20^h 55^m on September 30. Clouds prevented adequate observation of the Sun, but the active groups along the $-10°$ parallel of latitude were still by far the most important then on the disk.

The remaining solar happening which may be mentioned is the very large spot, first seen after some days of cloud on October 6 at about $+17°$ and near the east limb. This spot was one of the largest of the cycle and persistently retained its dimensions. Mr. Newton informs me that it reached a maximum of 2900 millionths of the solar hemisphere on October 6. It did not appear to be very active, and I understand that no disturbances of radio have been reported to Mr. Newton. During the early part of its passage it was followed by several intensely dark flocculi, apparently radiating from it as a centre.

In concluding this summary I must acknowledge my indebtedness to Messrs. Alexander, Alcock, Cooper and Welsh for drawings of current spots, to Prof. F. O'B. Ellison, the Rev. J. W. Cotton and Mr. Percy Murden for photographs, and also, of course, to Mr. Newbegin for copies of his spectrohelioscopic records.

OBITUARY

Walter Goodacre

Walter Goodacre came of Leicestershire stock, and was born at Loughborough in 1856. At an early age his family moved to Wakefield (Yorks), and a little later came to London, about 1863, residing at Finsbury Park, when his father founded the business of William Goodacre & Sons, a concern with considerable interests in India, dealing in coir and carpets, and destined to grow into a well-known commercial house of sound enterprise and solid standing.

He was educated at a local private school, and astronomical interests were awakened by his master, who possessed an astronomical telescope. When he left school at the age of about fifteen or sixteen a seed was planted which immediately took root, and eventually came to full fruition. He now entered his father's business, and displayed an aptitude and shrewd judgment in the furtherance of the now expanding concern. In 1883 he married Frances Elizabeth Evison, and two children, Eric and Gladys, were born. In 1910 Mrs. Walter Goodacre died. His astronomical interests, always intense, were now fully matured, and his early training when a member of the Liverpool Astronomical Society (and a Director of their Lunar Section) fitted him for the Lunar Directorship of the British Astronomical Association (of which he was a founder member in 1890) in 1897, the mantle of Thomas Gwyn Elger, F.R.A.S., first Lunar Director of the Association, falling on the very capable shoulders of Walter Goodacre. This office he maintained and encouraged with natural skill and characteristic energy for forty years, retiring in 1937 at the age of eighty-one.

In the lunar field his energy was unbounded, and his helpful enthusiasm and criticism, backed by observational skill and fine technique, raised him to the position of the world's first lunarian.

He went to India and founded a branch of his firm's business in 1902, remaining there about six months, with subsequent visits up to 1915. The firm of Goodacre now possessed their own Indian factories and warehouses, with large mercantile holdings in England.

Despite intricate business commitments his interest in lunar affairs never flagged or abated. Every letter addressed to him by members of the growing B.A.A. was always answered in detail.

His famous lunar map in twenty-five sections (commenced in 1902), originally drawn to a scale of 77 inches to Moon's diameter, reduced on publication to 60 inches, appeared in 1910, the result of many years of intensive study of the Moon, and was based on 1433 measured points by S. A. Saunder, F.R.A.S. To-day this chart still remains the anchor and foundation of most of our best English observers, and when in 1932 he published his *Moon*, this map was reproduced on a smaller scale in this authoritative volume which embodied the results of more than fifty years of lunar study.

Early in life he acquired a 12-inch Calver mirror, and mounted it himself; but his best work in the best period of his busy life was accomplished with a fine 18-inch equatorial, clock-driven Calver.

He lived at Forest Gate (Essex) in 1883, and played cricket with the Woodgrange C.C. In 1892 he lived at Highgate, in 1894 at Crouch End and in 1906 at Muswell Hill, thus from a boy always residing in North London. In 1909 he moved to Finchley, where in his large garden he built the observatory to contain the 18-inch Calver.

He was a Deacon and Church Treasurer of North Finchley Congregational Church for many years. He later sold his 18-inch Calver to a Japanese observatory, and acquired a 10-inch Cooke equatorial, clock-driven refractor; this necessitated the enlargement of his Finchley observatory. In 1929 he retired from business after fifty-five years in the Company, and removed to Bournemouth, where he published his *Moon*. In 1928 he endowed the B.A.A. with the Goodacre Medal and Gift. He was elected a Fellow of the Royal Astronomical Society in 1885, and was a life founder member of the B.A.A. and a life Fellow of the R.A.S. He was President of the B.A.A. 1922–1924. In his younger days he was a keen cricketer, and in later years he exchanged the bat for the club in a round of golf.

Walter Goodacre died on 1938 May 1 at his Bournemouth residence, and was buried in the family grave in Highgate (Old) Cemetery, the last offices being said in the Finchley Congregational Church, where he had worked and worshipped.

Success in business and the highest achievements in his lifelong

astronomical studies left Walter Goodacre an unspoiled, quiet, unassuming and most modest man; and to the end of his long, useful life he remained a kindly, shrewd friend to all who sought his advice and help, and a benefactor to the B.A.A.—R. B.

ASTRONOMICAL DIARY

The times are in Universal Time, i.e. Greenwich Mean Time reckoned from midnight, and are for the meridian and latitude of Greenwich.

Phenomena in December 1938

d	h	m	
1	21	51·4	Occultation (D) of 22 Piscium (Mag. 5·8). P.A. 61°
3	17	47·3	Occultation (D) of B.D. +9° 167 (Mag. 7·2). P.A. 115°
4			Mercury stationary
5	0	58·8	Occultation (D) of 29 Arietis (Mag. 6·1). P.A. 123°
7	10	22·1	Full Moon
9			Venus stationary
11	3	39·1	Occultation (R) of A^2 Cancri (Mag. 5·7). P.A. 323°
14			Mercury in inferior conjunction with the Sun
14	1	16·6	Moon in Last Quarter
14	2	15·4	Occultation (R) of B.D. −0° 2442 (Mag. 6·3). P.A. 304°
15			Saturn stationary
21	18	6·7	New Moon
22	12		Winter solstice
24			Mercury stationary
26			Venus at greatest brilliancy
26			Neptune stationary
28	18	41·6	Occultation (D) of B.D. +0° 5009 (Mag. 7·5). P.A. 27°
28	21	37·7	Occultation (D) of B.D. +0° 5018 (Mag. 6·6). P.A. 55°
29	22	53·2	Moon in First Quarter
31	21	43·4	Occultation (D) of B.D. +12° 271 (Mag. 6·3). P.A. 21°

Visibility of Planets in December 1938

MERCURY is an evening star till 14th, then a morning star.
VENUS is well placed as a morning star, being north of Sun.
MARS is a morning star, distant from Earth.
JUPITER is an evening star, on meridian about 16^h, S. Decl. 13°.
SATURN is an evening star, on meridian about 19^h, N. Decl. 2°.
URANUS is well placed; it passed opposition on November 8, in Aries.
NEPTUNE is a morning star between Leo and Virgo.

		URANUS		NEPTUNE	
Date		R.A.	Dec.	R.A.	Dec.
		h m	° ′	h m	° ′
Dec.	1	2 50·3	+15 57	11 36·7	+3 46
	16	2 48·3	+15 49	11 37·2	+3 43
	31	2 46·8	+15 43	11 37·4	+3 43