HISTORICAL PREFACE

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This Colloquium marked the two hundredth anniversary of the discovery of cepheid variables. On September 10, 1784 Edward Piggot established the variability of the star we now call η Aquilae, the very same night that his friend and co-worker, John Goodricke, first found β Lyrae to vary. Only a month later, on October 20, Goodricke was "almost convinced" that δ Cephei is variable.

Goodricke is a figure much beloved of textbook writers: his affliction as a deaf-mute, the fact that he died at 21, and his work having been done in relative isolation, have led to his often being portrayed as some kind of bucolic genius. He was, in fact neither. He came of a well-connected family and one, more-over, that was surprisingly enlightened for the times. In an age when deaf-muteness was customarily equated with insanity, his parents recognized their son's affliction for what it was, and sent him for special training at an academy in Edinburgh. It is now fairly certain that by the time he was thirteen he could lip-read and perhaps even speak. He continued at a normal school, where he showed intelligence and a reasonable ability in the standard curriculum.

Edward Piggot also came of a well-connected and much-travelled family. His father, an imenent surveyor and Follow of various Royal Societies and national Academies, had a strong interest in astronomy and was the correspondent of such as Herschel and Maskelyne. He and his son referred to themselves whimsically as 'gentlement astronomers', and upon settling for a time in the English city of York established a considerable private observatory. Here it was that the great variable star discoveries would be made.

The year 1781 provided a great stimulus to observational astronomy, especially in England. This was the year in which Herschel discovered Uranus, and all who had the means were eager to observe "Mr Herschel's comet". Edward Piggot, then 28, had the means, and John Goodricke, then 17 and living nearby, had the interest. So began their cooperative efforts.

The relationship was clearly one in which the knowledgeable Piggot was introducing the inexperienced youth to new fields. Moving on from the new planet, it was Piggot who suggested variable stars as a subject ripe for investigation, and specifically Algol as a long-suspected

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candidate. After Goodricke had in fact established Algol's variability a year later in November, 1782, it was Piggot who verified the discovery and, through his father's connections, make it widely known. Furthermore, recent research has shown that it may even have been Piggot who first suggested the eclipsing binary theory by way of explanation. But either way, Piggot gave full and generous support to Goodricke as the discoverer, leading to Goodricke's receiving the Copley Medal of the Royal Society.

Goodricke was an arduous observer, a characteristic that probably led to his death. Following his discovery of δ Cephei's variability in late-1784, he observed it no less than a hundred times in the first ten months of 1785 -- conceivably a record in the English climate! In early 1786 he contracted pneumonia "in the consequence of exposure to night air in astronomical observations," and died on April 20. He was 21 and had been a Fellow of the Royal Society for only two weeks. His death was "an event I shall ever lament," wrote Piggot. "This worthy young man exists no more; he is not only regretted by many friends, but will prove a loss to astronomy, as the discoveries he so rapidly made evince."

Piggot gave up active observing at this time and resumed his travels abroad. He would make only two further discoveries of variable stars, notably R Coronae Borealis in 1795, and his subsequent life seem not to have been the happiest. It included three years detention in France during French/English hostilities. He was never elected on FRS, nor a Fellow of the Royal Astronomical Society, which was founded shortly before his death in 1825 at the age of 72.

I am sure that the research reported on the pages that follow would have made strange reading to Edward Piggot and John Goodricke, but it stands as a worthy salutation to them and to all who have followed in their footsteps.