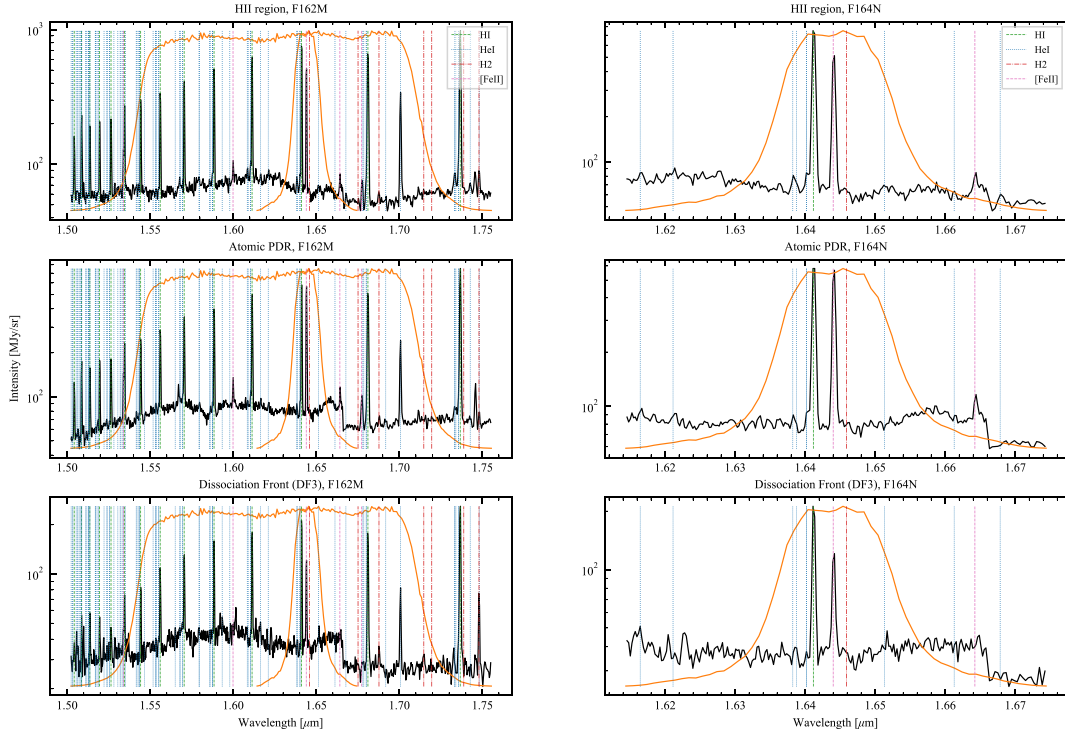




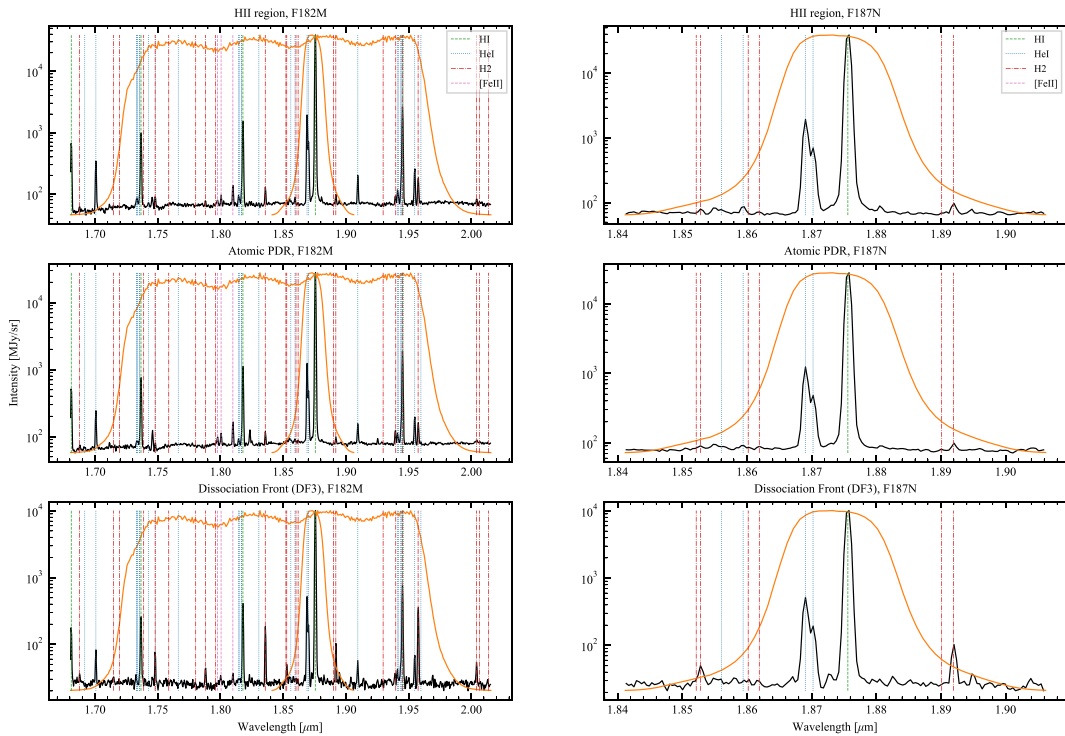
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## Appendix A: Contribution of lines and AIBs in imaging bands

Figs. A.1 to A.7 show the three template spectra in Peeters et al. (2023), illustrating the variation of the contribution of different lines into each imaging band. More detailed analysis with a full set of lines will be presented in the science enable product and the associated article (Chown et al. 2023).



**Fig. A.1.** Three template spectra (from top to bottom) shown in Peeters et al. (2023) in the range covered by F162M (left) and F164N (right). Response functions of the filters are shown with thin orange lines. Expected positions of HI, HeI, H<sub>2</sub>, and [FeII] lines are marked.



**Fig. A.2.** Same as Fig. A.1, but for F182M (left) and F187N (right).

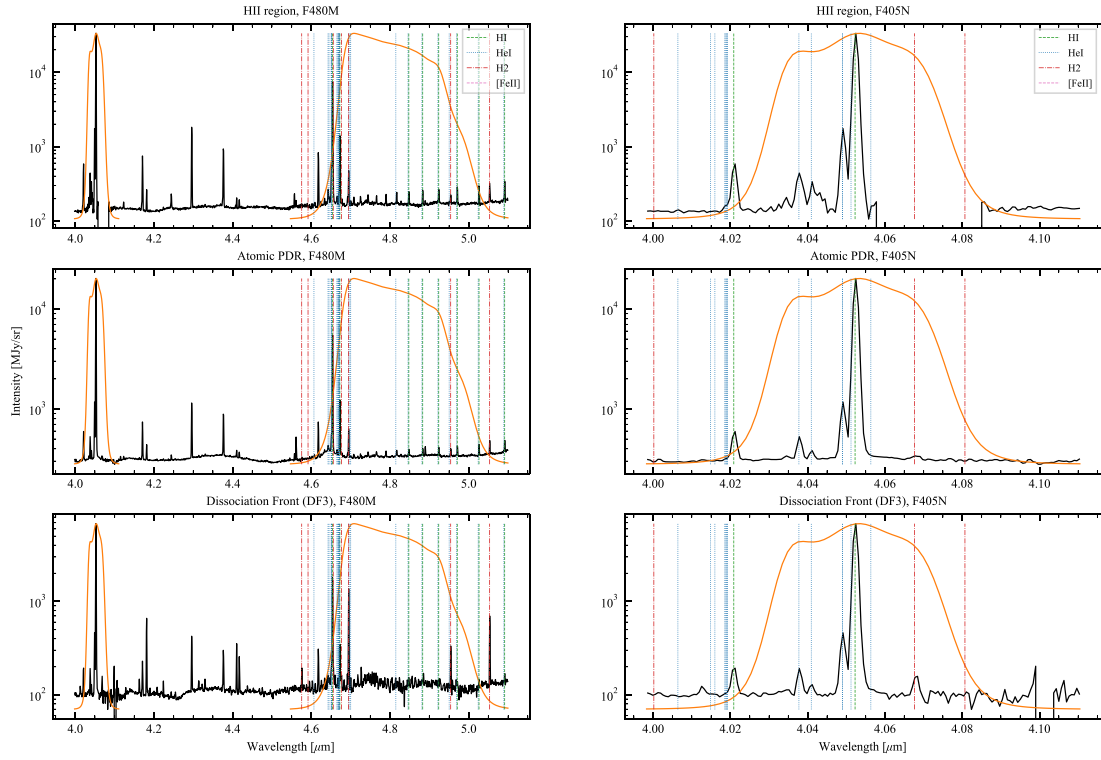


Fig. A.3. Same as Fig. A.1, but for F480M (left) and F405N (right).

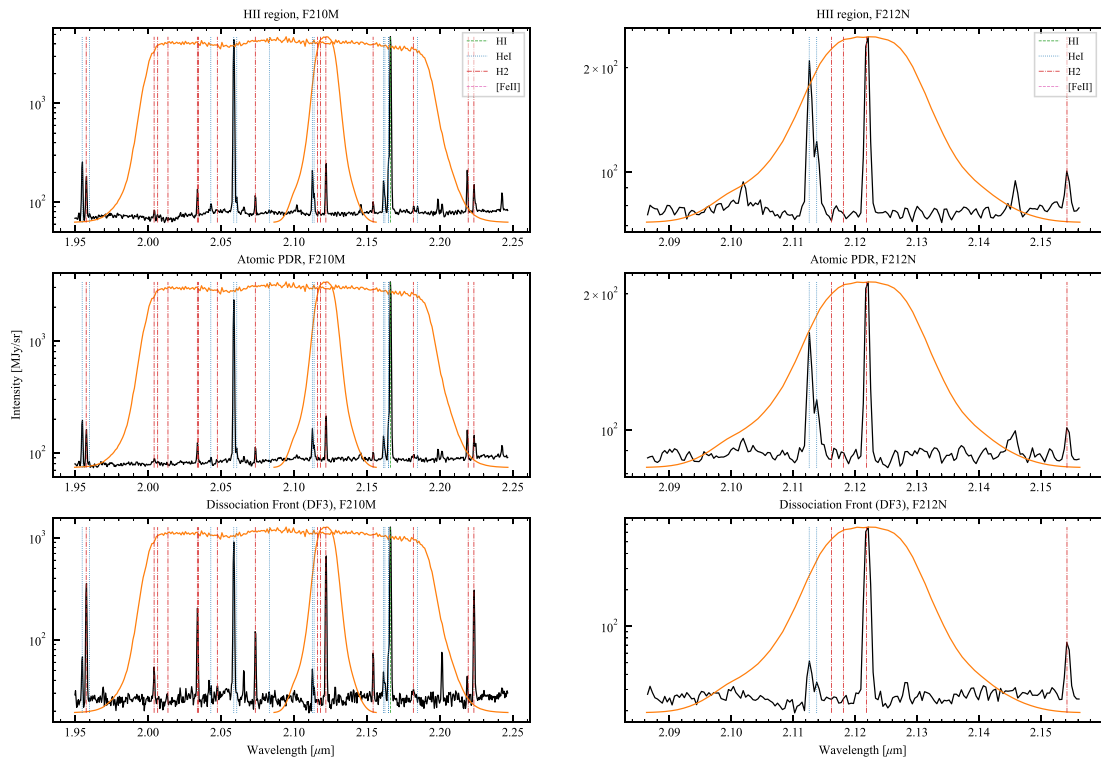


Fig. A.4. Same as Fig. A.1, but for F210M (left) and F212N (right).

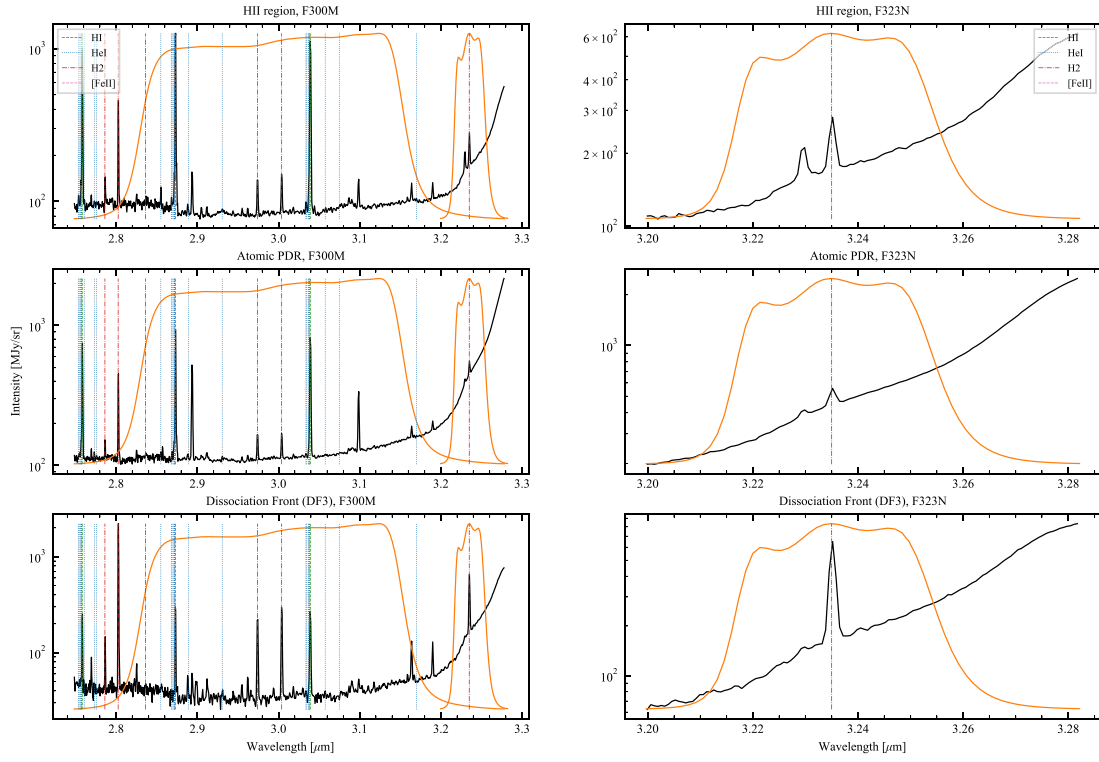


Fig. A.5. Same as Fig. A.1, but for F300M (left) and F323N (right).

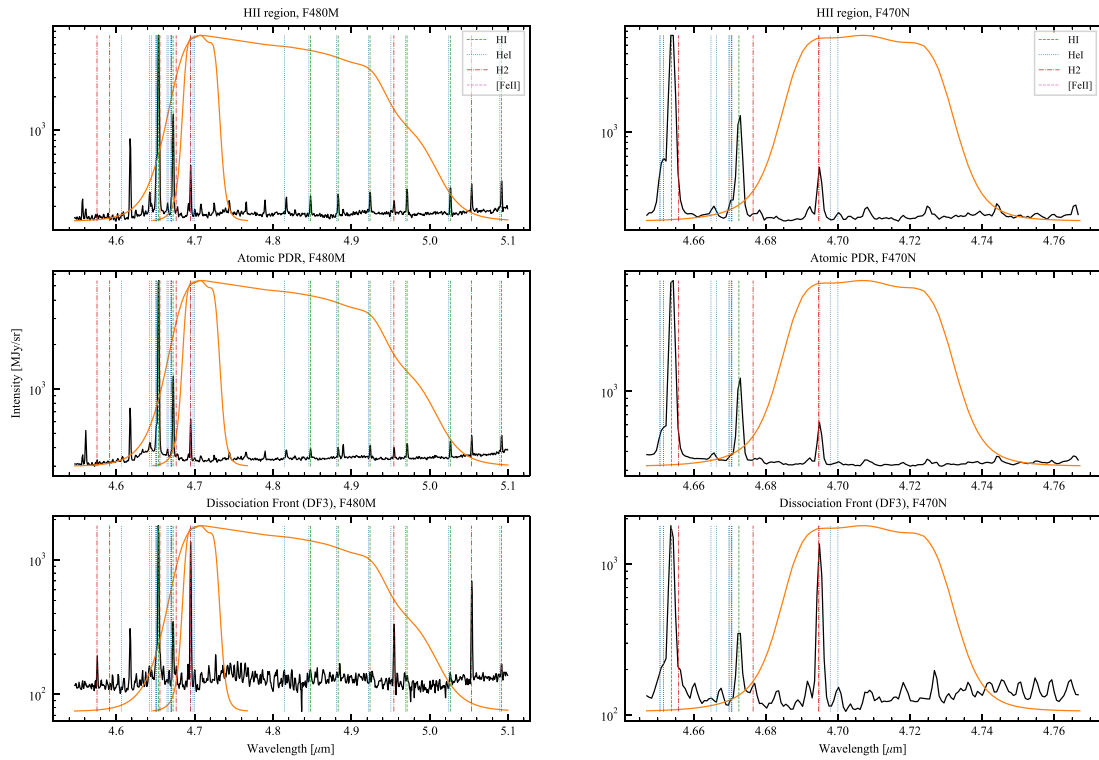


Fig. A.6. Same as Fig. A.1, but for F480 (left) and F470N (right).

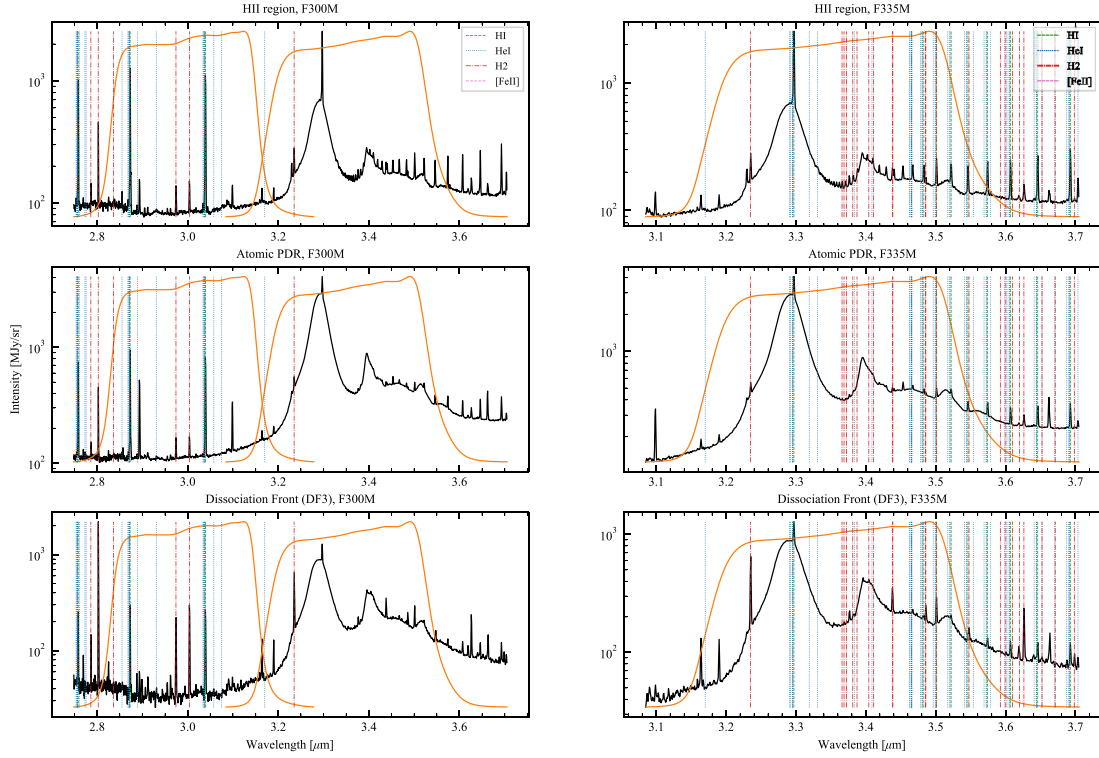
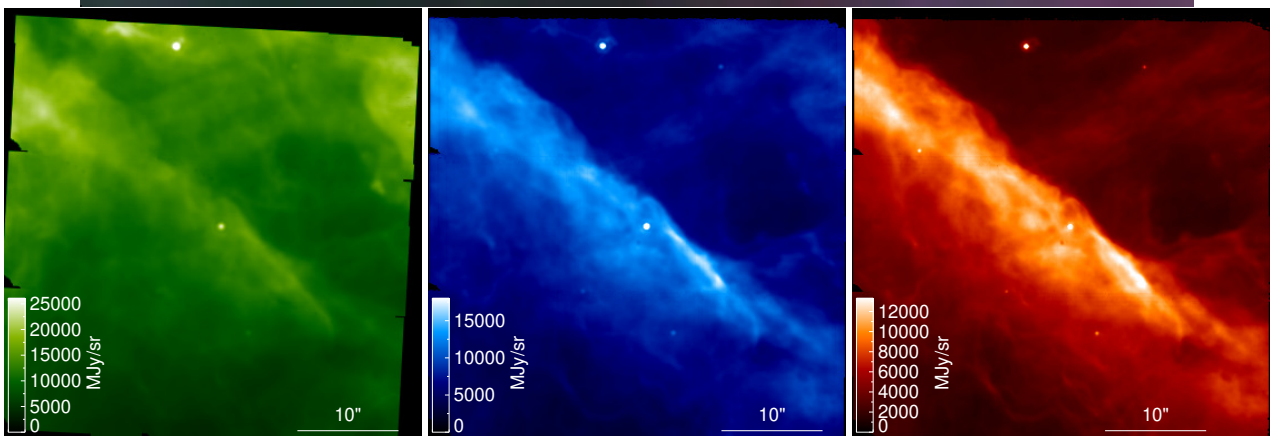
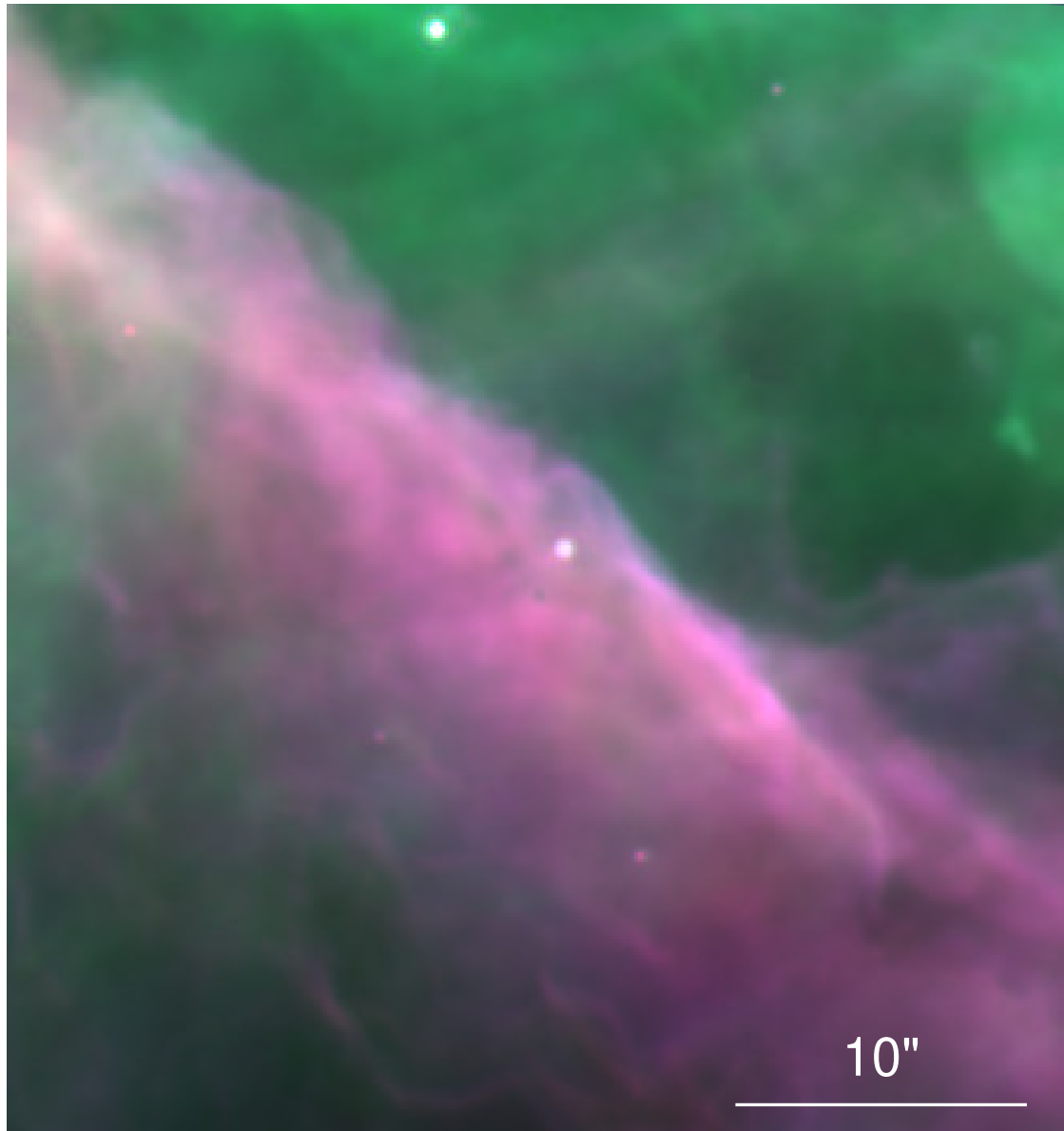


Fig. A.7. Same as Fig. A.7, but for F300M (left) and F335M (right).

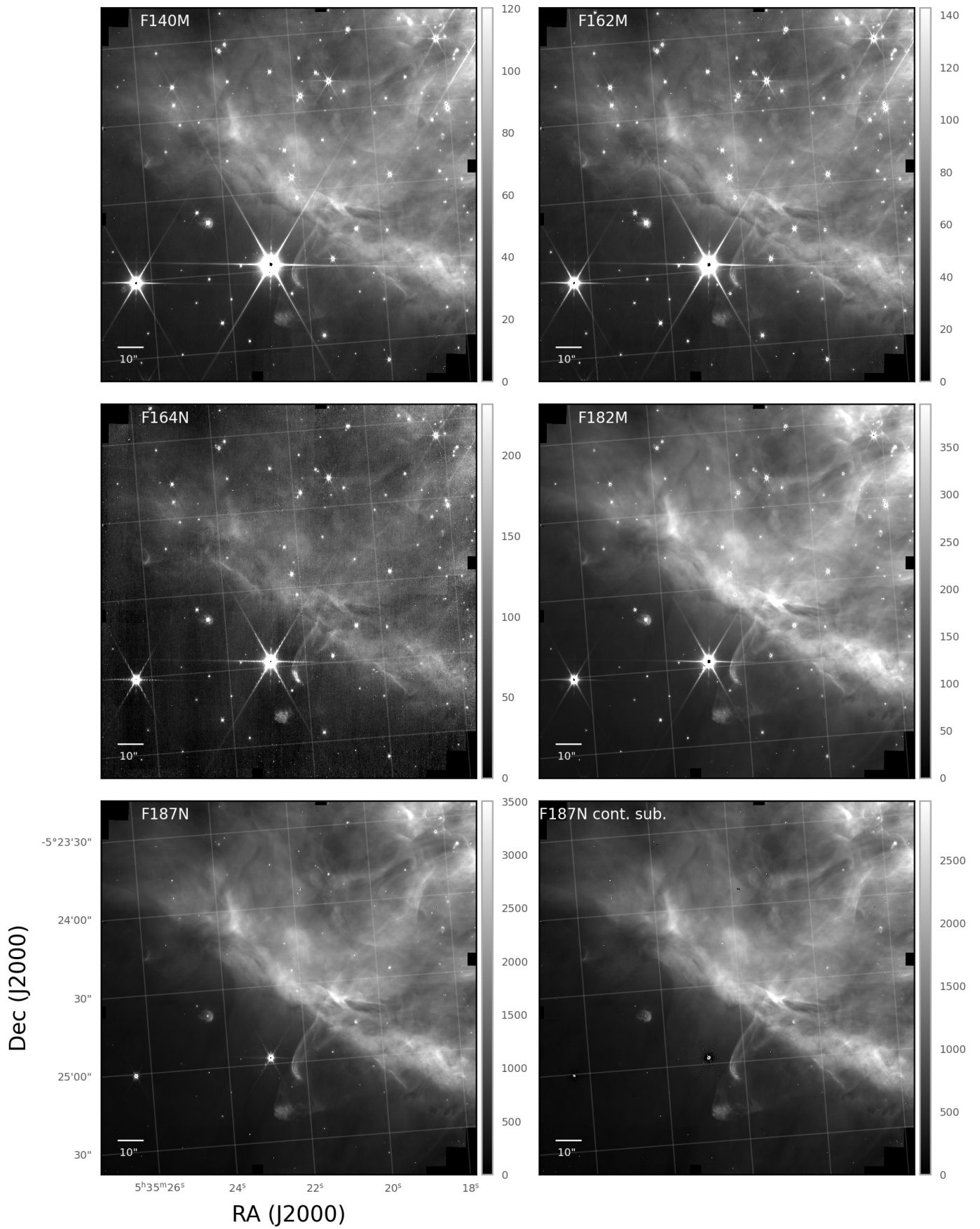
## Appendix B: JWST and ground-based telescopes images of the Bar

Fig. B.1 shows the composite MIRI images of the southwest part of Bar. This region designated the "SW Bright Bar" in O'Dell et al. (2017b) presents the sharpest ionization front of the Bar. Its structure and physical conditions near the MIF are studied in detail from HST, MUSE and velocity data in their Section 4.3.

Figs. B.2-B.4 present all NIRCcam images of the Bar obtained in the filters listed in Table 1, and some filters continuum subtracted. Fig. B.5 shows for the southwestern part of the Bar NIRCAM map of the 0-0 S(9) H<sub>2</sub> line at 4.69  $\mu\text{m}$ , Keck/NIRC2 map of the 1-0 S(1) H<sub>2</sub> line at 2.12  $\mu\text{m}$ , and ALMA maps of the HCO<sup>+</sup> J=4-3 and CO J=3-2 lines.



**Fig. B.1.** Southwestern part of Bar as seen by the JWST's MIRI instrument with north up and east left. Several images in different filters were combined to produce an RGB composite image: *F1500W* (green), *F1130W* (blue) and *F770W* (red) that traces respectively continuum emission from hot/warm dust and hydrocarbons (AIBs). The individual images used to make the RGB composite one are shown below. The size of the images is  $\sim 42'' \times 42''$  and it is centered on RA=05<sup>h</sup>35<sup>m</sup>20<sup>s</sup>.33, DEC=-05°25'03.77" very close the irradiated proto-planetary disk 203-504.



**Fig. B.2.** NIRCcam maps of the Bar in different filters. Units are in MJy/sr.

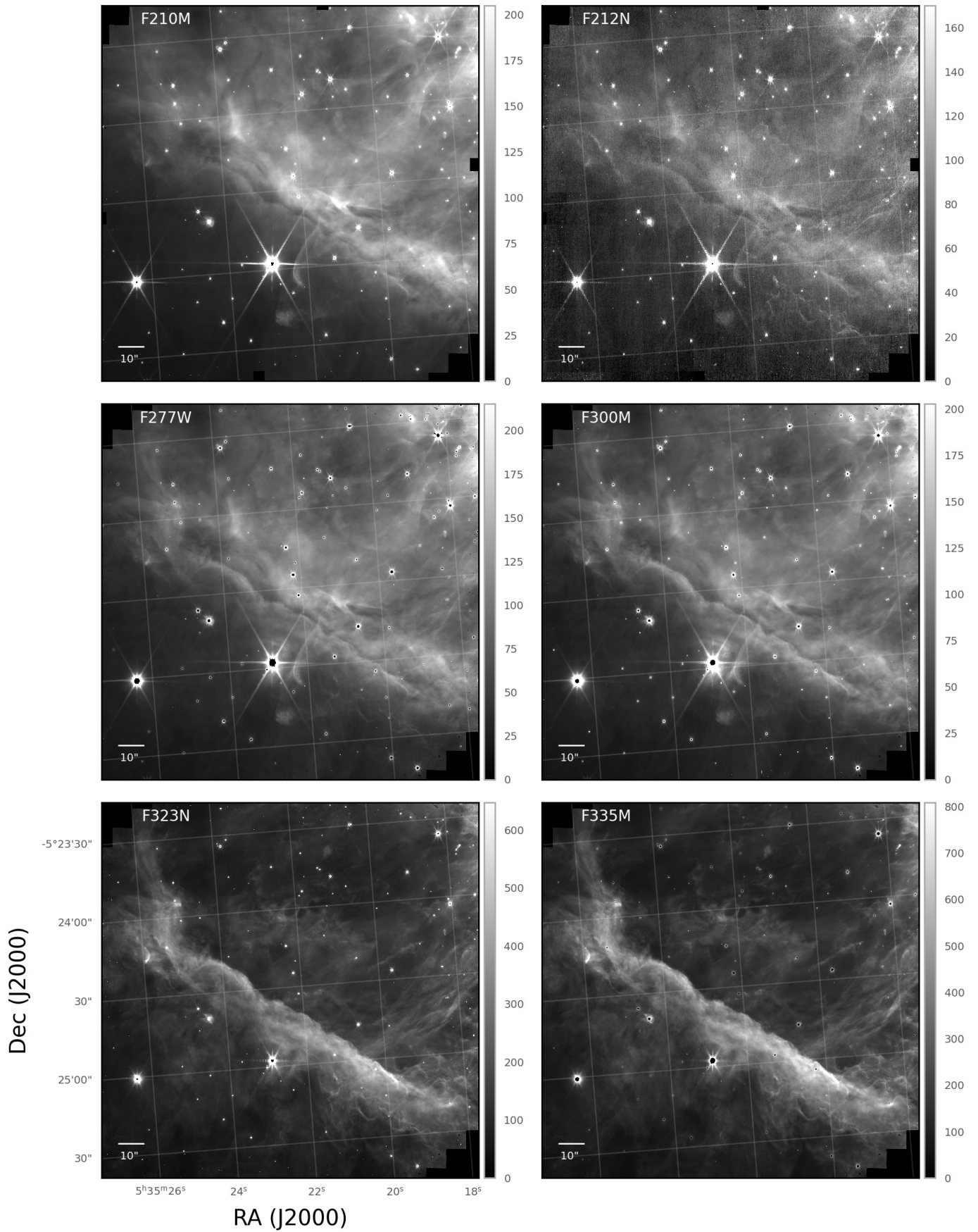


Fig. B.3. Same as Fig. B.2, but for other filters.

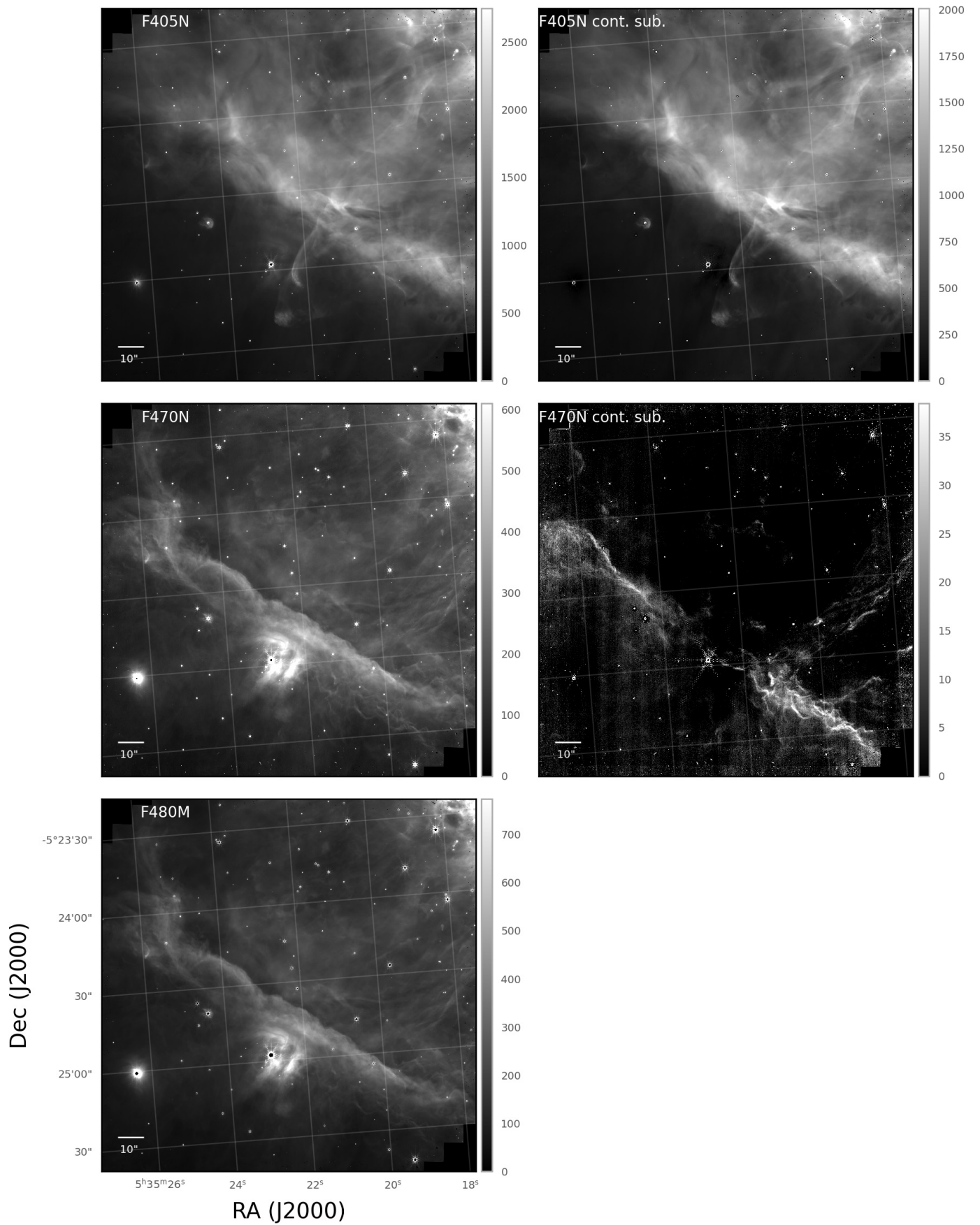
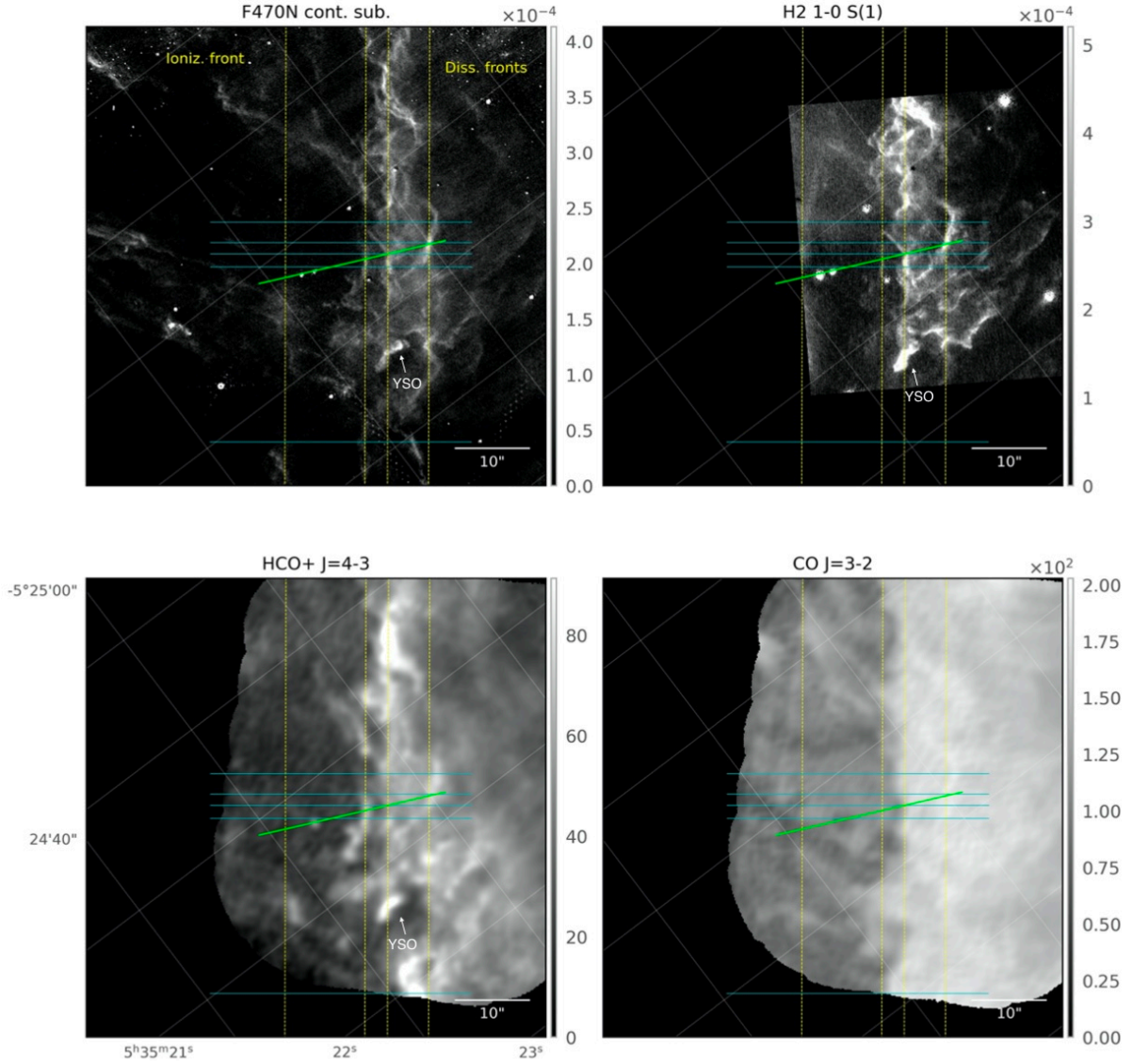


Fig. B.4. Same as Fig. B.2, but for other filters.



**Fig. B.5.** NIRCam, Keck and ALMA maps of the southwestern part of Bar. The maps have been rotated so that the ionizing radiation strikes the Bar from the left. **Upper left:** Map in the F470N filter continuum subtracted (H<sub>2</sub> 0-0 S(9) line at 4.7 μm). Units are in erg s<sup>-1</sup> cm<sup>-2</sup> sr<sup>-1</sup>. **Upper right:** Keck/NIRC2 map of the H<sub>2</sub> 1-0 S(1) line at 2.12 μm with a resolution of 0.085'' (Habart et al. 2023). Our NIRCam observations show a very good agreement with Keck/NIRC2 observations in terms of line distribution and intensity. **Lower left and right:** ALMA observation at 1'' resolution of the HCO<sup>+</sup> J = 4–3 line integrated intensity (in K km s<sup>-1</sup>) and the CO J=3-2 line peak temperatures ( $T_{peak}$ ) (Goicoechea et al. 2016). There exists a remarkably similar spatial distribution between the H<sub>2</sub> and HCO<sup>+</sup> emission from ALMA.