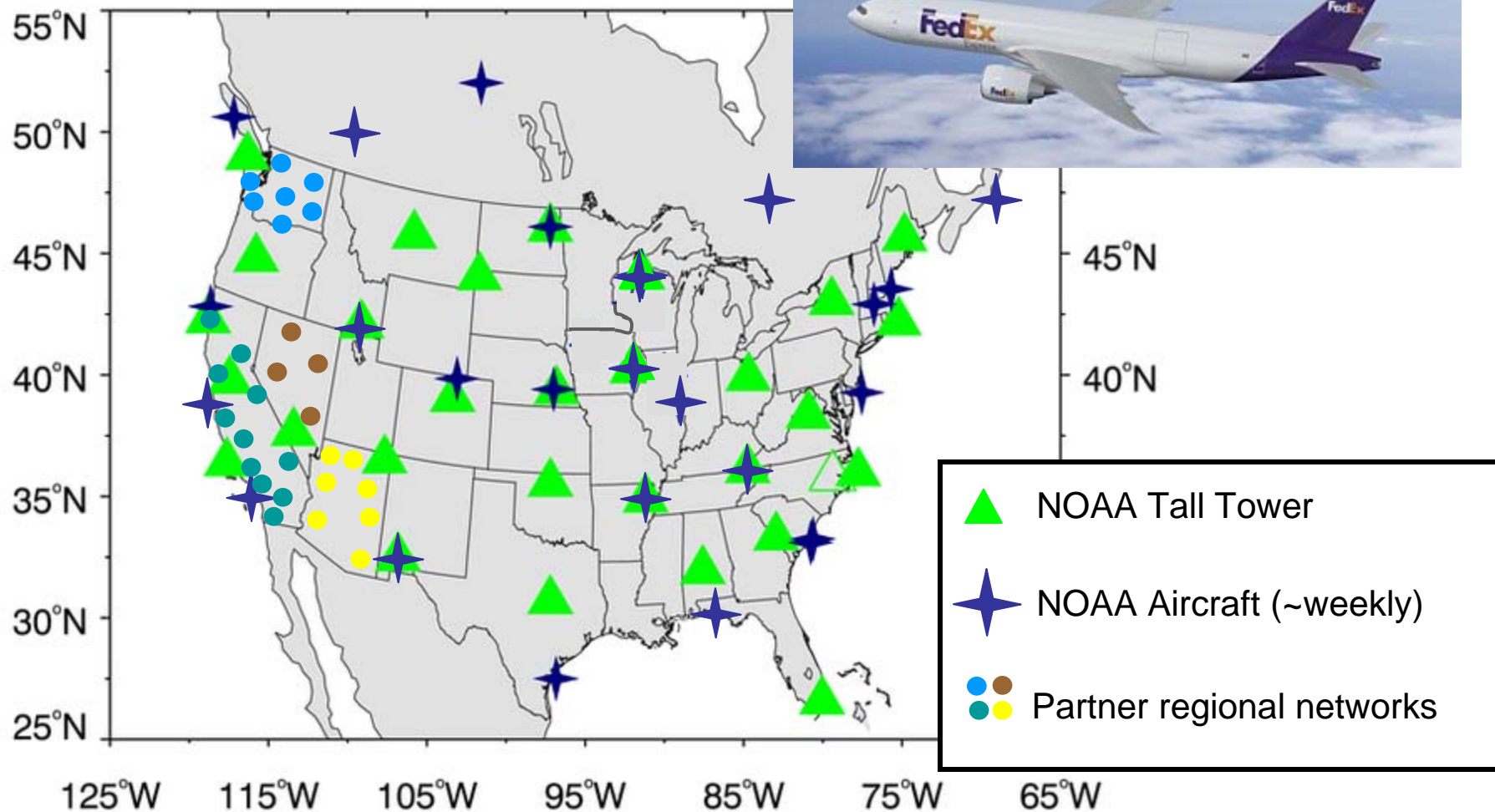


Grand vision for future ESRL Carbon Cycle Effort

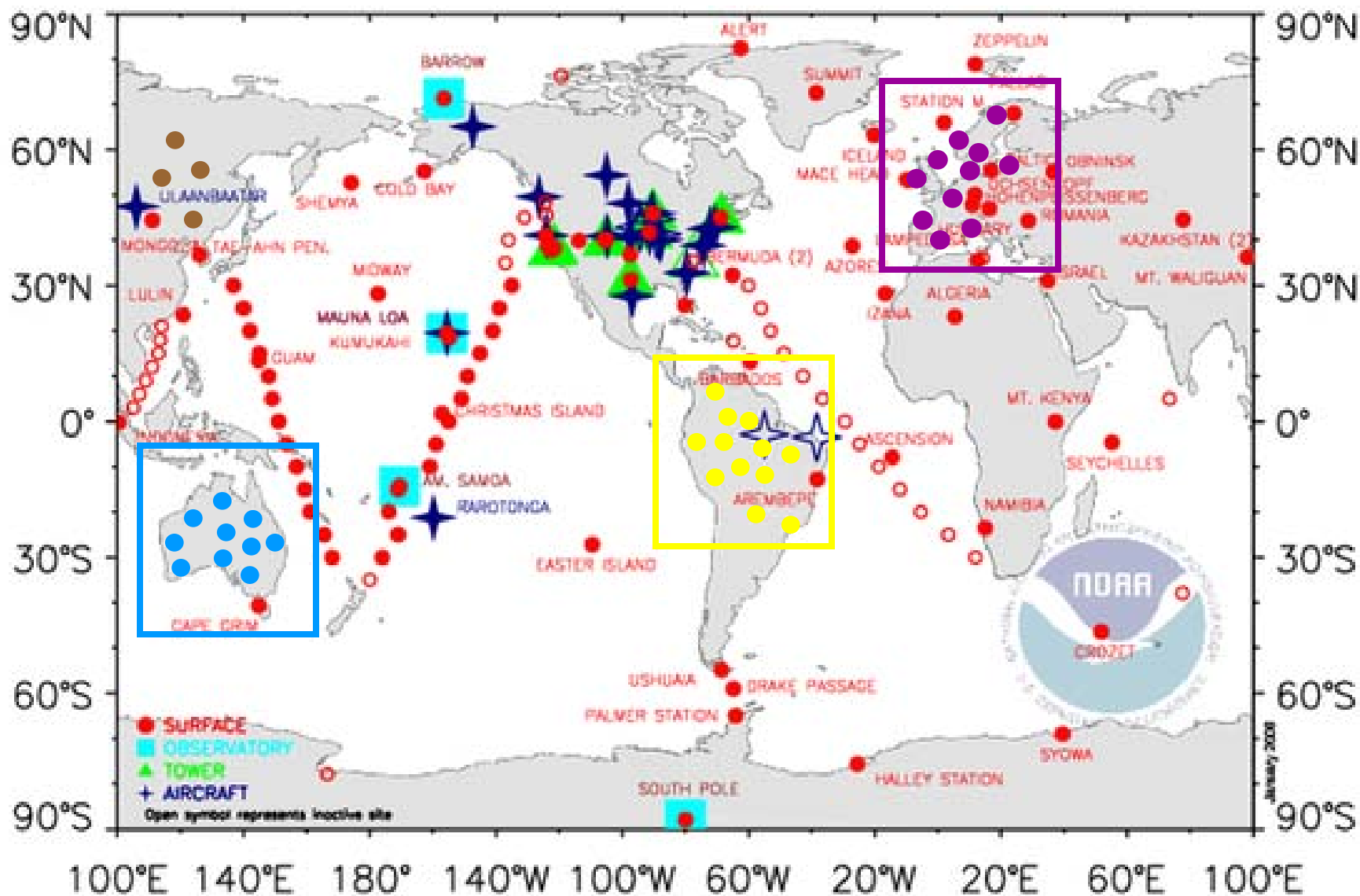
- Contribution to GEOSS – In situ GHG monitoring component
- Integrated Earth System Analysis



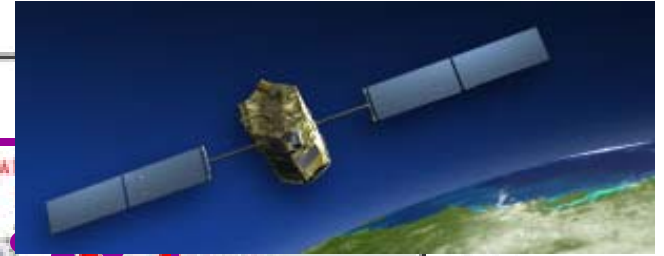
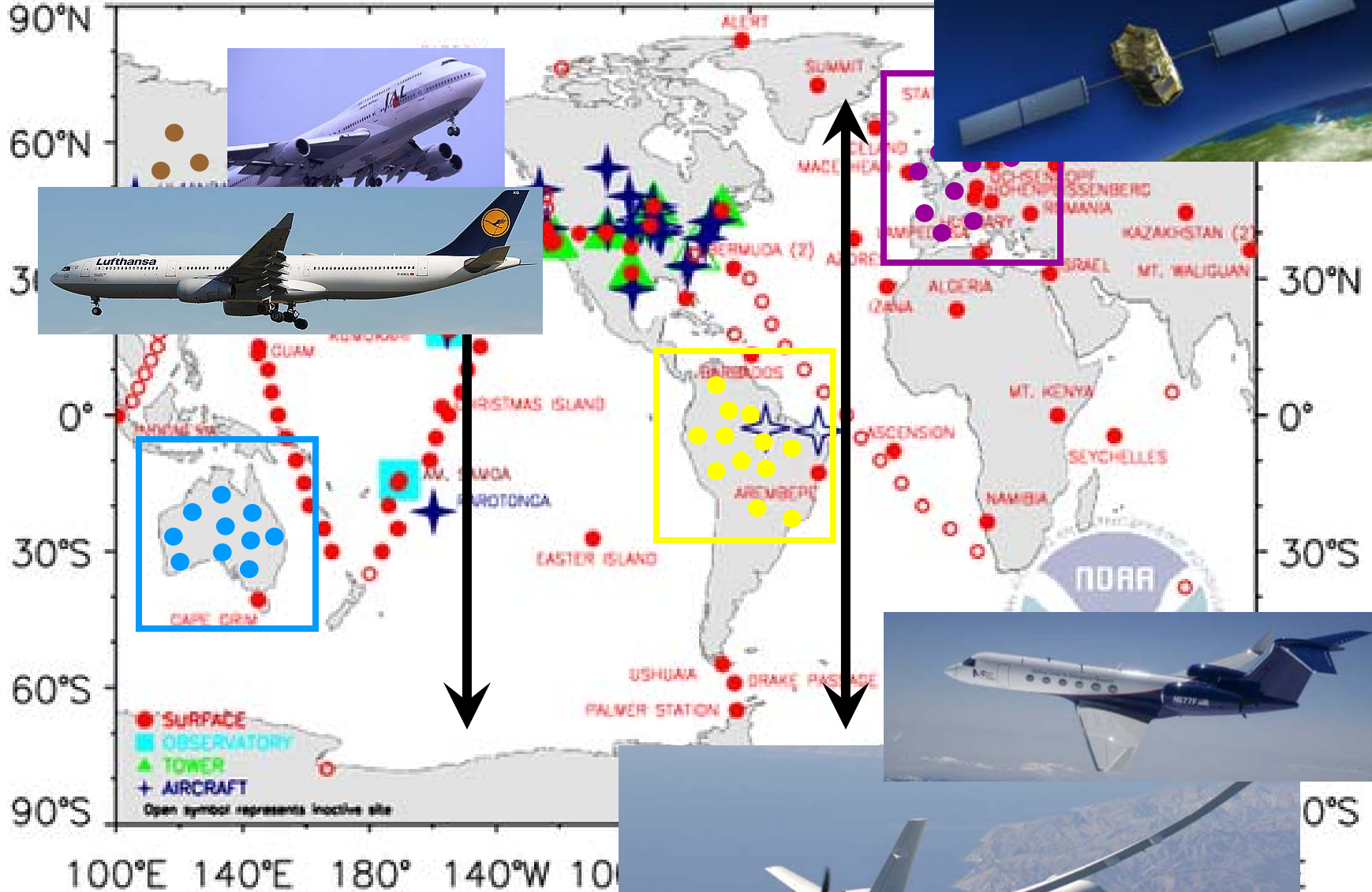
Hypothetical Future CarbonTracker Observing Network for North America



Hypothetical Future GEOSS In Situ GHG Network



Hypothetical Future GEOSS GHG Network



Take-home messages

- Goal of ESRL Carbon Cycle effort: measure carbon budget and provide timely, societally relevant information, e.g., independent verification of emissions reductions
 - Global and regional “backbone” networks anchor international and sub-regional networks (present and future)
 - ESRL C-Cycle group plays a leadership role in global measurement efforts
- Efforts to understand carbon cycle are data-limited
 - NA: more towers, aircraft (off to a good start)
 - Arctic: potential early detection of feedback (starting to develop plans)
 - Global: vertical data in the tropics and southern hemisphere (not on the radar)
- ESRL’s current CarbonTracker effort involves model users and model evaluators---Not model developers
 - This is a great opportunity for cross-ESRL collaboration