

Appendix A. Augusta Prescribed Fire Exceptional Events Plots

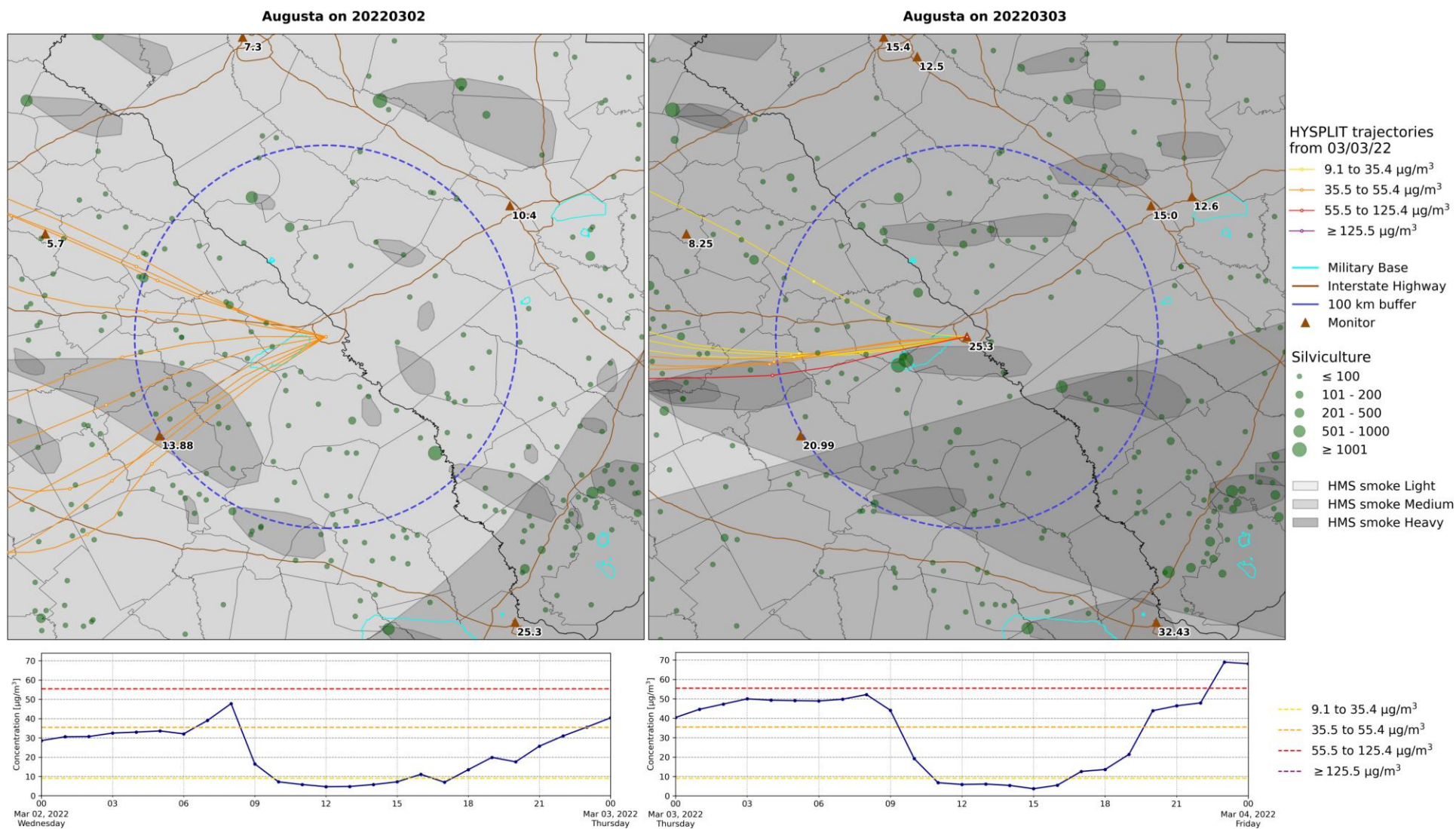


Figure 1A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour $\text{PM}_{2.5}$ concentrations at the Augusta $\text{PM}_{2.5}$ monitor on March 2, 2022. The top right map contains the same information for March 3, 2022. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta $\text{PM}_{2.5}$ monitor on March 3, 2022. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for $\text{PM}_{2.5}$ concentrations.

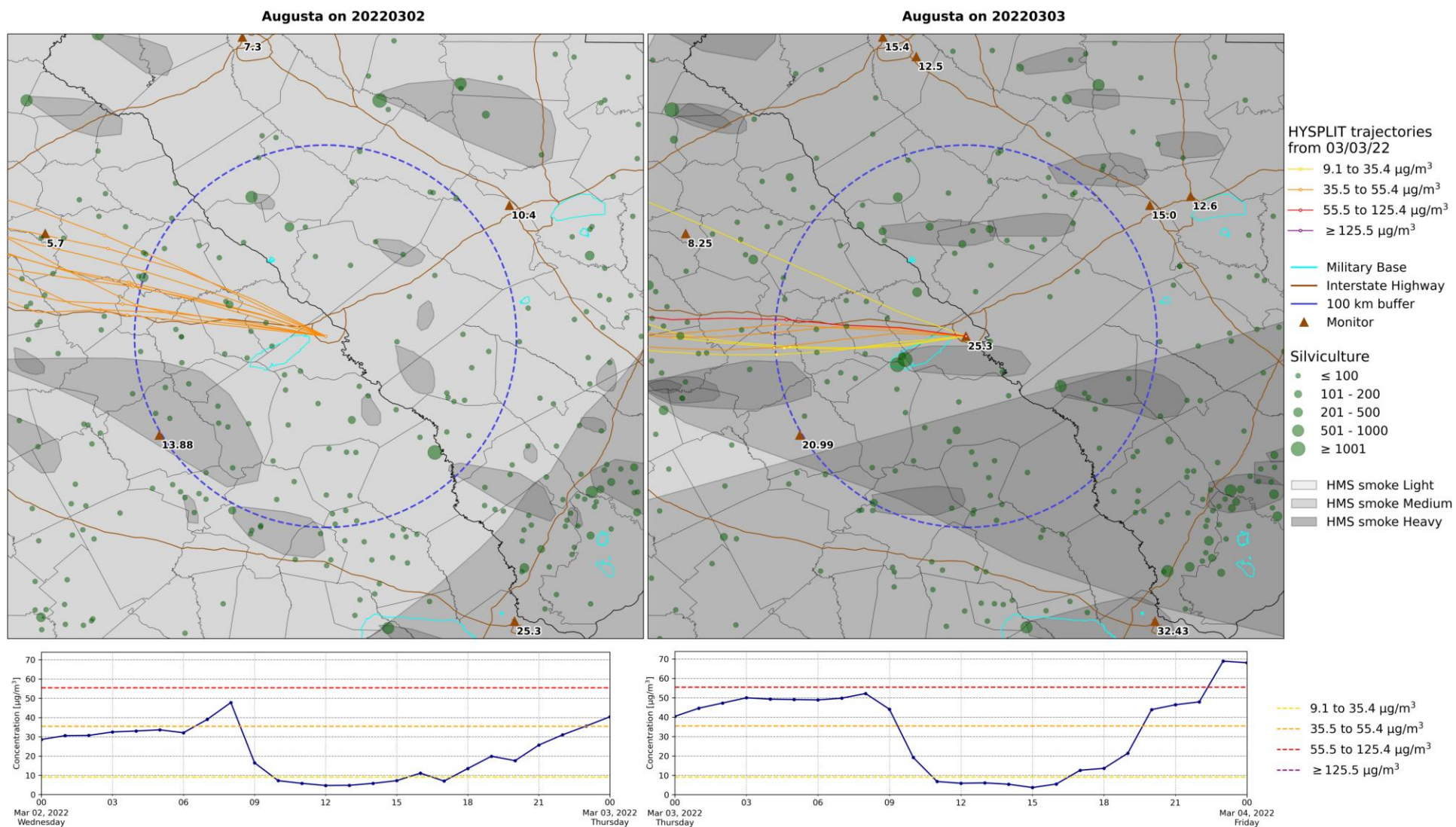


Figure 1B. The same as Figure 1A except HYSPLIT back trajectories are released at 500 m from the Augusta $\text{PM}_{2.5}$ monitor.

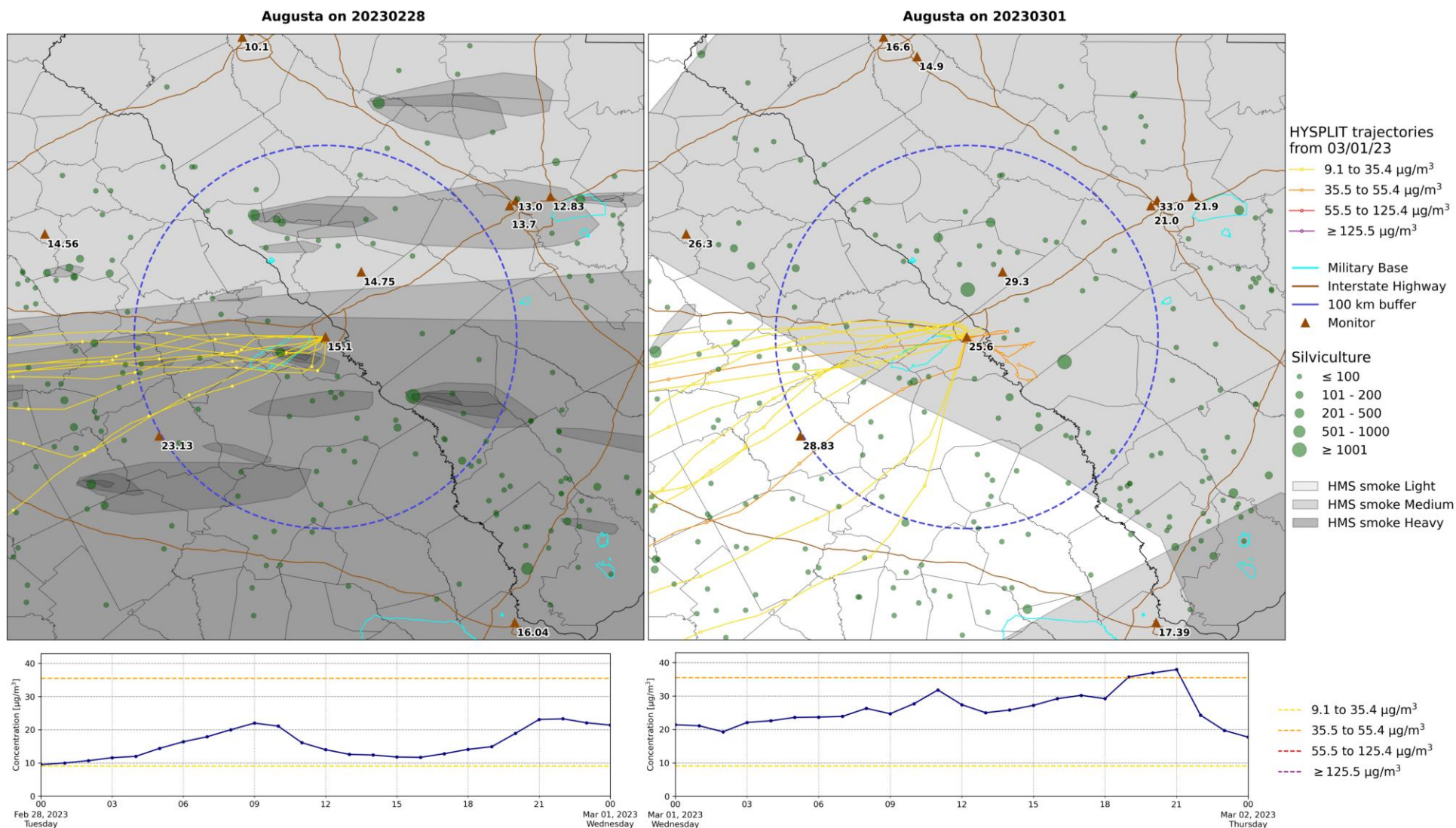


Figure 2A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour $\text{PM}_{2.5}$ concentrations at the Augusta $\text{PM}_{2.5}$ monitor on February 28, 2023. The top right map contains the same information for March 1, 2023. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta $\text{PM}_{2.5}$ monitor on March 1, 2023. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for $\text{PM}_{2.5}$ concentrations.

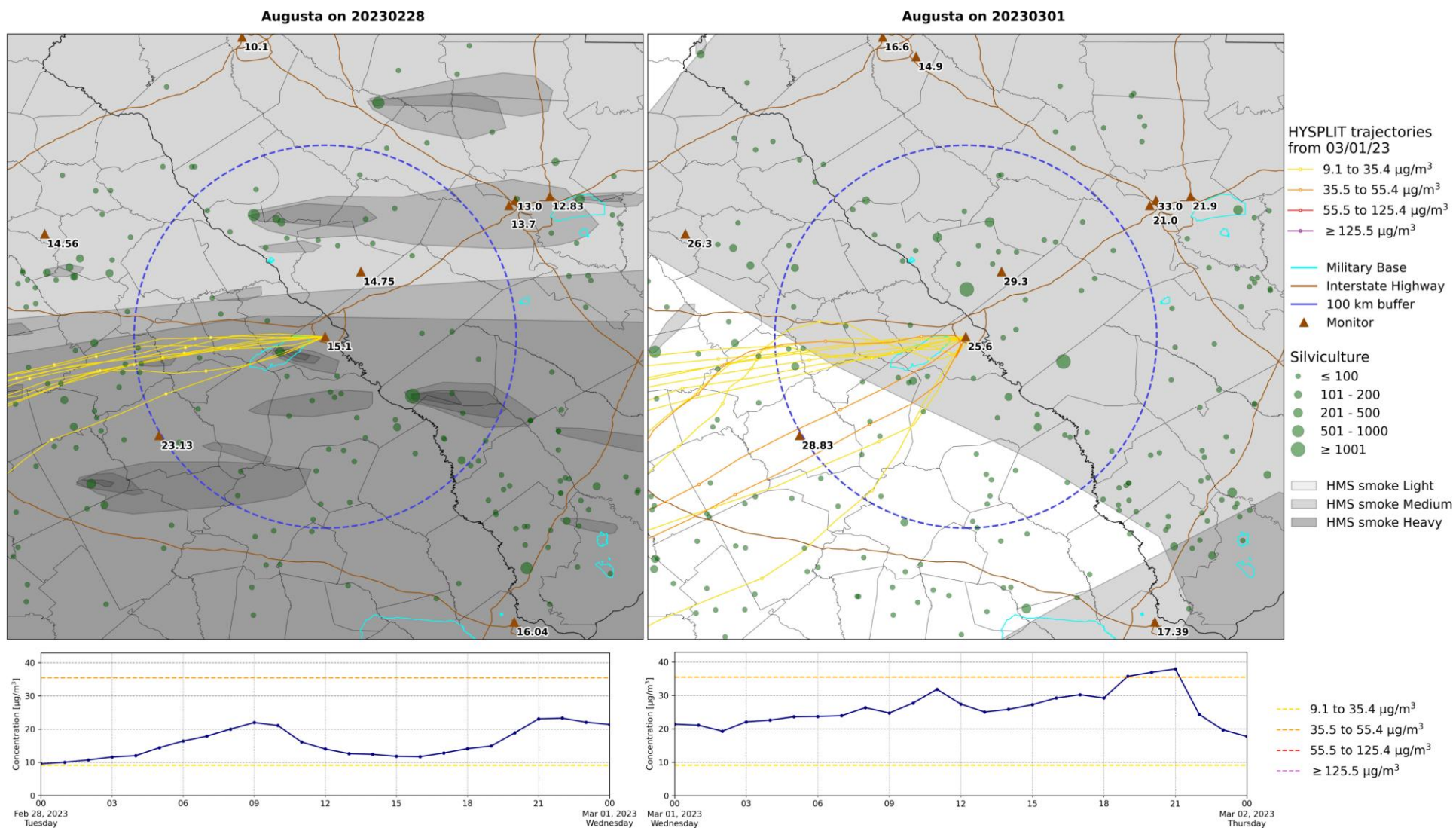


Figure 2B. The same as Figure 2A except HYSPLIT back trajectories are released at 500 m from the Augusta PM_{2.5} monitor.

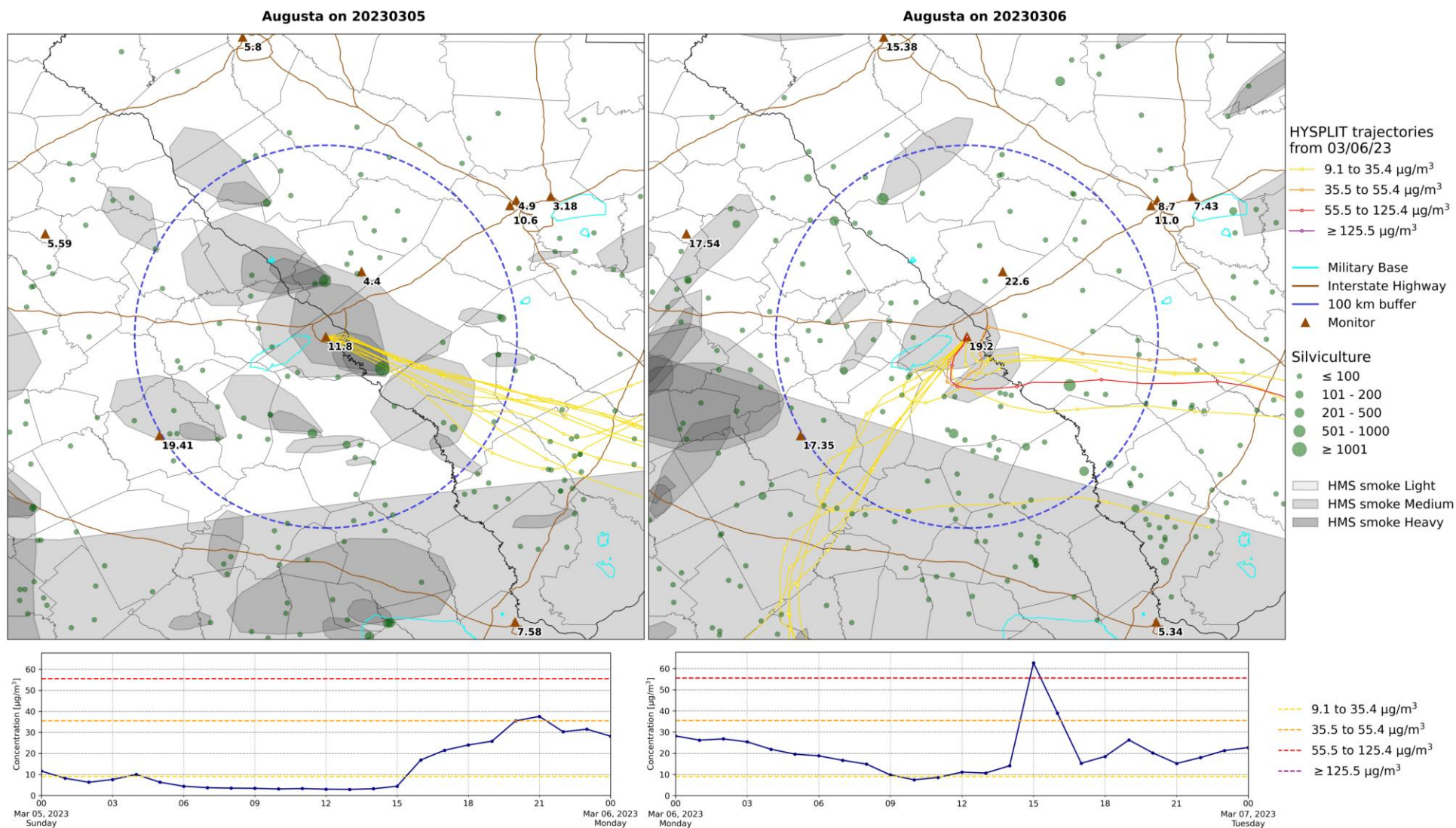


Figure 3A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour PM_{2.5} concentrations at the Augusta PM_{2.5} monitor on March 5, 2023. The top right map contains the same information for March 6, 2023. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta PM_{2.5} monitor on March 6, 2023. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for PM_{2.5} concentrations.

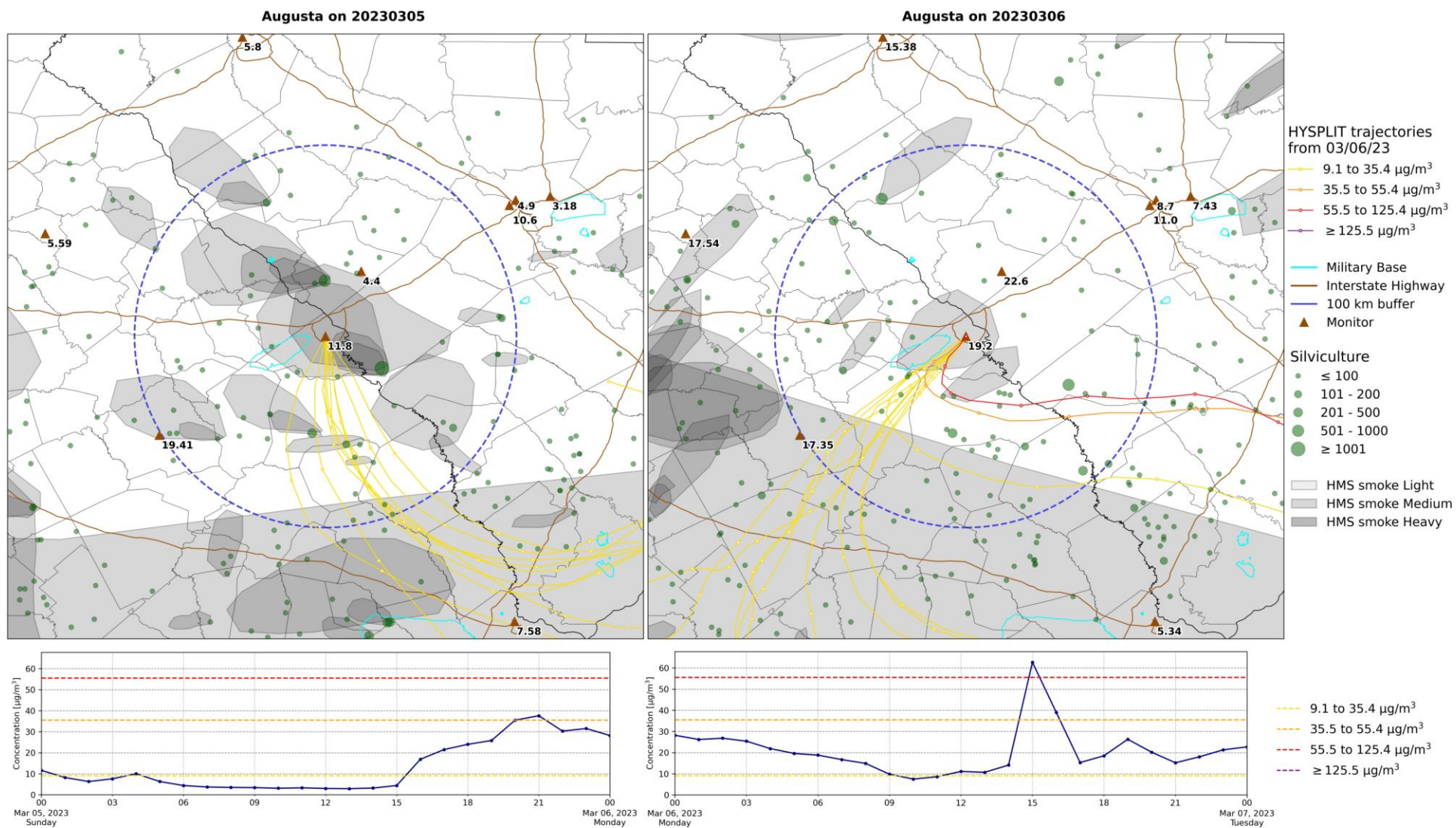


Figure 3B. The same as Figure 3A except HYSPLIT back trajectories are released at 500 m from the Augusta PM_{2.5} monitor.

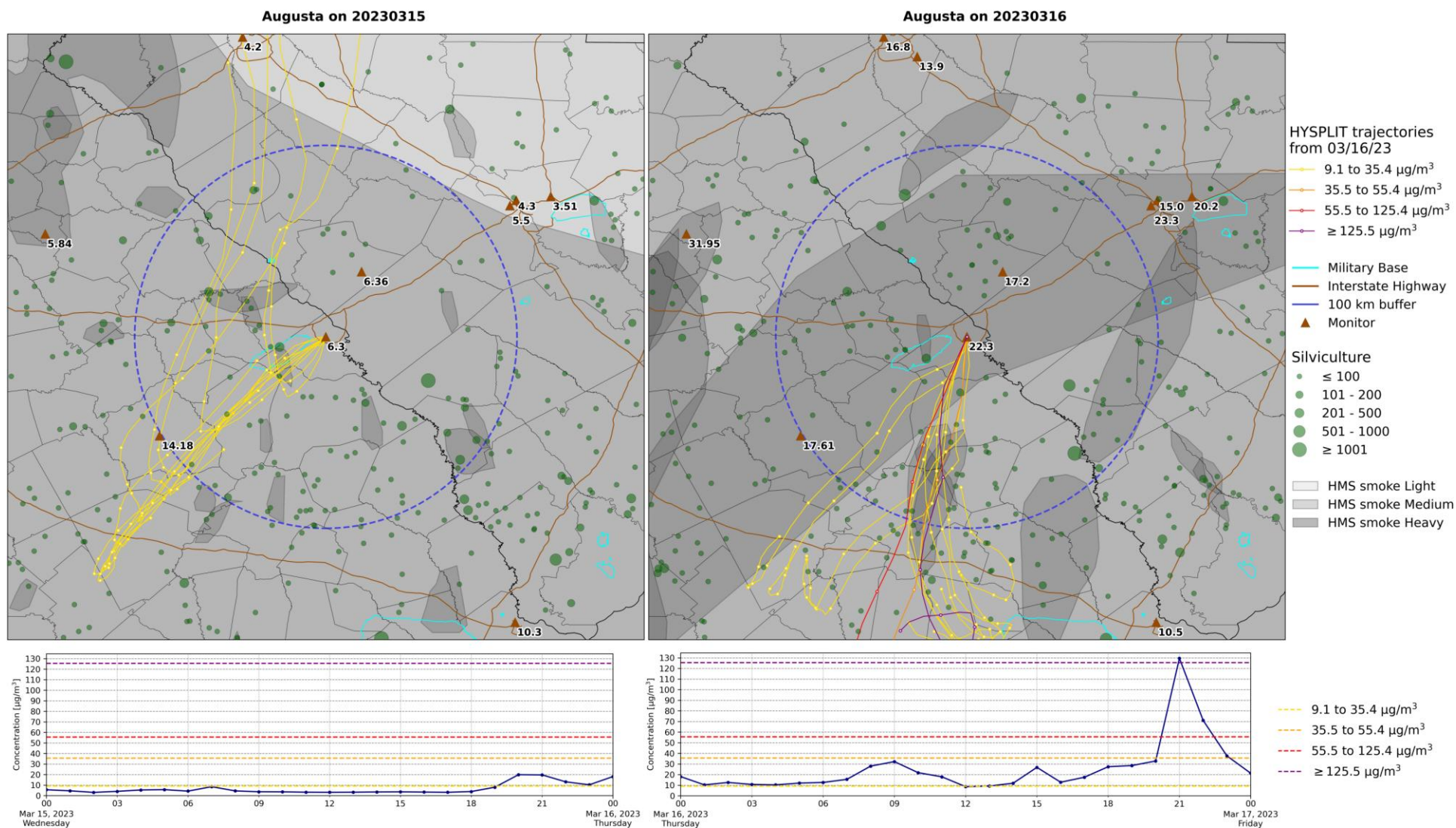


Figure 4A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour $\text{PM}_{2.5}$ concentrations at the Augusta $\text{PM}_{2.5}$ monitor on March 15, 2023. The top right map contains the same information for March 16, 2023. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta $\text{PM}_{2.5}$ monitor on March 16, 2023. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for $\text{PM}_{2.5}$ concentrations.

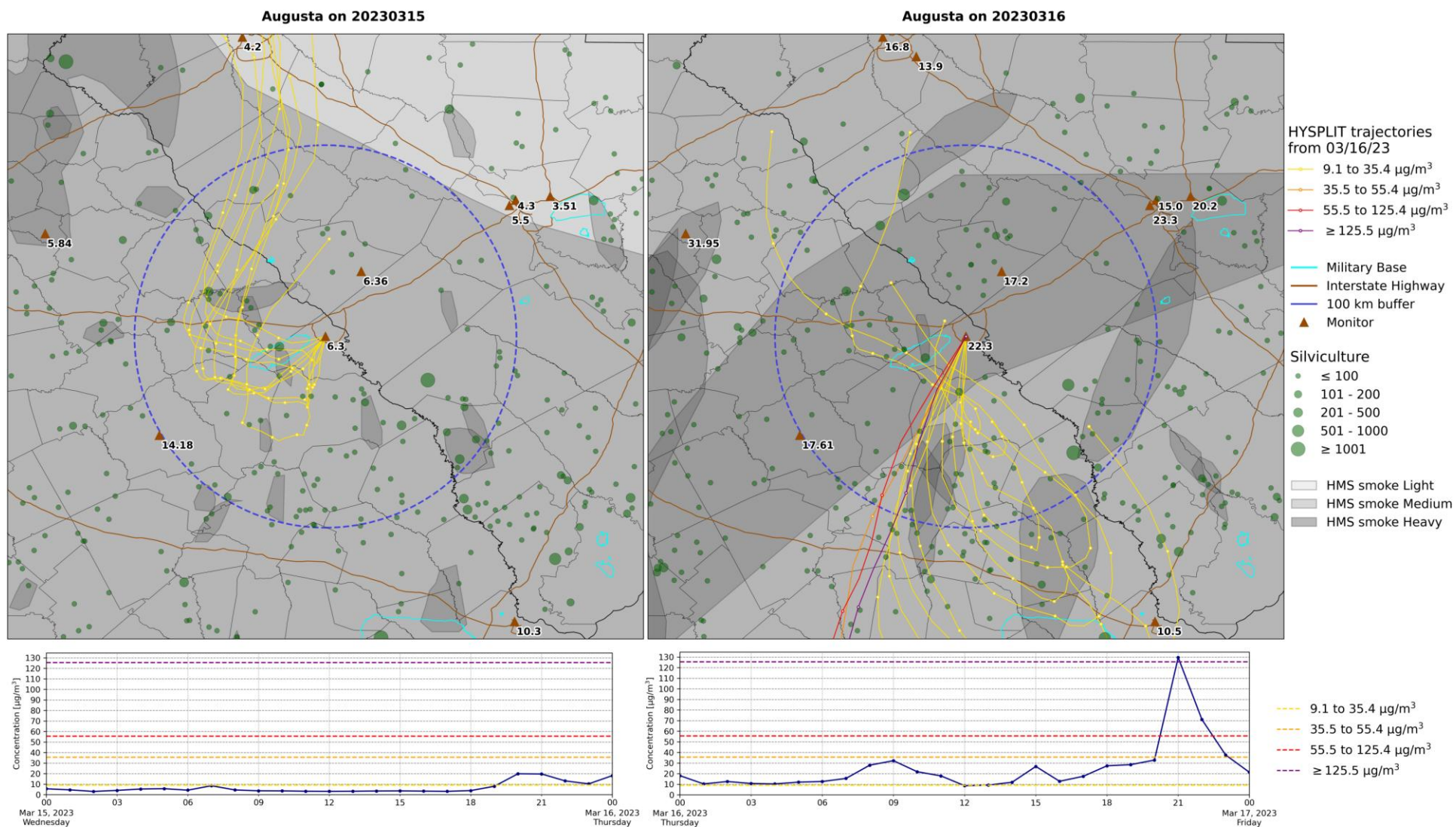


Figure 4B. The same as Figure 4A except HYSPLIT back trajectories are released at 500 m from the Augusta PM_{2.5} monitor.

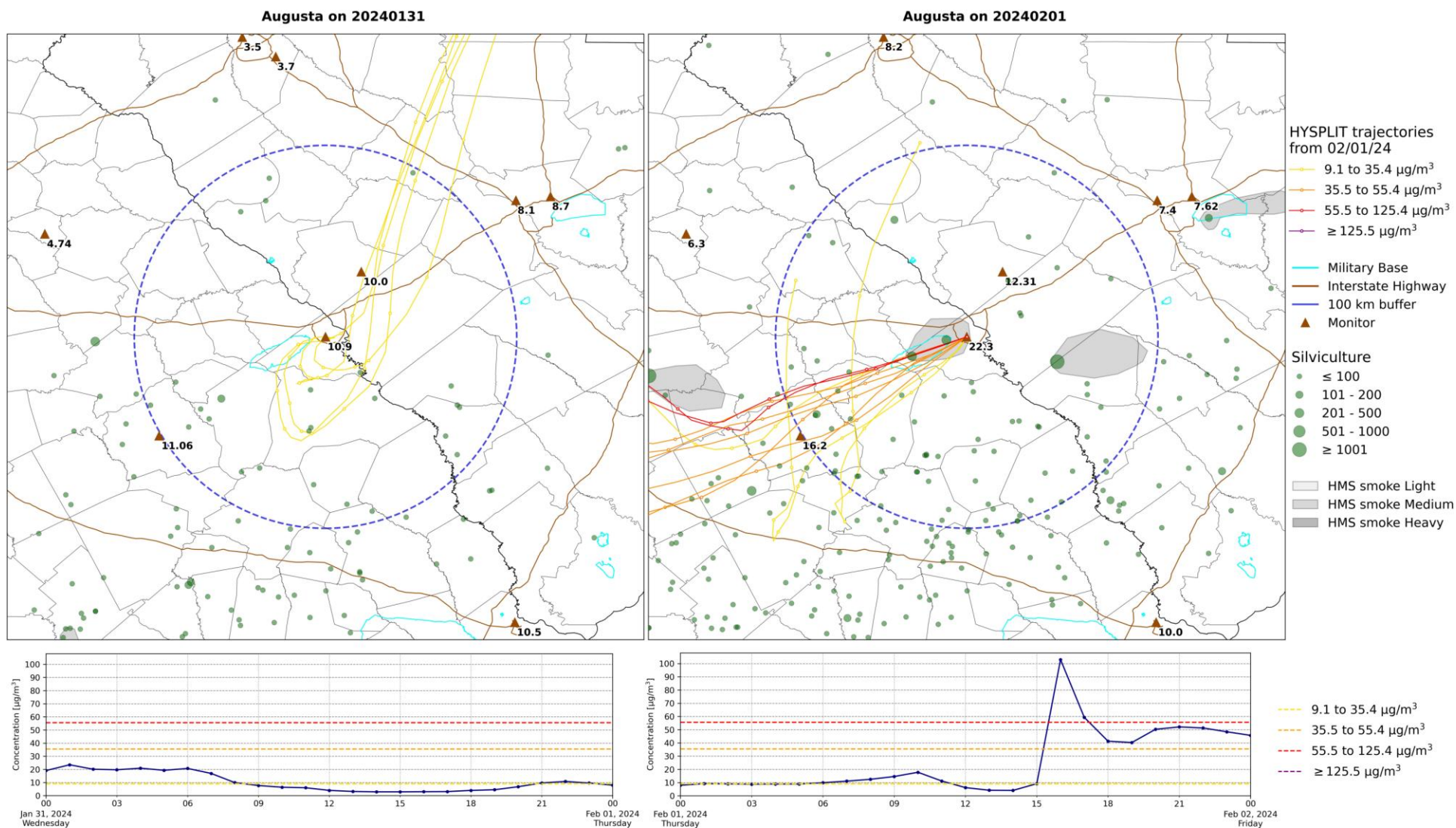


Figure 5A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour $\text{PM}_{2.5}$ concentrations at the Augusta $\text{PM}_{2.5}$ monitor on January 31, 2024. The top right map contains the same information for February 1, 2024. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta $\text{PM}_{2.5}$ monitor on February 1, 2024. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for $\text{PM}_{2.5}$ concentrations.

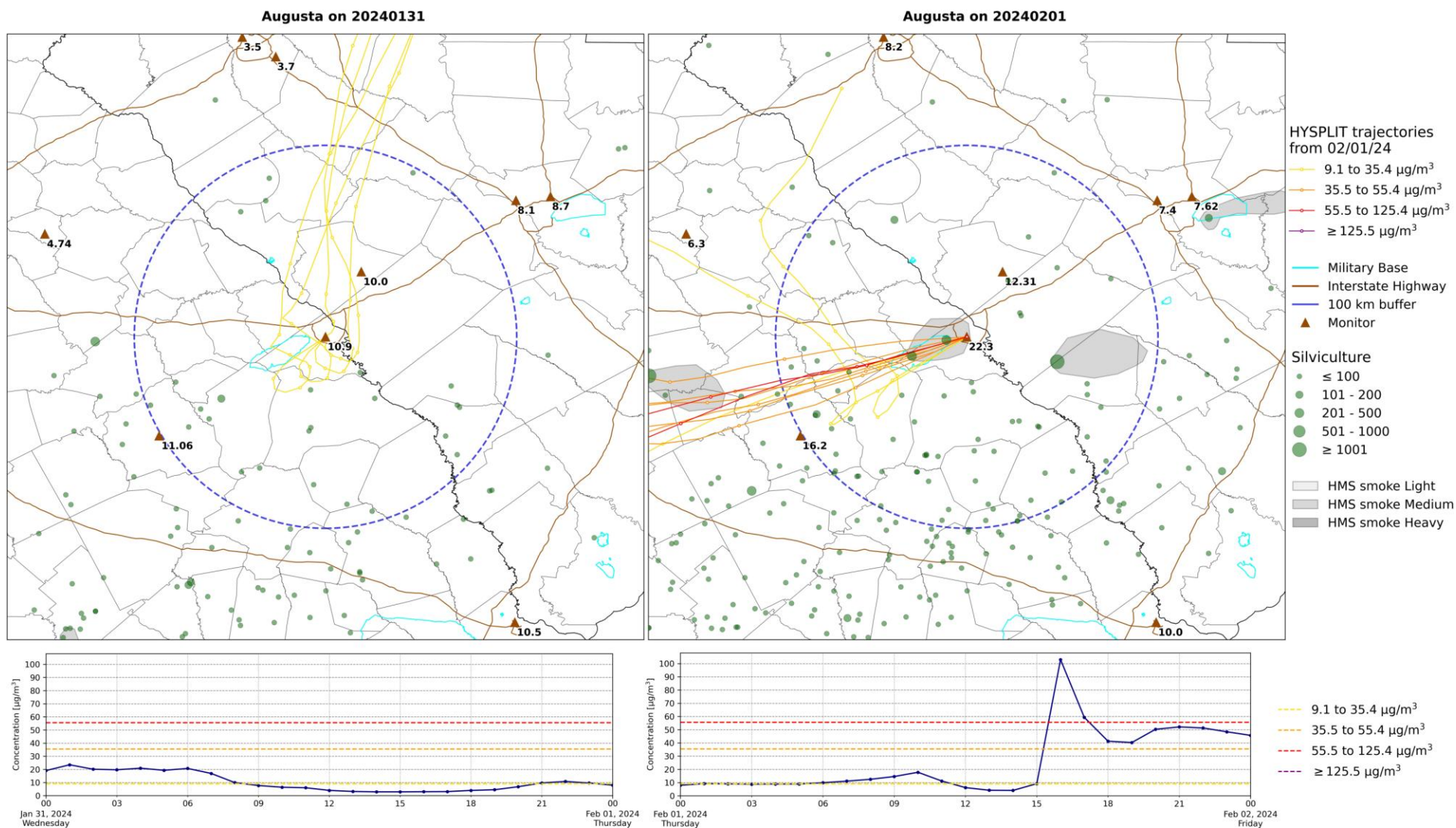


Figure 5B. The same as Figure 5A except HYSPLIT back trajectories are released at 500 m from the Augusta PM_{2.5} monitor.

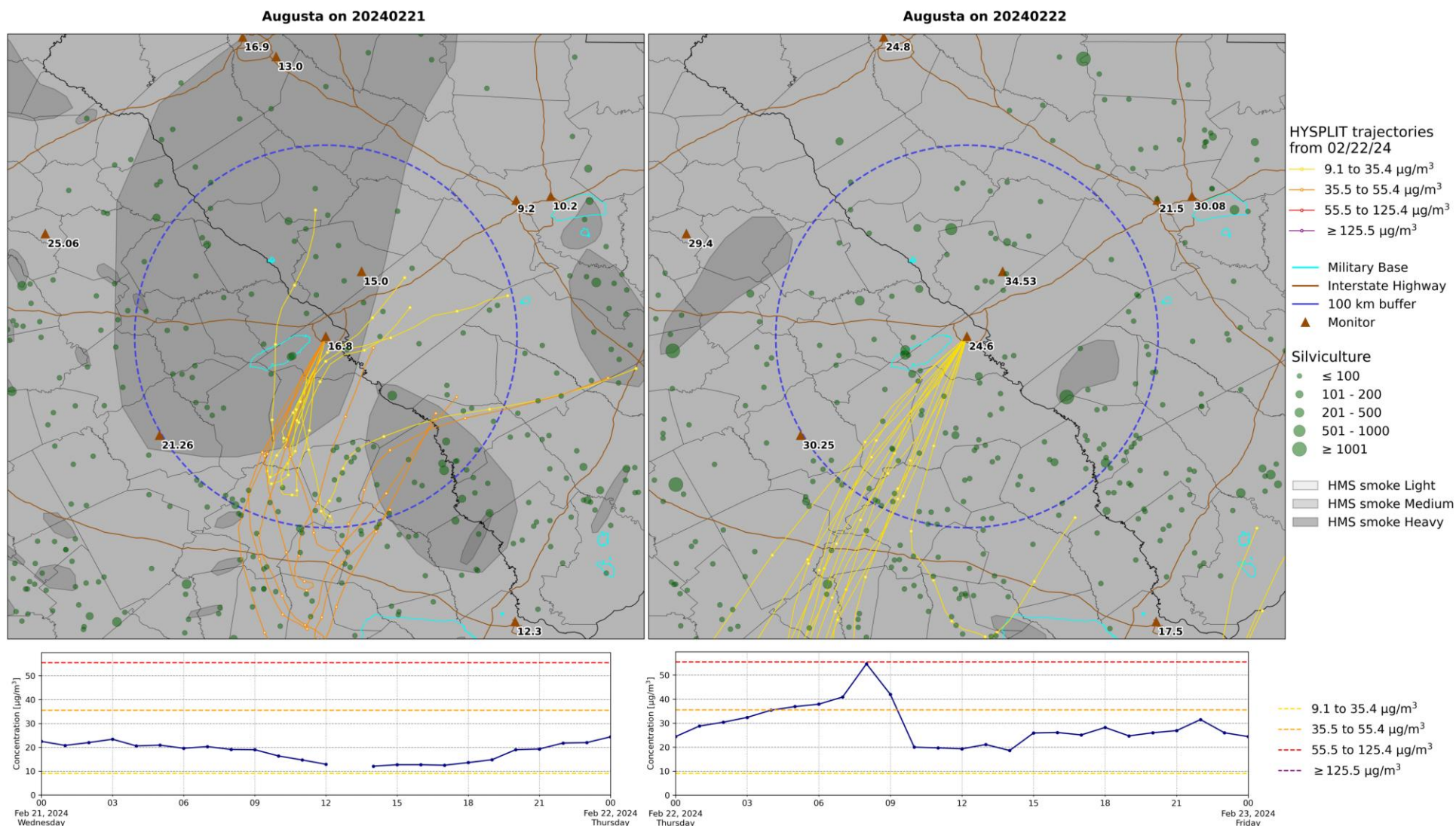


Figure 6A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour PM_{2.5} concentrations at the Augusta PM_{2.5} monitor on February 21, 2024. The top right map contains the same information for February 22, 2024. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta PM_{2.5} monitor on February 22, 2024. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for PM_{2.5} concentrations.

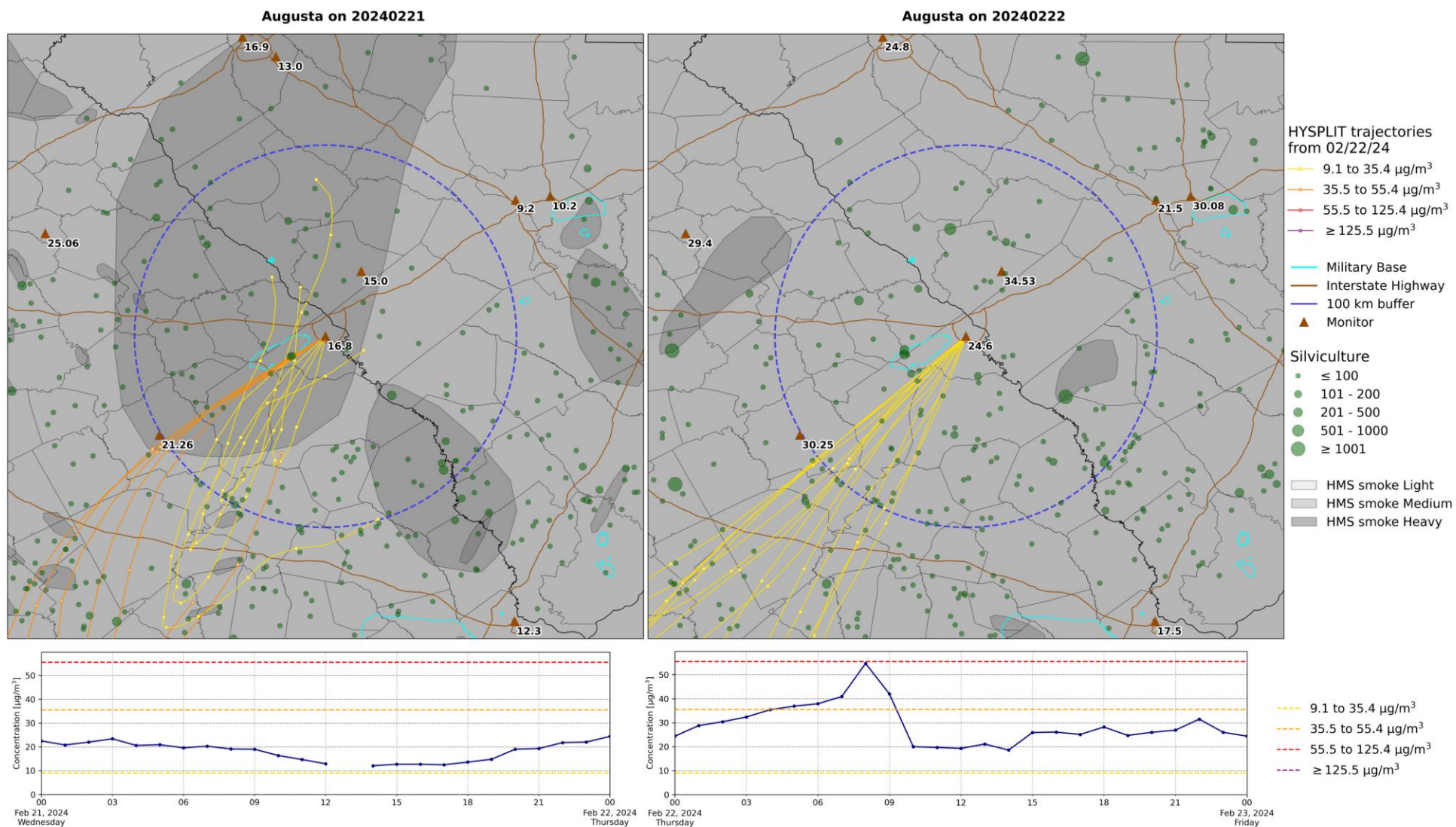


Figure 6B. The same as Figure 6A except HYSPLIT back trajectories are released at 500 m from the Augusta $\text{PM}_{2.5}$ monitor.

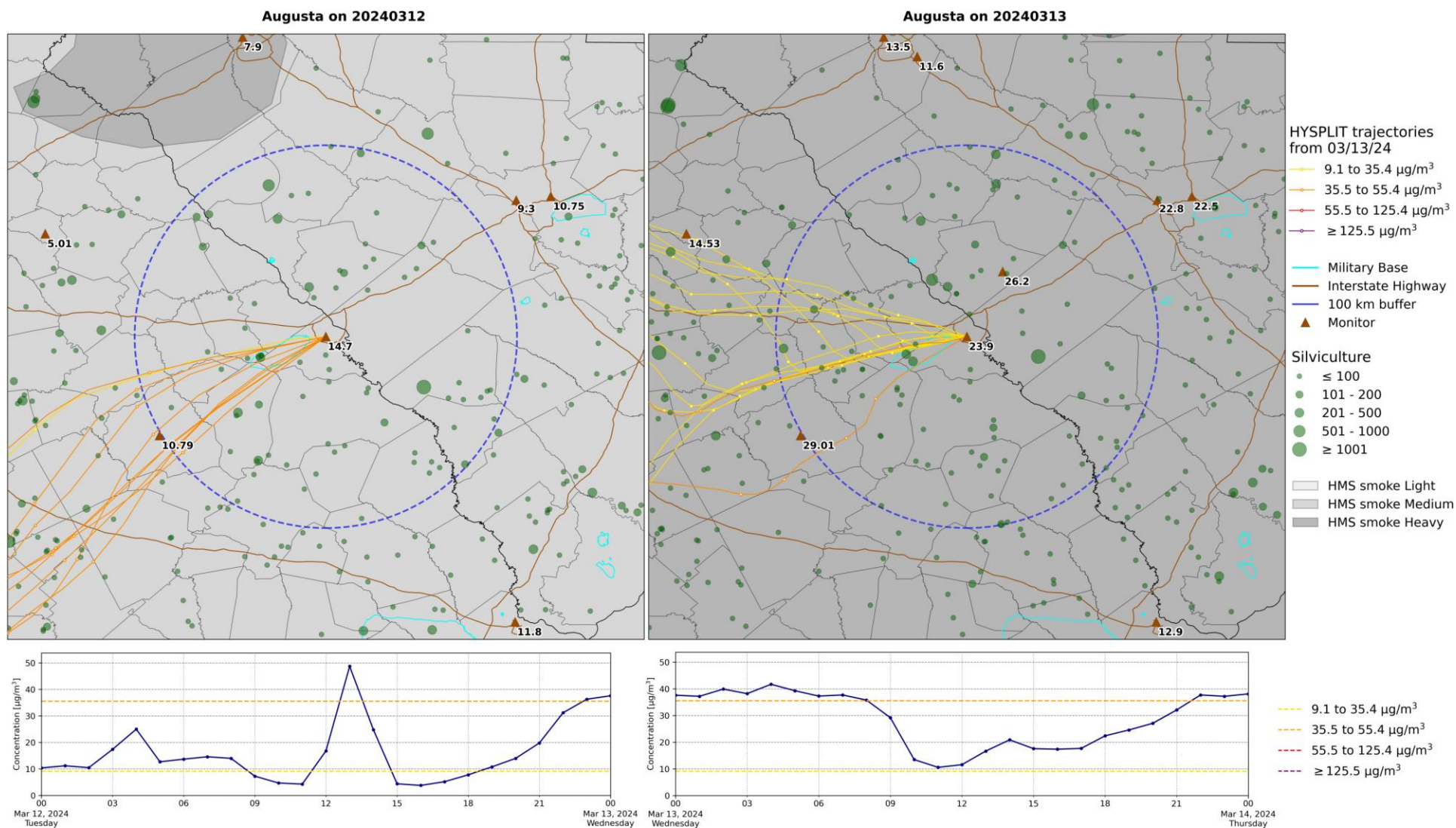


Figure 7A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour PM_{2.5} concentrations at the Augusta PM_{2.5} monitor on March 12, 2024. The top right map contains the same information for March 13, 2024. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta PM_{2.5} monitor on March 13, 2024. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for PM_{2.5} concentrations.

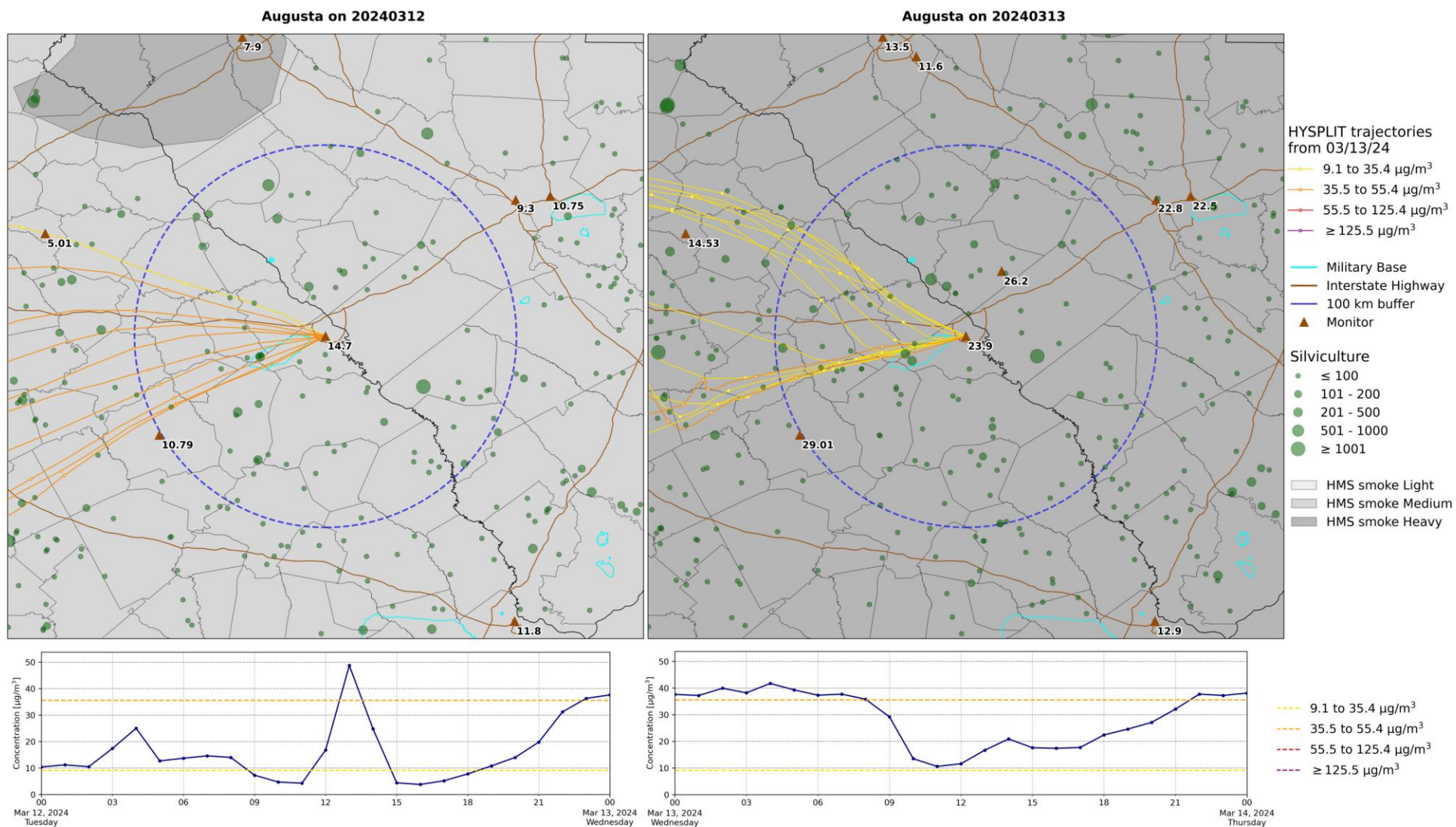


Figure 7B. The same as Figure 7A except HYSPLIT back trajectories are released at 500 m from the Augusta $\text{PM}_{2.5}$ monitor.

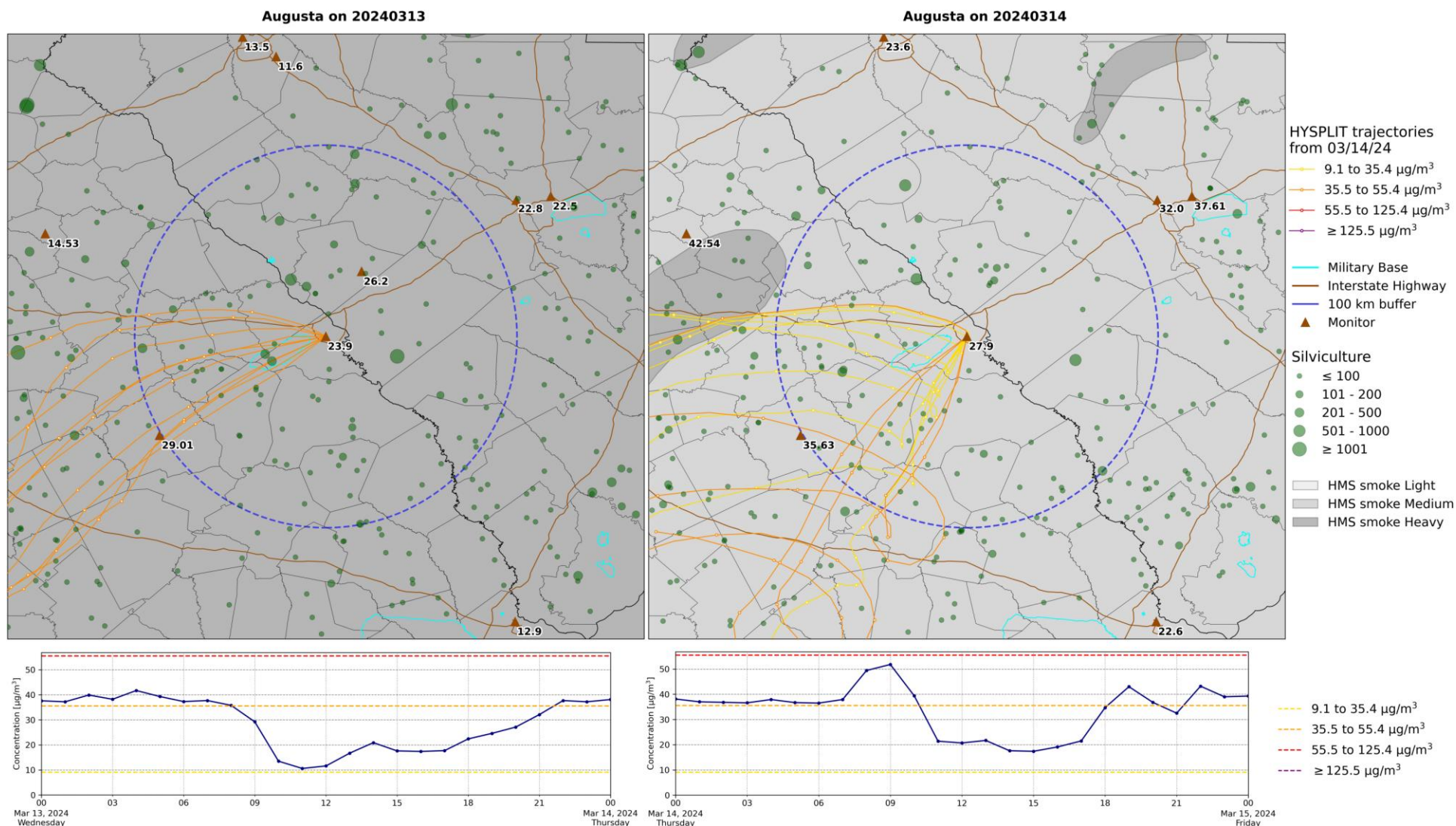


Figure 8A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour PM_{2.5} concentrations at the Augusta PM_{2.5} monitor on March 13, 2024. The top right map contains the same information for March 14, 2024. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta PM_{2.5} monitor on March 14, 2024. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for PM_{2.5} concentrations.

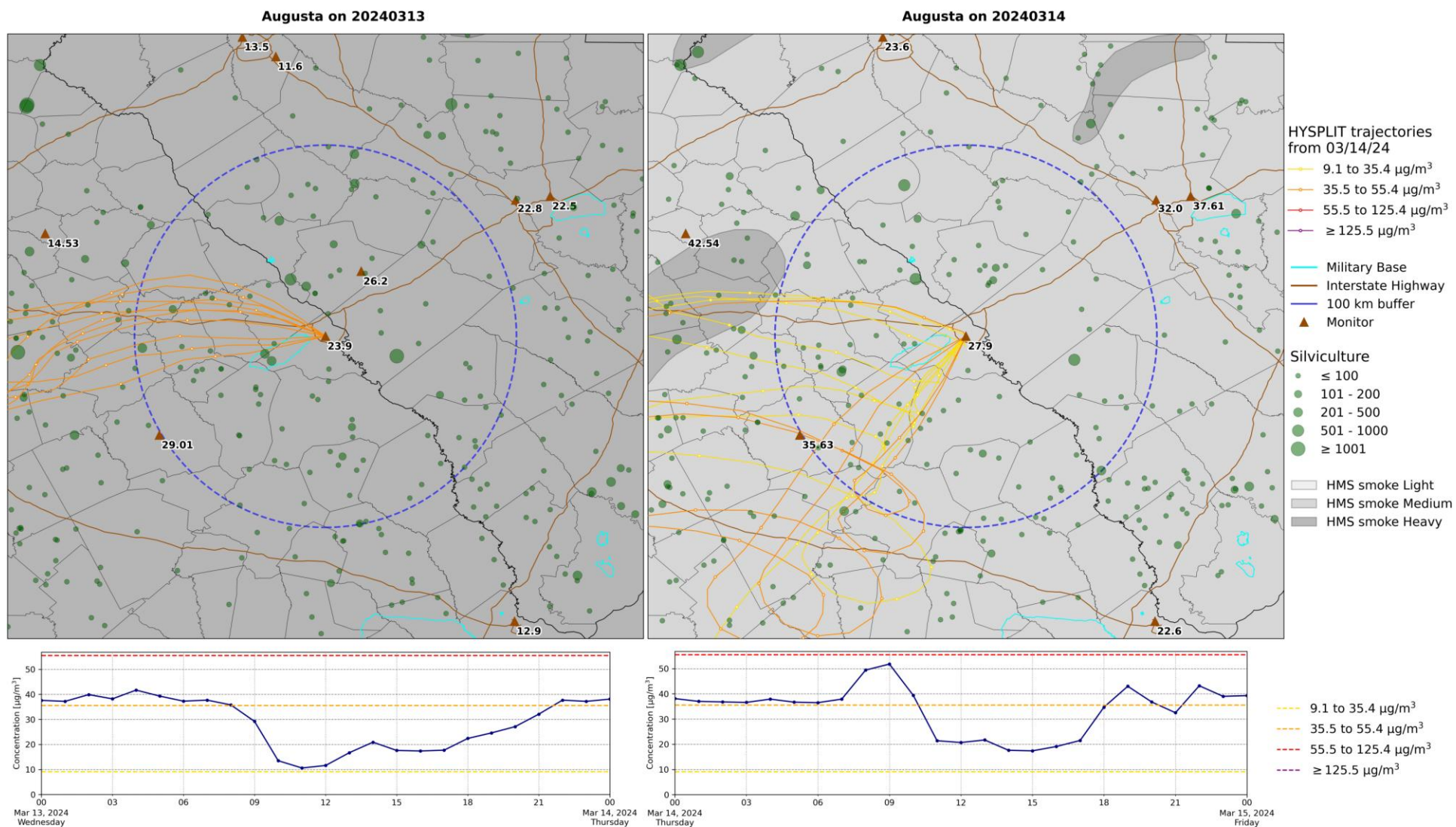


Figure 8B. The same as Figure 8A except HYSPLIT back trajectories are released at 500 m from the Augusta PM_{2.5} monitor.

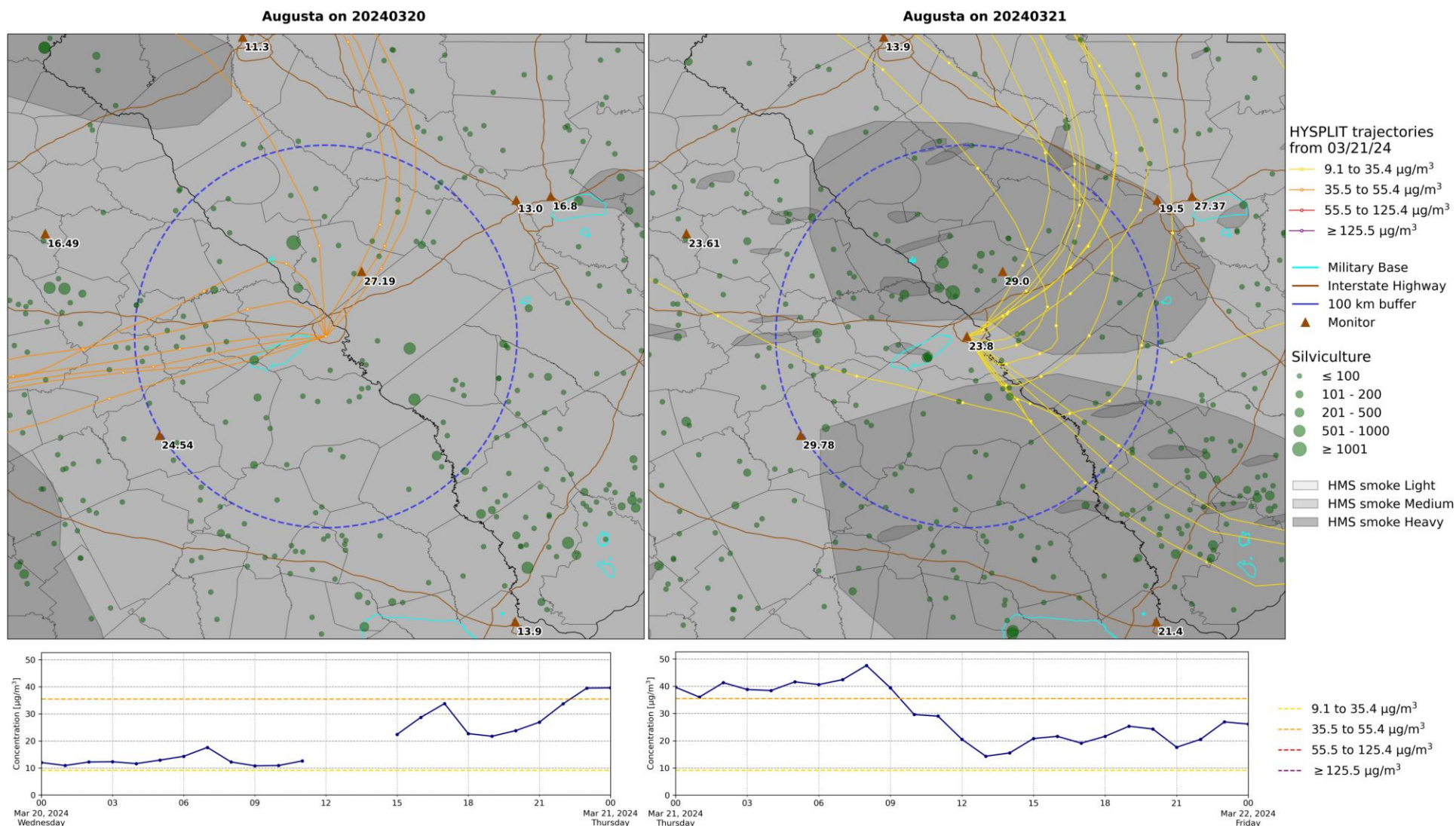


Figure 9A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour $\text{PM}_{2.5}$ concentrations at the Augusta $\text{PM}_{2.5}$ monitor on March 20, 2024. The top right map contains the same information for March 21, 2024. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta $\text{PM}_{2.5}$ monitor on March 21, 2024. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for $\text{PM}_{2.5}$ concentrations.

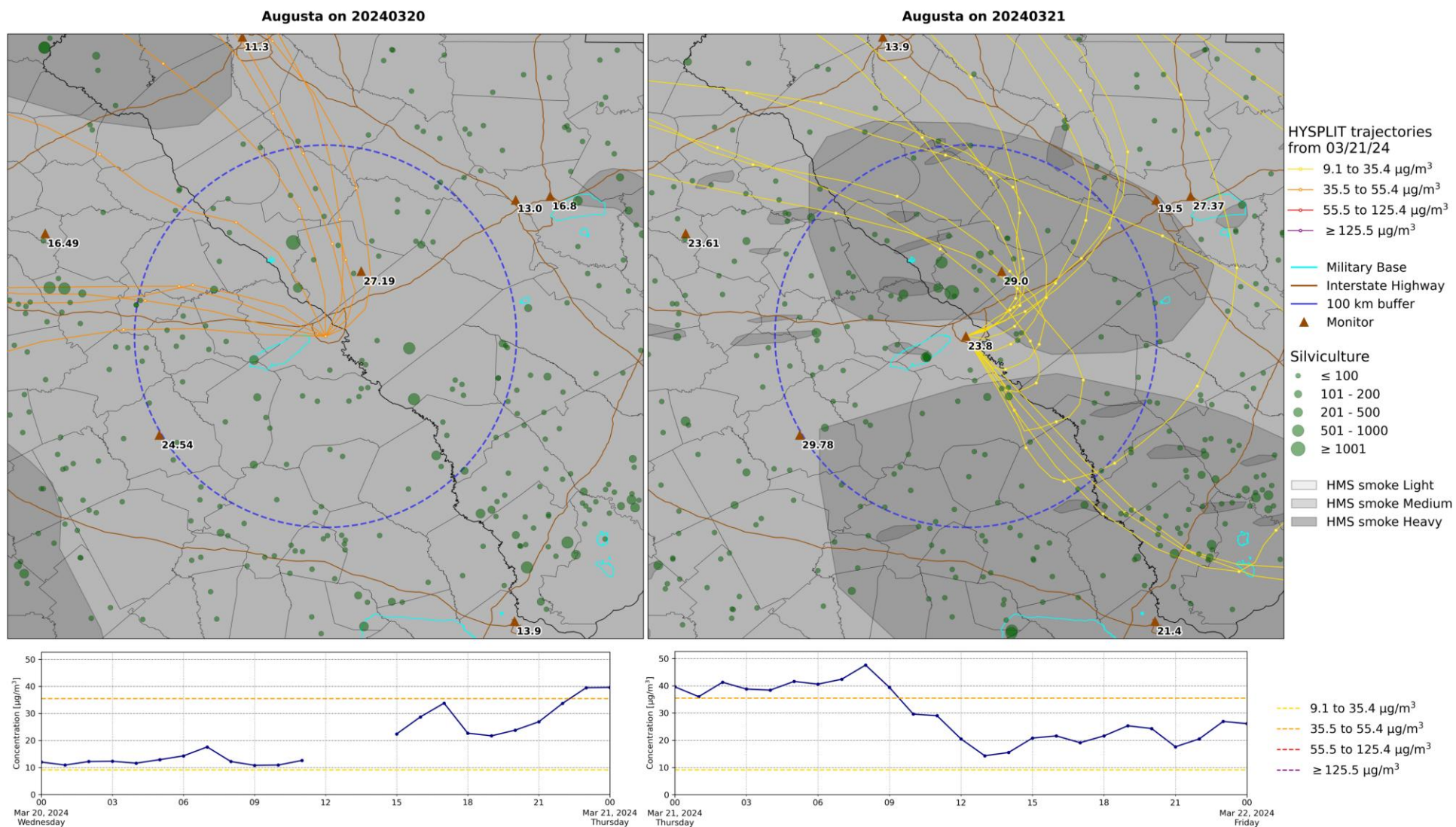


Figure 9B. The same as Figure 9A except HYSPLIT back trajectories are released at 500 m from the Augusta $\text{PM}_{2.5}$ monitor.

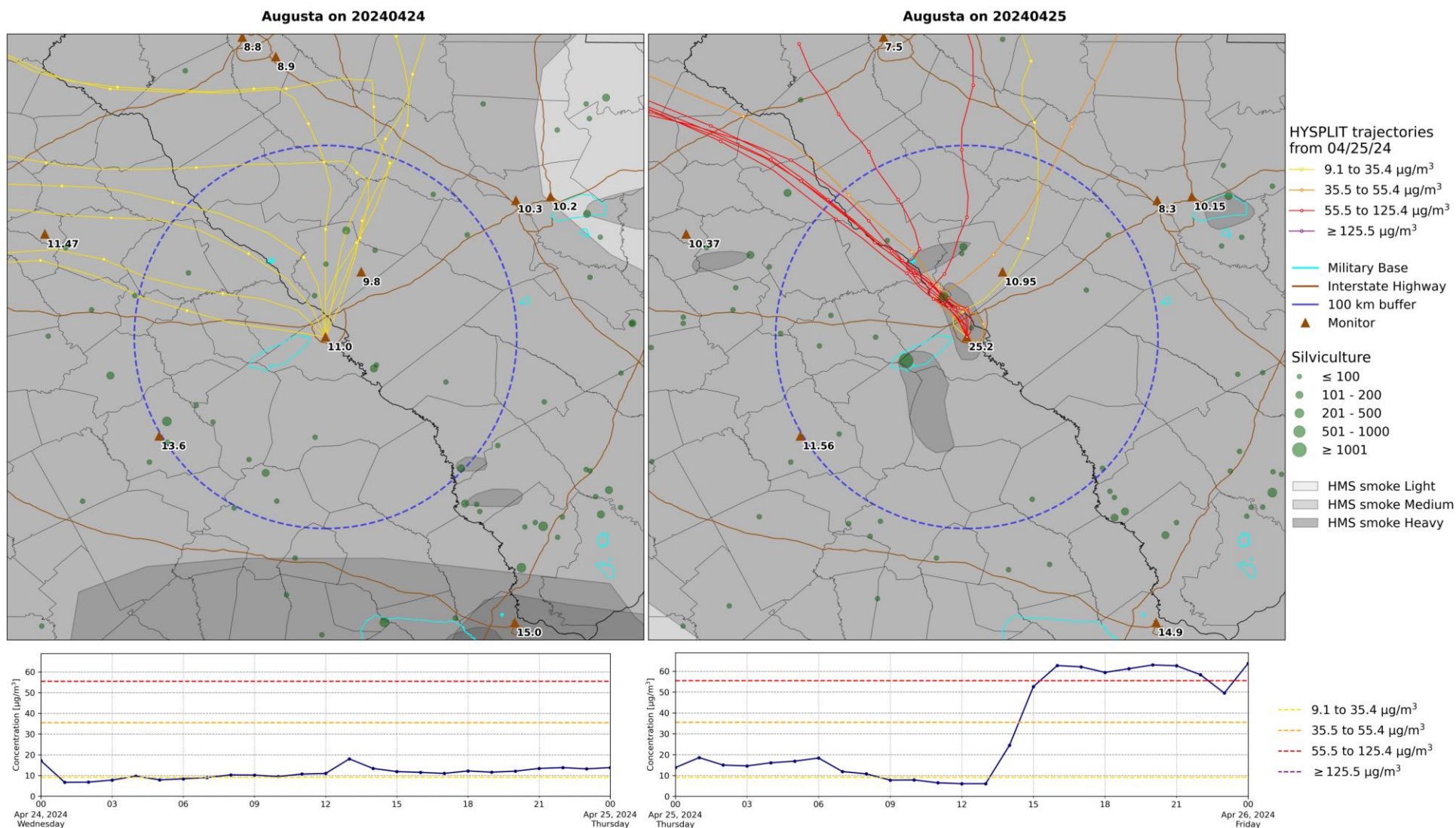


Figure 10A. The top left map contains burn permits issued, HMS smoke plumes, and 24-hour PM_{2.5} concentrations at the Augusta PM_{2.5} monitor on April 24, 2024. The top right map contains the same information for April 25, 2024. Both maps contain HYSPLIT back trajectories (released at 100 m, 24-hour duration) from the Augusta PM_{2.5} monitor on April 25, 2024. The left map shows the back-trajectories for 0:00 AM-9:59 AM EST and the right map represents back-trajectories for 10:00 AM-11:59 PM EST. HYSPLIT markers are spaced in 3-hour intervals. In the time series plots, the blue line shows hourly observations from the monitor. The dashed lines correspond to the AQI breakpoints for PM_{2.5} concentrations.

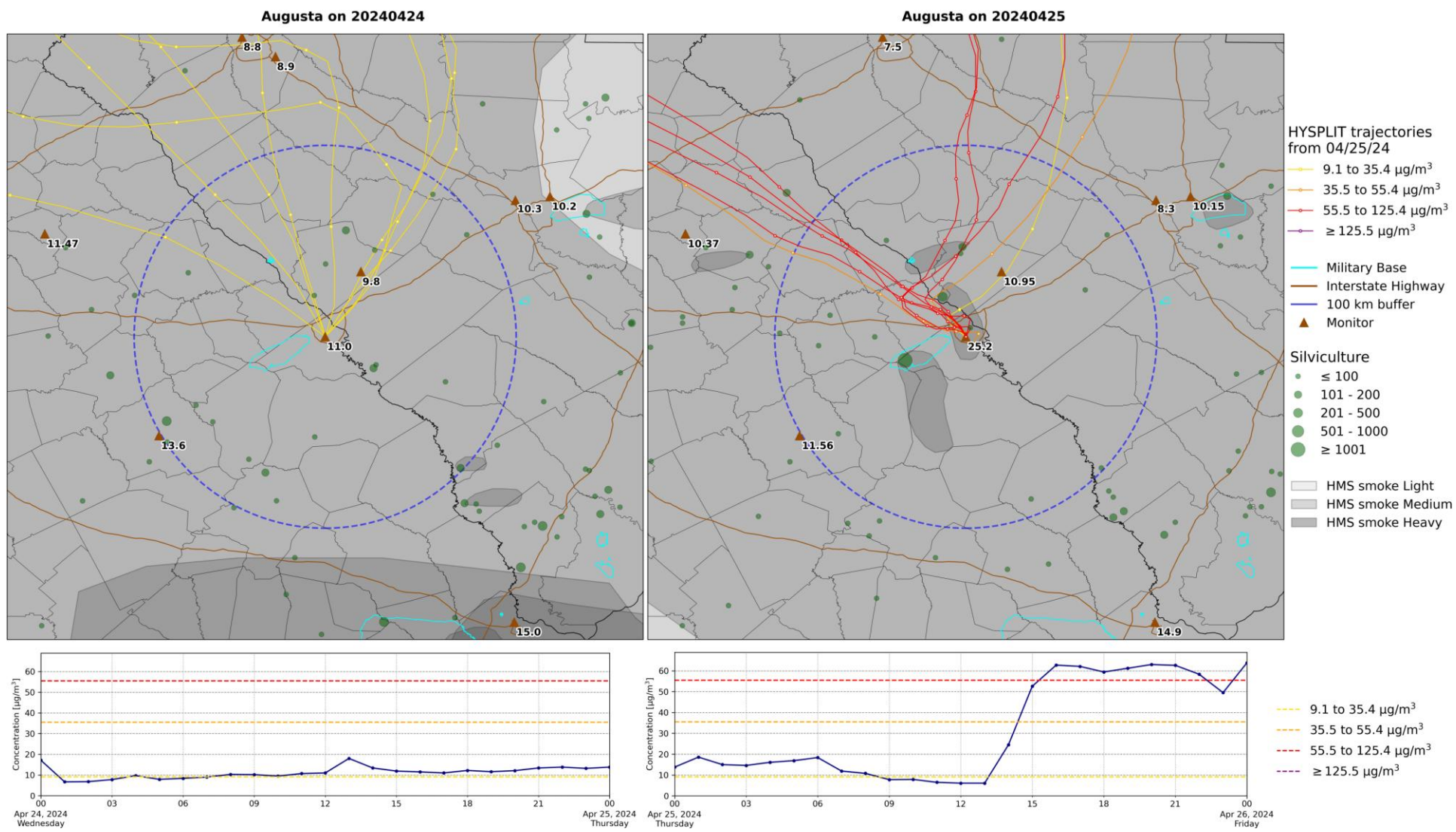


Figure 10B. The same as Figure 10A except HYSPLIT back trajectories are released at 500 m from the Augusta PM_{2.5} monitor.