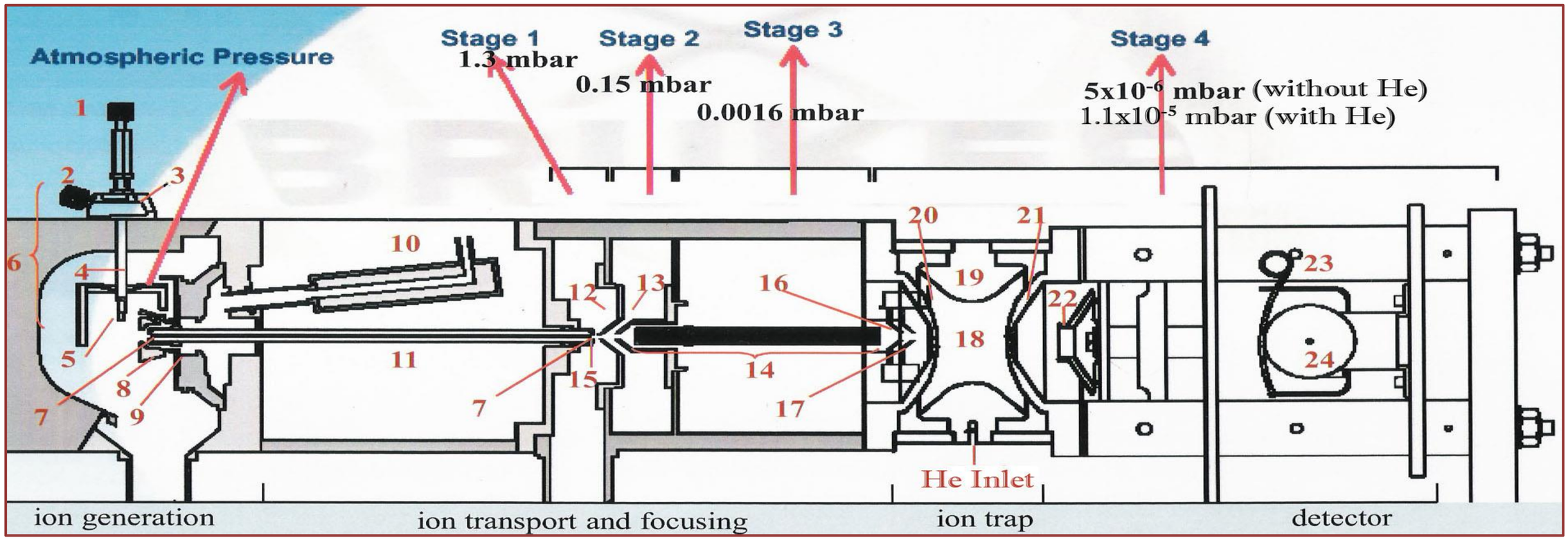
HCTUltra PTM Discovery System



Ion generation

1. sample Inlet 2. nebulizer gas inlet
3. nebulizer 4. neb gas stem
5. inner sprayer needle (ground)
6. sprayer
7. capillary cap (-3 - -4 KV)
8. spray shield (-2.5 - -3.5 KV)
9. end plate (-2.5 - -3.5 KV)
10. drying gas heater
11. glass capillary (-3 - -4 KV)

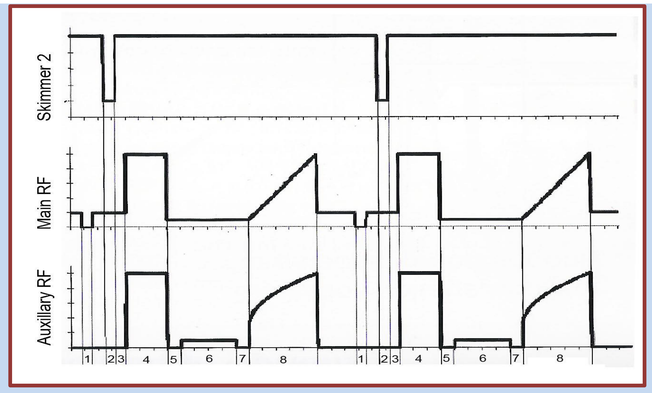
Ion transport and focusing

12. skimmer 1 (40.0 V)
13. skimmer 2
14. dual octopoles (ion guide)
    octopole 1 DC (12.00 V)
    octopole 2 DC (2.48 V)
    octopole RF amplitude (50 - 300 V)
15. capillary exit (50 - 300 V)
16. lens 1 (-5.0 V)
17. lens 2 (-60.0 V)

Capillary exit, octopole RF, and trap drive values increase with higher target mass; capillary exit is further modulated by compound stability setting (10-100%).

Ion trap & detector

18. Ion trap
    trap drive (20 - 195)
19. Ring electrode
    (main RF 781 kHz)
20. Entrance trap
21. Exit and cap
    (auxillary RF, 1/3 of main)
22. Dynode lens
23. Dynode (7.0 KV)
24. Multiplier (1.7 KV)



MS/MS scan process

1. clear trap 2. accumulation time 3. isolation delay
4. isolation begin 5. fragmentation delay
6. fragmentation begin 7. scan delay
8. mass analysis