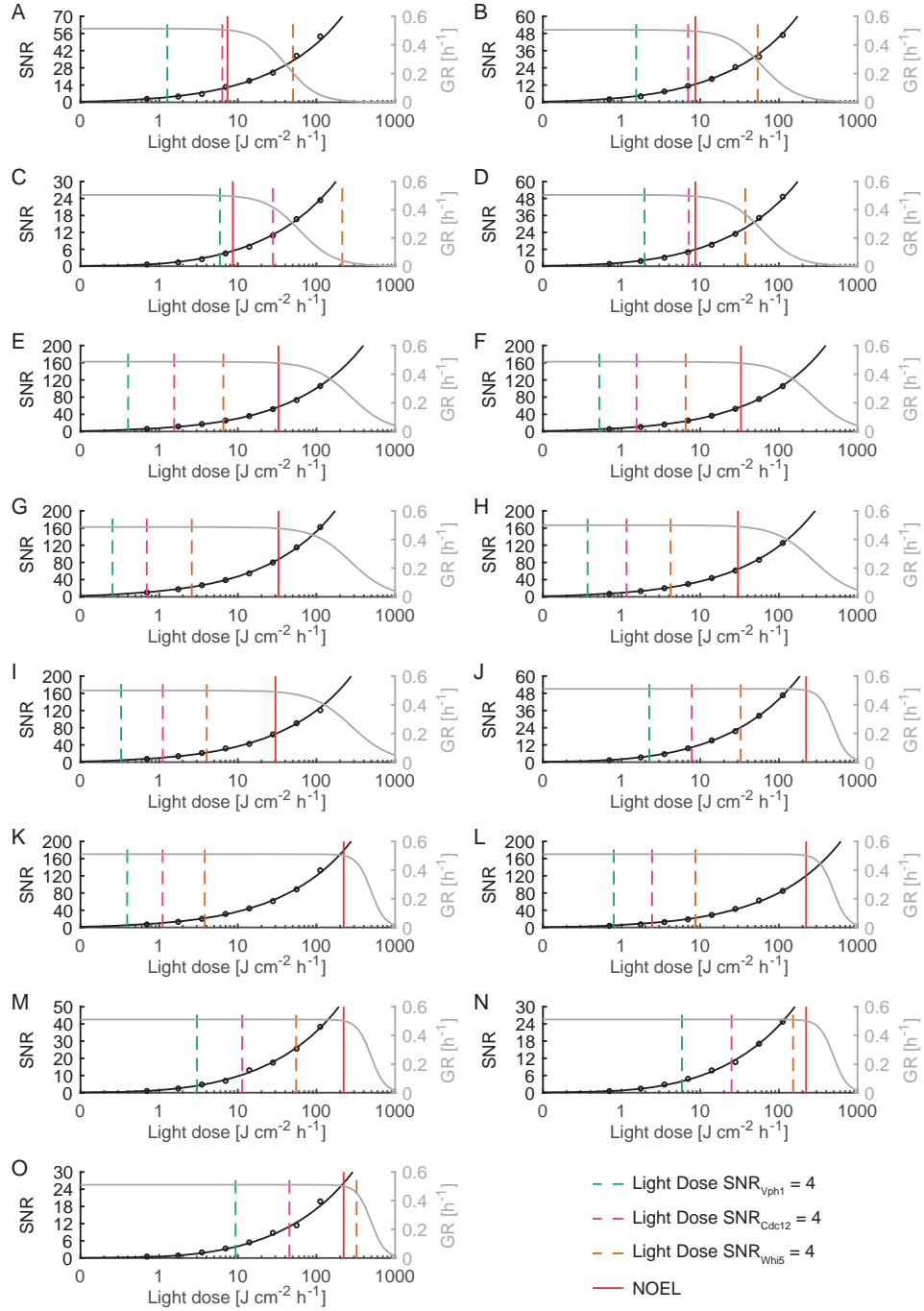


**Figure S20: Relationship between photomorbidity of excitation light and quality of fluorescence images obtained with different fluorescent proteins.**



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**Figure S20** (*previous page*)

A-O: The measured SNR (black circles) and calculated SNR (black lines) of images obtained using Vph1-fusions is plotted against the light dose (light dose based on 5 min interval time). The light doses necessary to reach an SNR of four for Vph1, Cdc12 and Whi5 fusions with the respective fluorescent protein were calculated (dashed lines). The fit of the previously measured photomorbidity curve of the respective excitation light and the corresponding NOEL is plotted against the light dose (gray and red line). A: t-Sapphire, B: mAmetrine, C: mTFP1, D: mTurquoise2, E: sfGFP, F: eGFP, G: mNeongreen imaged in GFP channel, H: mNeongreen imaged in Citrine channel, I: Citrine, J: mRuby2, K: tdKO $\kappa$ , L: mKO $\kappa$ , M: mKate2, N: mCardinal, O: mNeptune2

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