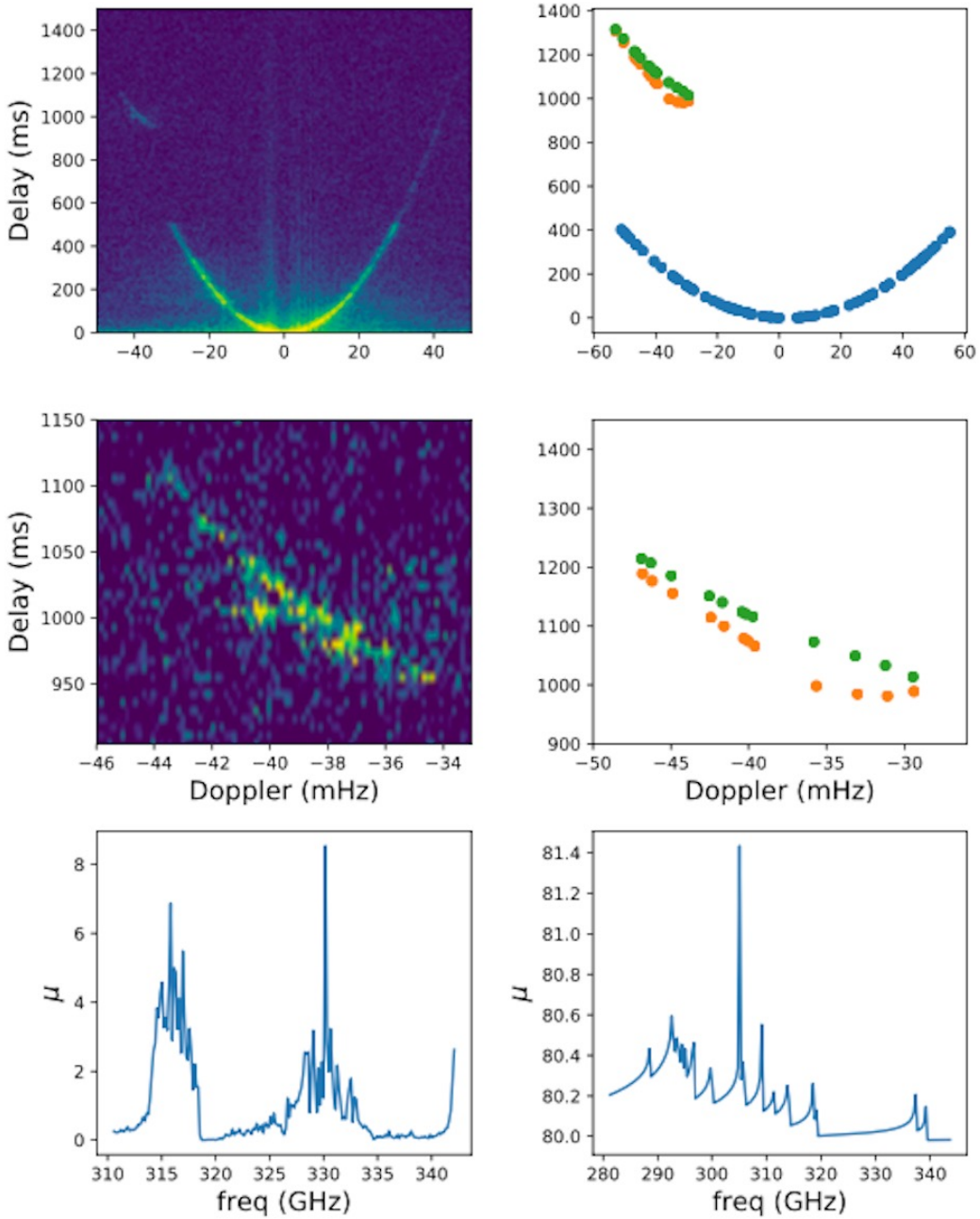

Figure 9. The left column shows data for an observation of PSR B0834+06. The top panel shows the conjugate wave-field of the observation in Doppler-delay space. The middle panel is the same as the top panel, zoomed in on the millisecond-delay feature associated with the ESE lens. The bottom panel shows the sum of the power in the conjugate wave-field of the millisecond wave-field as a function of frequency, normalized to unity when the signal falls below the noise threshold. This is taken as a proxy for the magnification induced by the lens. The top and middle panel of the right column shows the location of the images in Doppler-delay space for our double lensing model with an A_3 lens plus a primary scattering screen. We choose the dimensionless parameters $\alpha = 0.7$, $\sigma = 0.05$, $\nu = 31,000$, $D = 5$, $y_1 = 0$, $y_2 = 11$, and the direction of the velocity to be $\frac{\partial \boldsymbol{\nu}}{\partial t} \parallel [1, 0.1]$. The locations of the images on the scattering screen are chosen to be distributed uniformly over $z_1 \in [-16, 16]$. To convert to dimensionful parameters, we choose $f = 311\,\mathrm{MHz}$, $d_{01} = 389\,\mathrm{pc}$, $d_{02} = 415\,\mathrm{pc}$, and $d_{03} = 620\,\mathrm{pc}$ and a physical scale of the lens $\ell = 1\,\mathrm{AU}$. The magnitude of the velocity is chosen to be $23\,\mathrm{km\,s^{-1}}$. These parameters correspond to an amplitude of the plasma under-density of $\Sigma_2^* \sim 0.0001\,\mathrm{pc\,cm^{-3}}$ (note that the maximum density at the fold is about an order of magnitude higher than this). Since we choose the two lenses to be perpendicular to each other, it is well-defined to identify each image with one of the three images produced by the A_3 lens: distinguished in the figure by the green, orange, and blue colours. The bottom right panel shows the total flux of the green and orange images (the images associated with the millisecond feature) as a function of frequency.