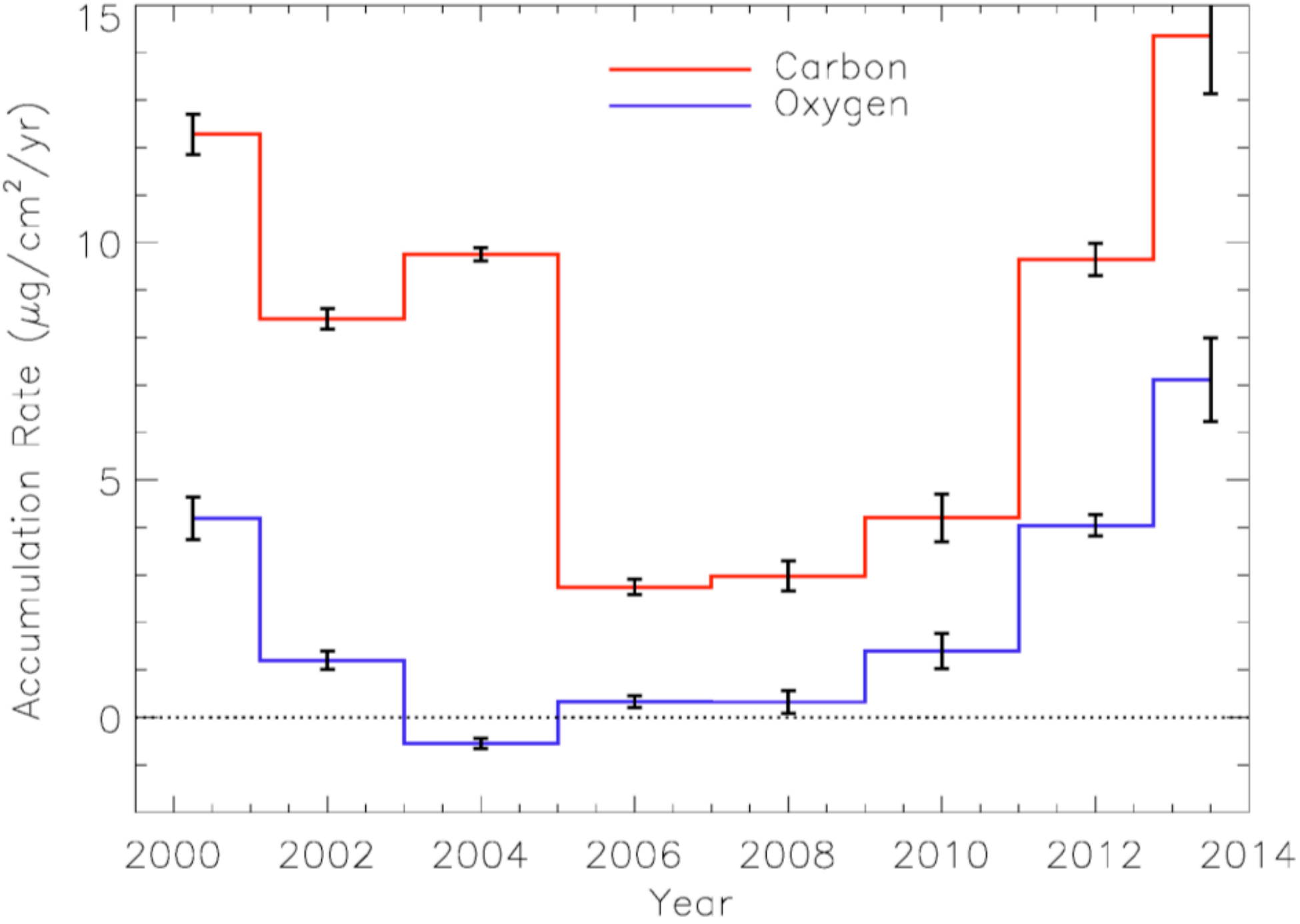
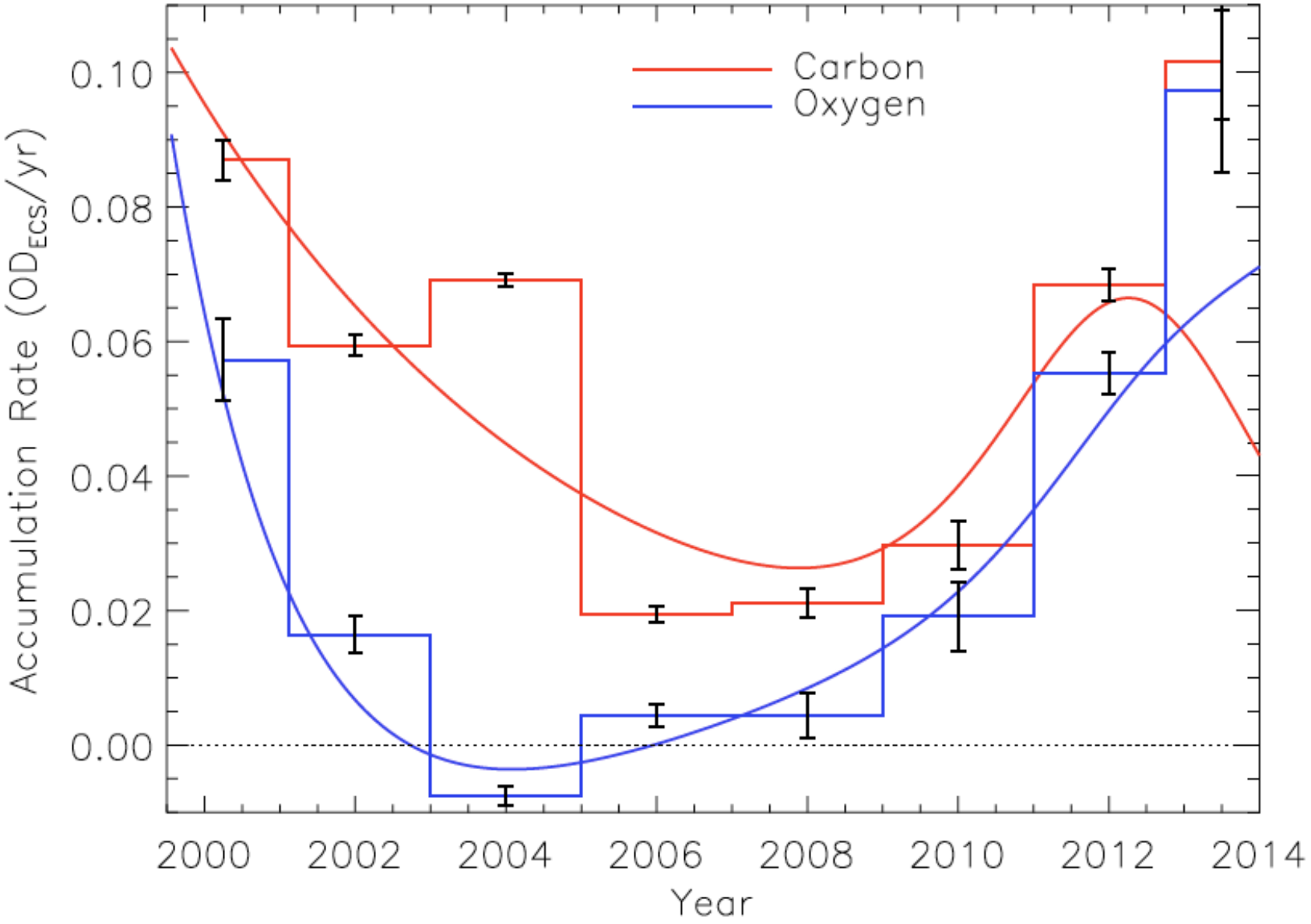
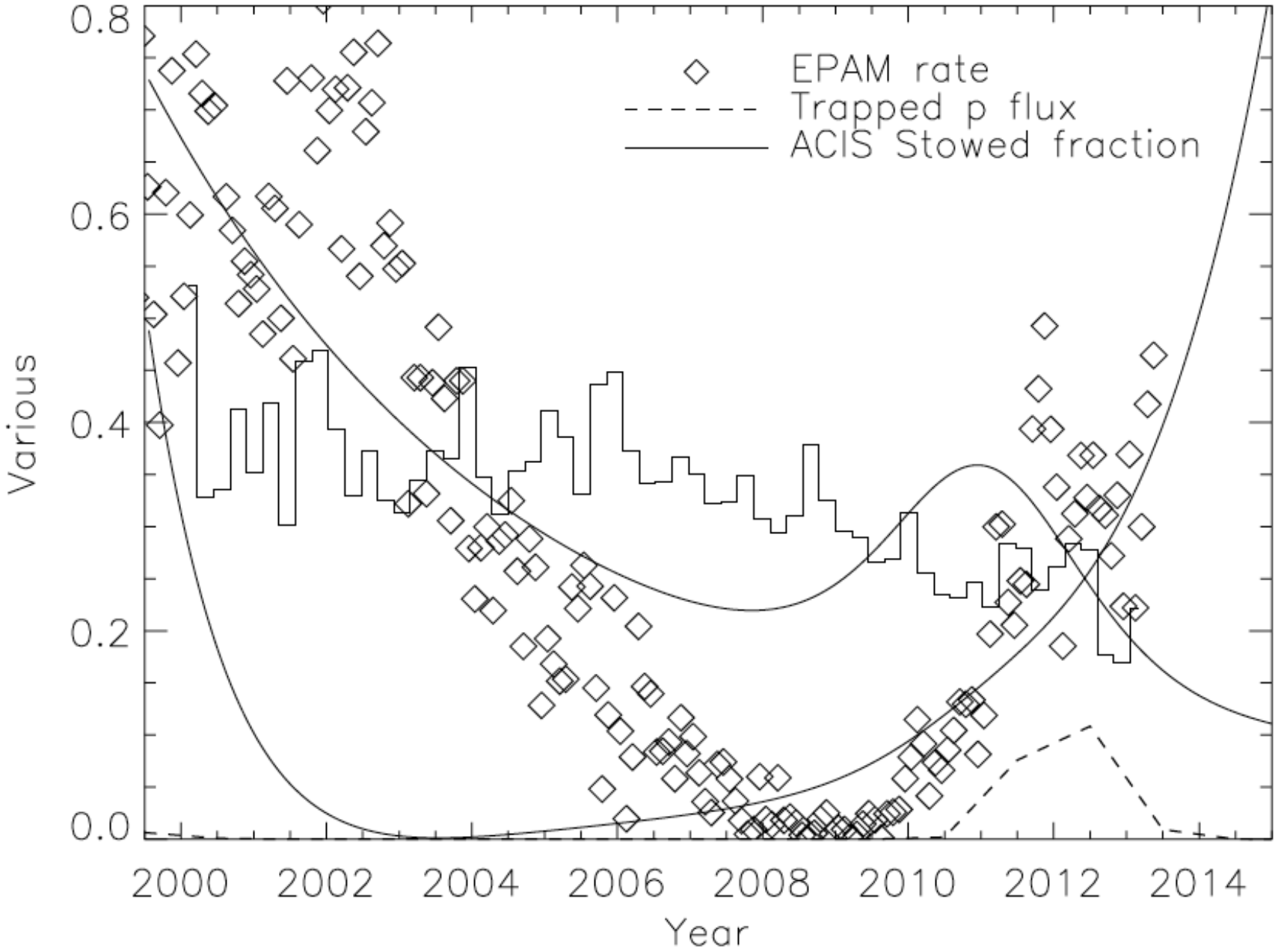
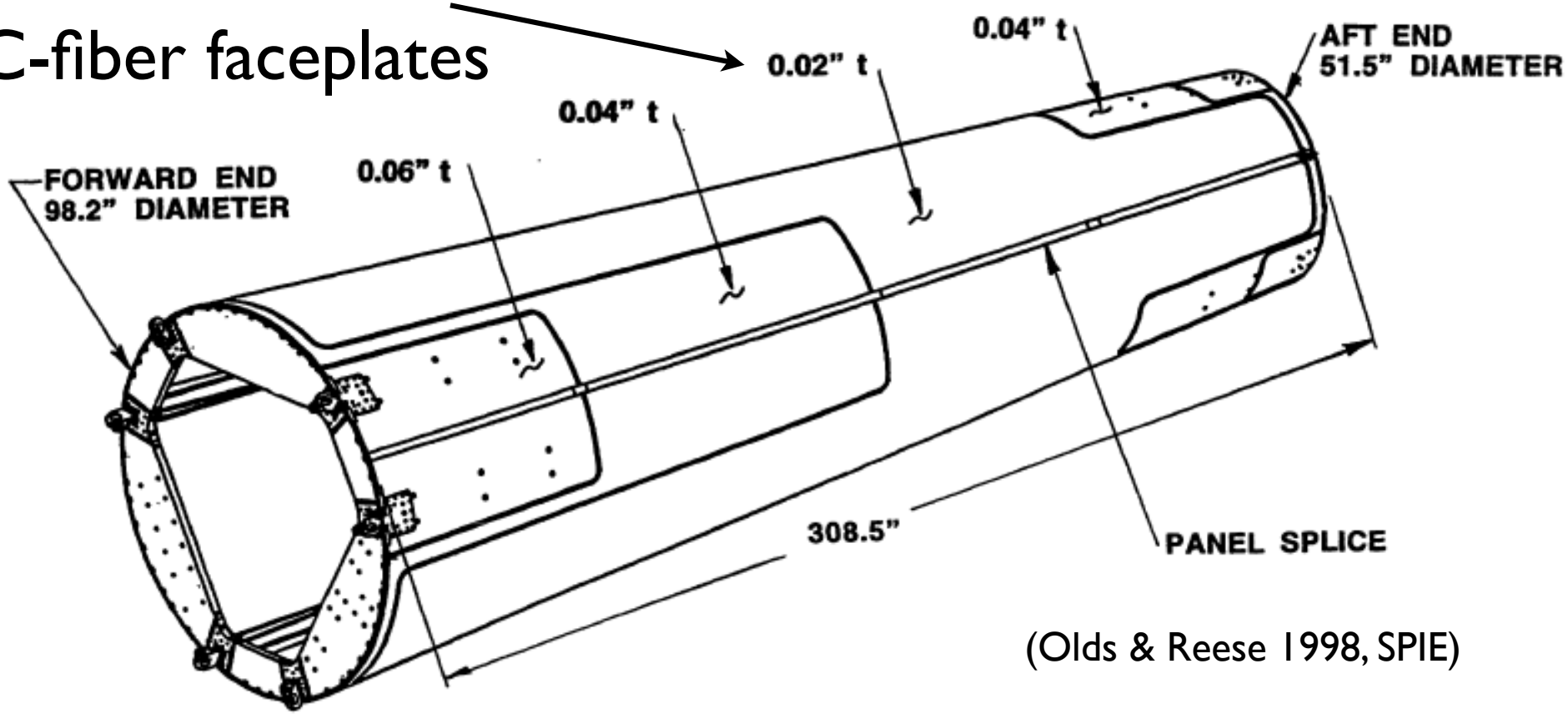

Carbon
Oxygen
Accumulation Rate (μg/cm²/yr)
15
10
5
0
2000
2002
2004
2006
2008
2010
2012
2014
Year


Carbon
Oxygen
Accumulation Rate (OD$_{ECS}$/yr)
0.10
0.08
0.06
0.04
0.02
0.00
2000
2002
2004
2006
2008
2010
2012
2014
Year


EPAM rate
Trapped p flux
ACIS Stowed fraction
Various
Year
0.0
0.2
0.4
0.6
0.8
2000
2002
2004
2006
2008
2010
2012
2014

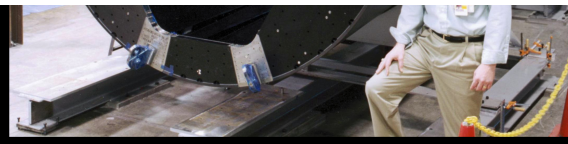
Chandra Optical Bench

thicknesses of
C-fiber faceplates

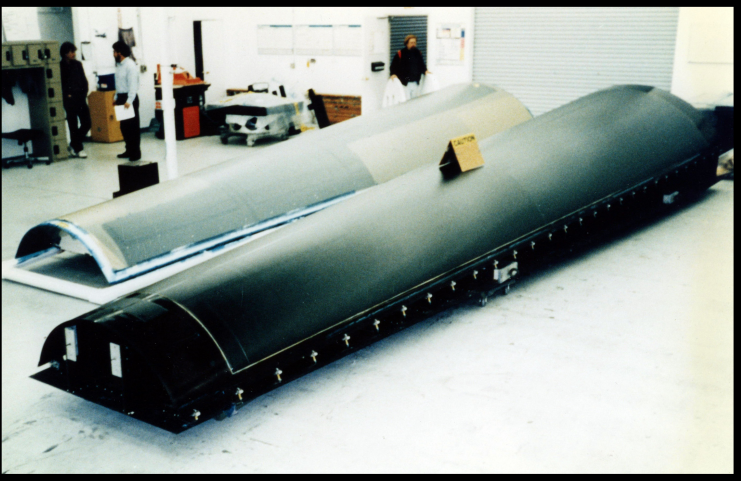


(Olds & Reese 1998, SPIE)

Figure 2.2-1 Optical bench.

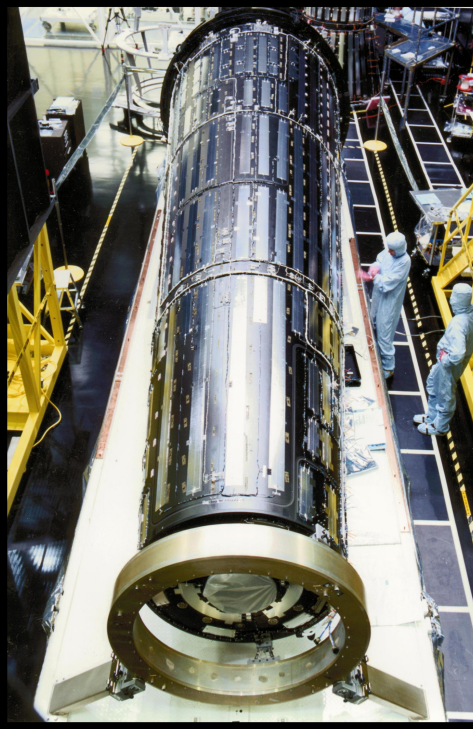


Optical Bench during initial assembly at ITT

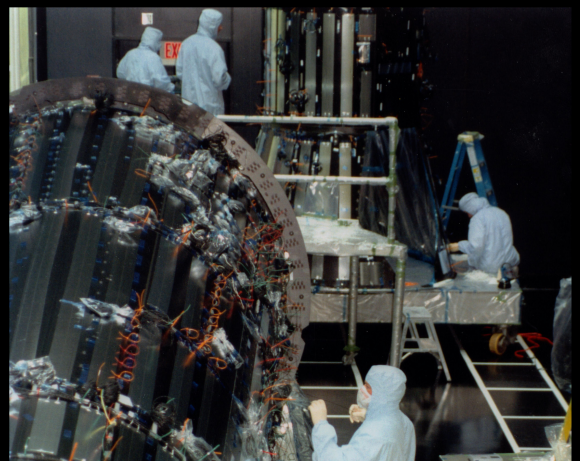


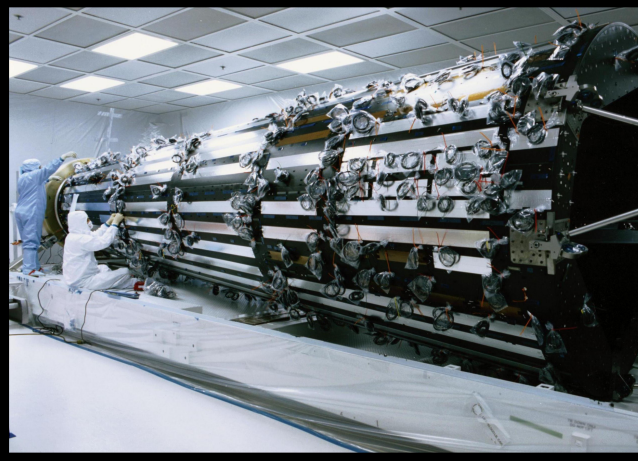
Structure being prepared for Static Load Test in Handling Fixture

OBA during electrical assembly operations

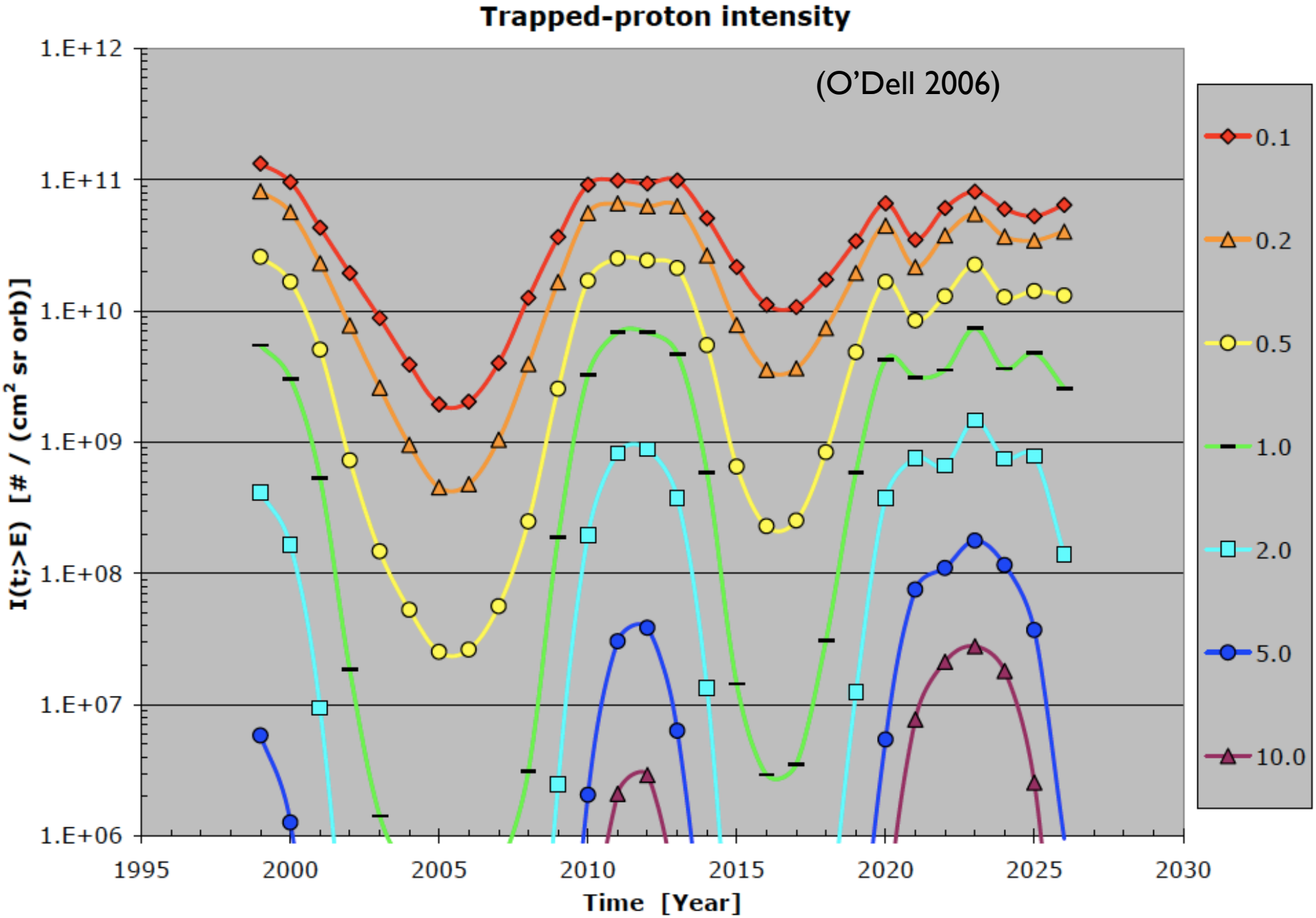


Optical Bench Structure during Static Load Testing at ITT





Completed OBA with blankets installed being prepared for HRMA integration at NGAS


Trapped-proton intensity
(O'Dell 2006)
1.E+12
1.E+11
1.E+10
1.E+09
1.E+08
1.E+07
1.E+06
I(t;>E) [# / (cm² sr orb)]
1995
2000
2005
2010
2015
2020
2025
2030
Time [Year]
0.1
0.2
0.5
1.0
2.0
5.0
10.0

Proton Sputtering?

- $dN_C/dt \sim 10^{19\text{-}22}$ atoms/yr in contaminant
  - minimum = only on filter
  - maximum = 0.1% on filter, rest vents or elsewhere
- Trapped proton fluxes ~ 200-10^7 p/cm^2/s/sr
  - minimum at 10 MeV, max at 100 keV
- At E ~ 10 MeV, p penetrates 1 mm C-fiber
  - dn/dt at 10 MeV: 10^{16} p/yr
  - E < 500 keV --> cascading sputter, >2x10^{20} atom/yr