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Lest We Forget: Impact of the Great War on Physics & Astronomy

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2015 Annual Meeting of the Far West Section of the APS
Thursday–Saturday, October 29–31, 2015; Long Beach, California
Session S1: Astrophysics
2:00 PM–3:36 PM, Saturday, October 31, 2015
Room: CBA-139A

Chair: John Price, California State University, Dominguez-Hills

Abstract: S1.00001 : Lest We Forget: Impact of the Great War on Physics & Astronomy
2:00 PM–2:24 PM

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For astronomers, World War I began with the capture and imprisonment of a German eclipse expedition that had gone to the Crimea in August 1914 to look for bending of starlight by the sun, at the request of Einstein himself, who had, in 1911, predicted a value of about 0.8 arcsec (at the limb), one half of what definitive GR would say in 1915-16. Over the next few years Schwarzschild wrote his spherically symmetric solution to Einstein's equation, then died of service-related pemphigus. Physicists developed telescope meters to determine distances and directions to artillery fire, submarines, and aircraft. Paul Merrill learned to sensitive photographic emulsions to red and IR photons, later employing such plate to discover Tc on stellar surfaces (the first incontrovertible evidence of nuclear reactions inside). And much else. The end came with the 1919 establishment of the International Astronomical Union and International Union of Pure & Applied Physics and with Eddington's eclipse expedition which really did see relativistic light bending by the sun. A few words will be said about how parallel presentation of scientific advances and world history can help to fix both in our and our students' minds.