Another “Moore’s Law”

Attempts at Flight 1890 - 1909
Flight

• From Kitty Hawk to the Moon in 65 ½ years
• As much a triumph of *materials science*, as anything else
• How do we do it again?
Pioneers

• Otto Lilienthal
  – the courageous experimentalist

• Samuel P. Langley
  – the accomplished theorist

• Orville and Wilbur Wright
  – the patient but stubborn synthesizers
Who will be our “Wright brothers” for reactor walls?

• The key breakthrough may or may not come from a large team

• *Large teams can systematically develop the tools that some brilliant scientist can use as a platform*

• It will take a large team of theorists, experimentalists, and simulation whizzes to harness the advances