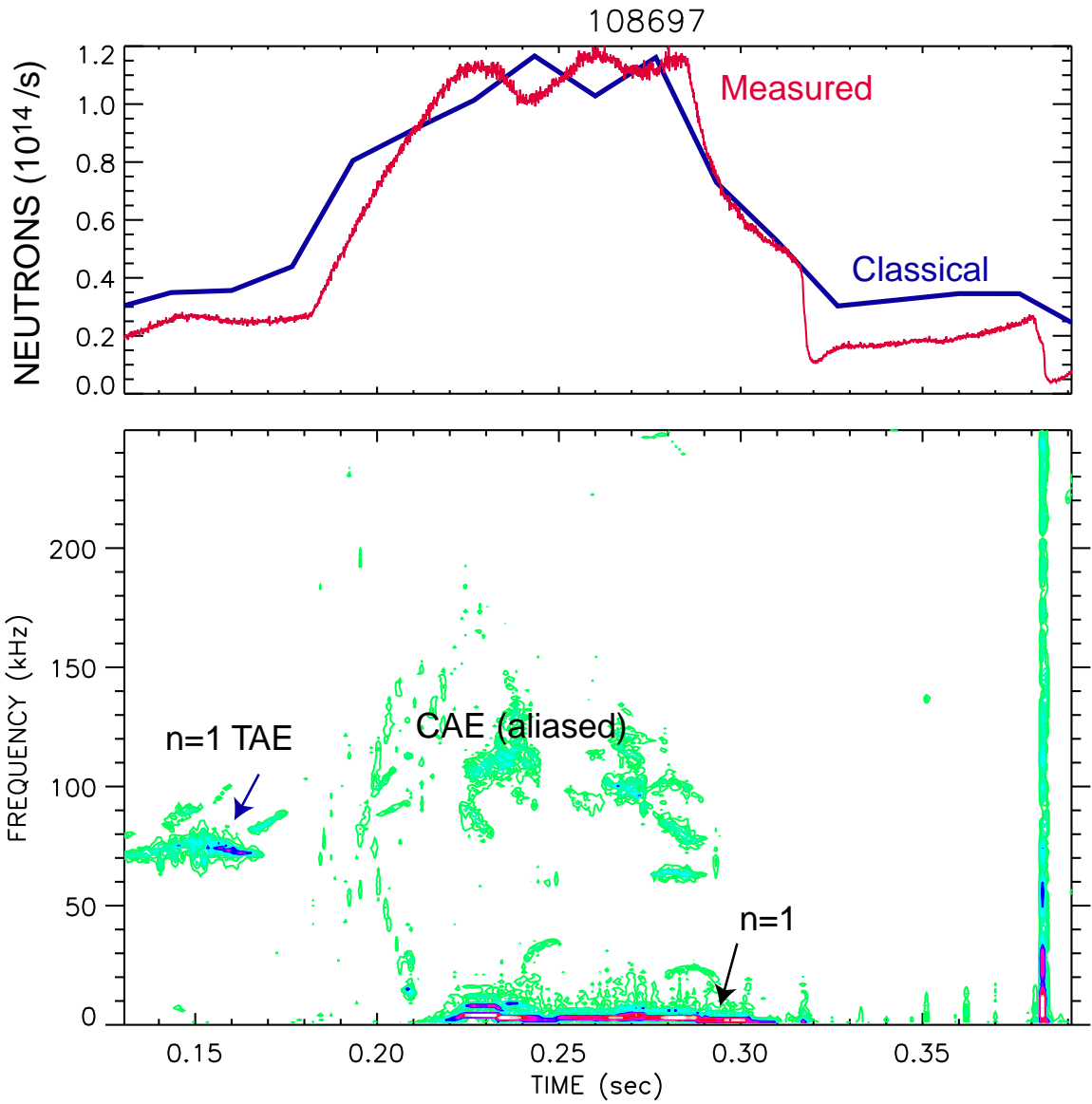
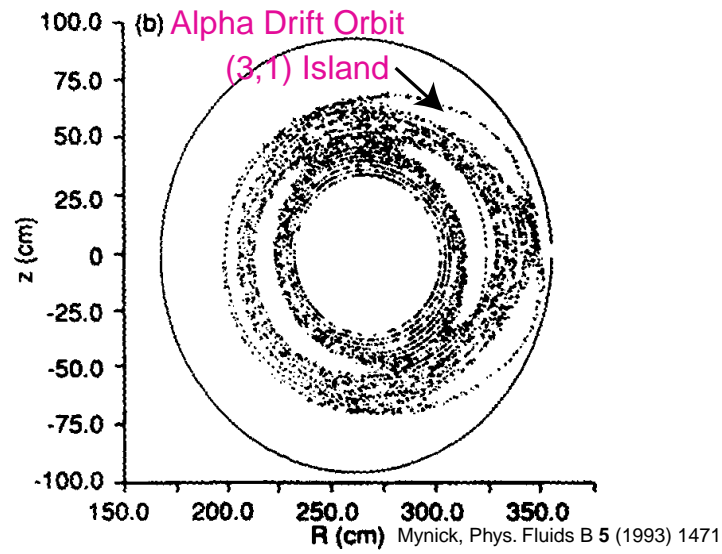
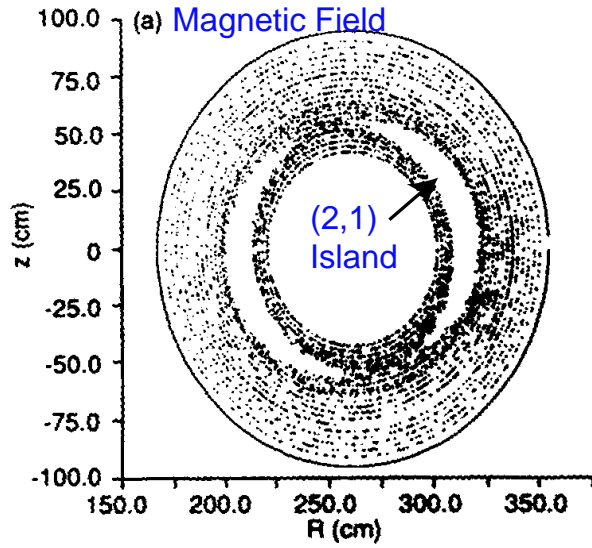


# Fast-Ion Transport

- Transport caused by fast-ion instabilities.
- Effect of low-frequency helical modes on transport.
- Mysterious reductions in neutron rate



Orbit Stochasticity easier by  $\sqrt{a/R}$  at Low Aspect Ratio



**ST attractiveness:**

- Alpha transport–heating profile and hot spots

**Toroidal physics:**

- Orbit stochasticity easier to observe and study?

**Center stack upgrade:**

- Higher  $I_p$  could make beam-ion transport studies more relevant to a reactor.

**Diagnostics:**

- Spatial eigenfunction.
- Beam spatial profile.

**Theory:**

- ORBIT calculations