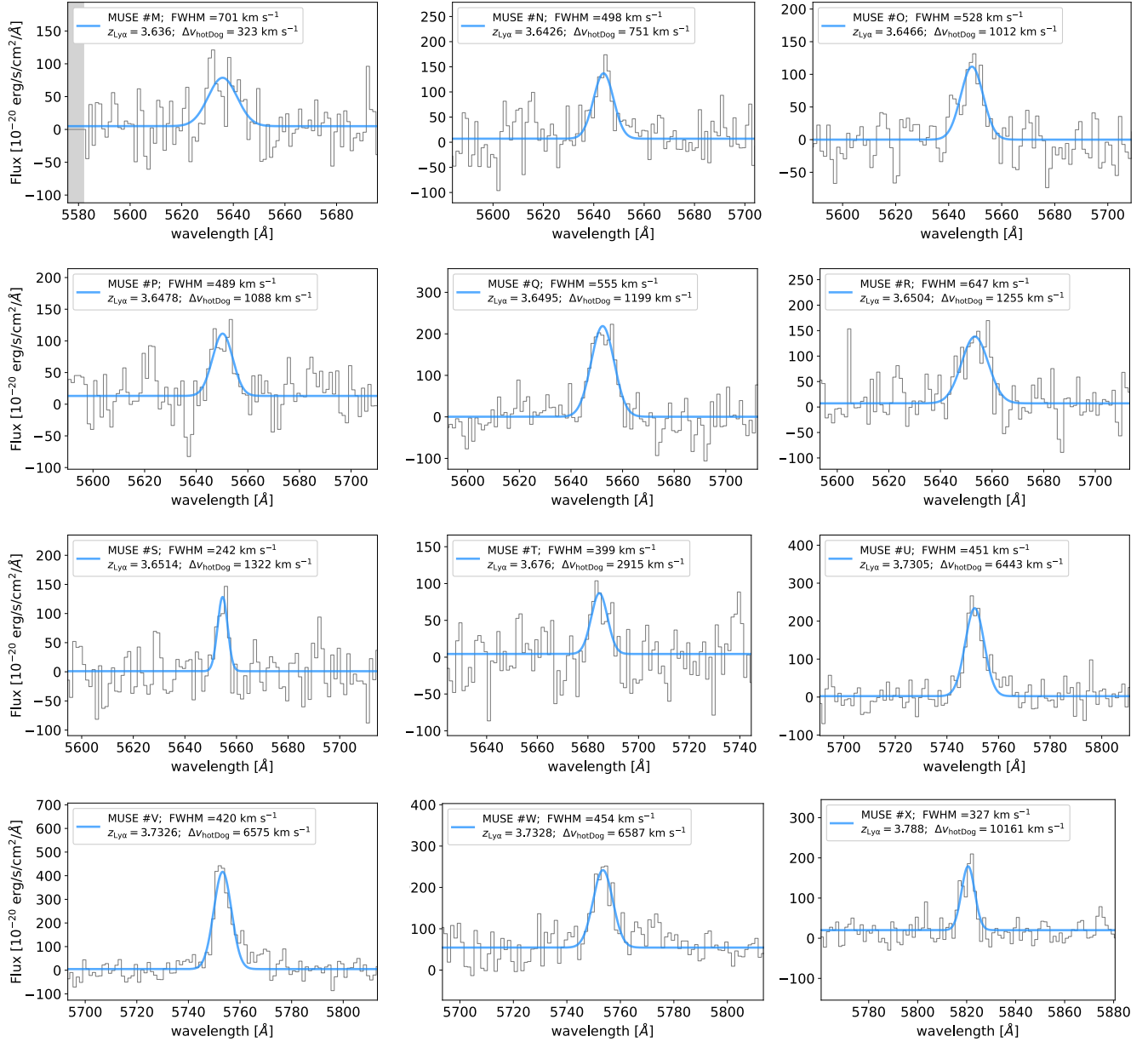


Supplementary Information: **Detection of companion galaxies around hot dust-obscured hyper-luminous galaxy W0410-0913**

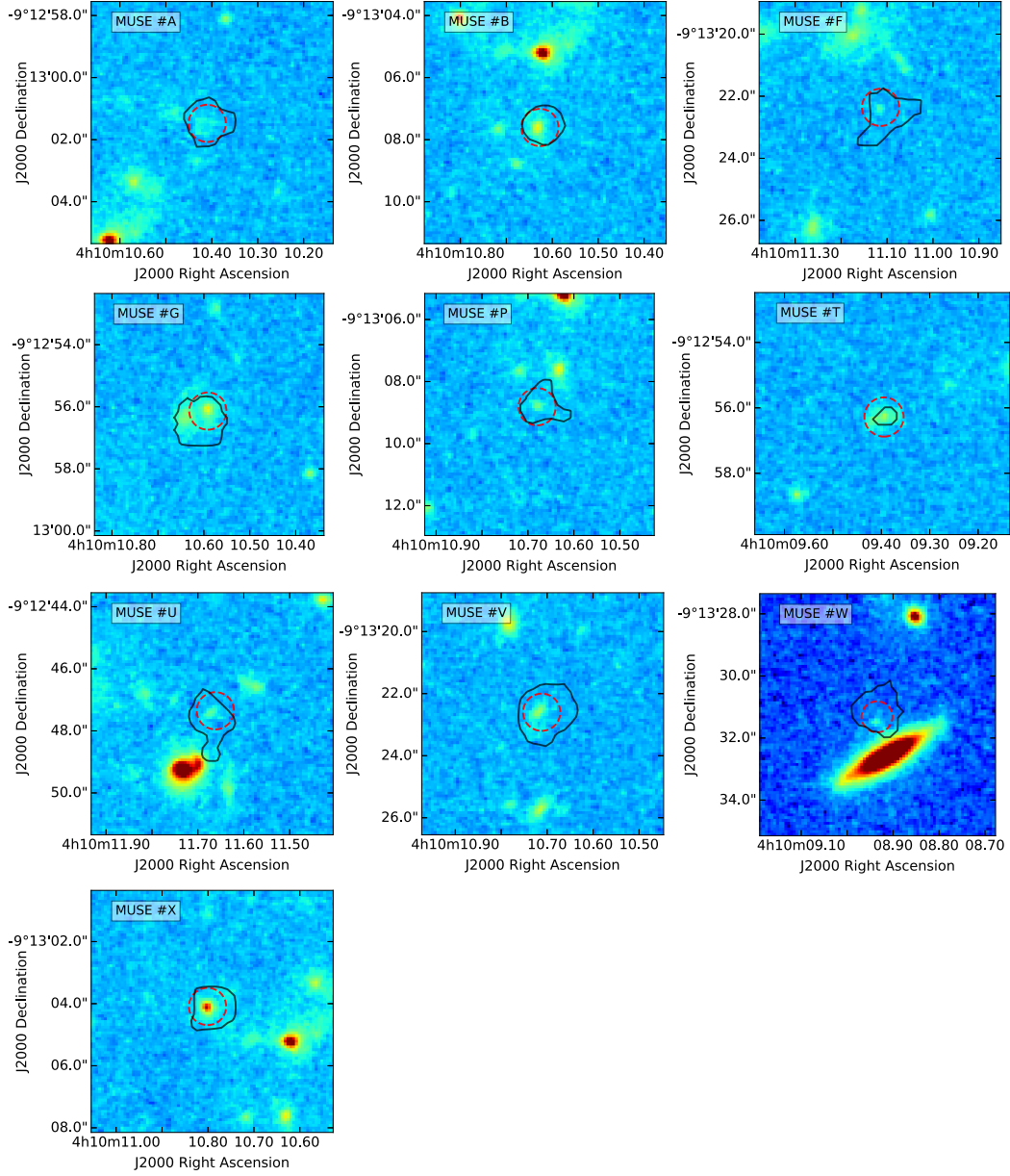
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Supplementary Figure 1. Lyman- α spectra of the companion galaxies discovered with MUSE in the surrounding environment of W0410-0913. Lyman- α spectra, extracted from circular regions with a radius of $1''$ and centered around the Lyman- α peaks, are shown in gray. The wavelength range in the x-axis has a width of $120 \text{ \AA}$ and is centered around the central wavelength obtained through a Gaussian fit (Gaussian models are shown in blue). Legends report the redshift of each source (derived through Lyman- α), their FWHM, and their offset velocity with respect to the systemic redshift of the central luminous object. Gray shaded areas represent the regions affected by sky lines. See Table 1 for the definition of IDs and a summary of the measured properties of the Lyman- α emitters. Figure continues in Supplementary Figure 2.



Supplementary Figure 2. Lyman- α spectra of the companion galaxies discovered with MUSE in the surrounding environment of W0410-0913. Lyman- α spectra, extracted from circular regions with a radius of $1''$ and centered around the Lyman- α peaks, are shown in gray. The wavelength range in the x-axis has a width of $120 \text{ \AA}$ and is centered around the central wavelength obtained through a Gaussian fit (Gaussian models are shown in blue). Legends report the redshift of each source (derived through Lyman- α), their FWHM, and their offset velocity with respect to the systemic redshift of the central luminous object. Gray shaded areas represent the regions affected by sky lines. See Table 1 for the definition of IDs and a summary of the measured properties of the Lyman- α emitters. Figure starts in Supplementary Figure 1.



Supplementary Figure 3. Maps of the HST-detected companion galaxies. The HST cutouts ($4'' \times 4''$) of the Lyman- α emitters detected with the WFC3/F160W filter are shown (colored images). The 2σ contours of pseudo-NB Lyman- α images obtained with MUSE are overlaid in black. Red dashed circles represent the circular apertures with $1''$ -sized radii that we use to extract the HST flux and estimate the SFR.