

Abstract Submitted  
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**Blurring Boundaries among Physics, Chemistry, & Astronomy:  
The Mosely Centenary** VIRGINIA TRIMBLE, UC Irvine & LCOGT — Scientists are territorial animals, not just about our parking spaces & seats in the colloquium room, but also about our scientific territories, from the narrowest thesis topic (“Who’s been working on my Nebula and left it covered with dust?”) to the whole of physics, chemistry, or astronomy. Many 19th century astronomers resented spectroscopes invading their observatories; chemists objected to Moseley’s use of X-rays outgaming their retorts and test tubes in 1913; and chemists & physicists typically disbelieve astronomers suggesting new science on the basis of astronomical data (3 other combinations are possible). The talk will explore some of these transgressions, successes and failures. Moseley’s own contributions included sorting out the rare earths, putting paid to nebulium, coronium, etc, and putting Prout’s hypothesis on a firm foundation ready for the structure Cameron and B2FH would eventually erect there. Back in 1935 Gamow asked whether a new discipline should be called nuclear physics or nuclear chemistry (both now exist within APS and ACS), and 30+ years later, chemist L.S. Trimble was still complaining that physicists had grabbed the territory of atomic and nuclear composition away from chemistry. Some historians agree.

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