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PRL at 50: A history of moving physics forward

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Fifty years ago, Editor Sam Goudsmit announced the introduction of a new journal, Physical Review Letters, which would collect the pre-existing “Letters to the Editor” in The Physical Review into a separate Review. According to his July 1958 editorial, the new journal would consider only “Letters which really deserve rapid publication” in order to “maintain the high speed and high standards.” Fifty years after its creation, Physical Review Letters has grown into a journal of choice for publishing important work, which includes many Nobel-Prize-winning discoveries, in all fields of physics. Today, the journal continues to attract a steady growth of worldwide submissions that have reached the level of over 10,000 submitted manuscripts per year. To gain insight into the evolution of the new journal from its beginning as an “experiment” to its current state as an established world leader among physics journals, I will present a brief historical perspective of key developments starting in 1893 when three physicists founded the parent physics journal, The Physical Review, at the physics department of Cornell University, Ithaca, New York. Other major events before the birth of Physical Review Letters in 1958 include the immediate introduction of “Minor Contributions” in 1893, the foundation of The American Physical Society in 1899 and its takeover of The Physical Review in 1913, and the publication of the first “Letter to the Editor” in 1929. Since 1958, Physical Review Letters experienced a steady growth of submissions as well as a few major format and procedural changes, which include the increase in Letter length from one printed page to four printed pages in the 1960s and the establishment of the editorial board for handling appeals in the 1970s. Despite early technical difficulties, the “experiment” was very successful at carrying physics into the twenty-first century.