

= Warner and Swasey Observatory =

The Warner and Swasey Observatory is the astronomical observatory of Case Western Reserve University . Named after Worcester R. Warner and Ambrose Swasey , who built it at the beginning of the 20th century , it was initially located on Taylor Road in East Cleveland , Ohio , USA . The observatory , which at that time housed a 9 @. @ 5 @-@ inch (24 cm) refractor , was donated in 1919 to the Case School of Applied Science . The newer 24 @-@ inch (61 cm) Burrell Schmidt telescope was built in 1939 .

Due to rising light pollution in Cleveland , a new station in Geauga County 's Montville Township was established in 1950s . Named after Jason John Nassau , the station initially housed the Burrell telescope , which was later moved to Kitt Peak National Observatory . Instead of Burrell the station was equipped with the 36 @-@ inch robotic telescope . In 2008 Nassau Station was sold to the Geauga Park District and subsequently incorporated into its Observatory Park .

The observatory currently operates the old 9 @. @ 5 @-@ inch refractor (now known as the rooftop telescope) at the university 's University Circle campus , and the Burrell Schmidt telescope at Kitt Peak National Observatory in Arizona . The old site on Taylor Road was sold in 1983 .

= = History = =

The observatory was originally built by Worchester R. Warner and Ambrose Swasey , owners of Warner & Swasey Company , which made precision instruments and telescopes in the late 19th and early 20th centuries . They became trustees of the Case School of Applied Science (later renamed to Case Institute of Technology) , and built an observatory in East Cleveland , which they gave to the school in 1919 . This original observatory building was located on Taylor Road four miles east of the university campus and housed a 9 @. @ 5 @-@ inch refractor , and was dedicated in 1920 . The building was designed by the firm of Walker and Weeks . In subsequent years the observatory grew to house several more telescopes and instruments , such as the 24 @-@ inch Burrell Schmidt telescope , as well as an astronomical library and public lecture hall .

In the 1950s , it became apparent that the light pollution from Cleveland was beginning to make cutting @-@ edge research impossible from the East Cleveland site . A new site was constructed 30 miles to the east in Geauga County , known today as the Nassau Station , and the Burrell Schmidt telescope was moved to this location . In order to compensate for the move , a 36 @-@ inch telescope was soon installed at the Taylor Road facility .

In 1978 , the Astronomy Department of Case Western Reserve University made a deal with the Association of Universities for Research in Astronomy (AURA) to build a new observatory at Kitt Peak National Observatory to house the Burrell Schmidt . The telescope was moved from Ohio to Arizona in May 1979 , and in 1980 the 36 @-@ inch reflector on Taylor Road was moved to the Nassau Station . This meant no further astronomical work was done at the Taylor Road facility , and as a result the faculty and resources of the original observatory were moved to the main campus of Case Western Reserve University in 1982 . The Taylor Road facility was sold in 1983 , was abandoned , and remained neglected until 2005 when it was sold to a couple who planned to convert the building into a residence . The plans stalled when its new owner was convicted of mortgage fraud and sent to prison in 2007 .

= = Telescopes = =

= = Burrell Schmidt Telescope = = =

The 24 @-@ inch Burrell Schmidt Telescope was originally built in 1939 by Warner & Swasey Company of Cleveland , Ohio and was housed at the Taylor Road facility . It is currently housed at Kitt Peak National Observatory near Tucson , Arizona . The telescope recently had its optics upgraded with a very wide field of view CCD array , which is much more sensitive than the

photographic plates . It is the instrument used today by the Case astronomers .

= = Nassau Station Robotic Observatory = = =

The Nassau Station , originally constructed in the 1950s , currently houses a 36 @-@ inch reflecting telescope . It is named after observatory director Jason John Nassau , who was a prominent astronomer at the time . Work was carried out in the 1990s to make the telescope capable of remote viewing , making it one of the first telescopes to be used in this manner . However , it was seldom used by Case astronomers due to increased light pollution from Cleveland and the enhanced capabilities of the Burrell Schmidt . As a result , the observatory was left unused for several years until 2008 , when it was sold to the Geauga Park District . The park district reopened the facility as part of its Observatory Park on June 16 , 2012 . The park was designated as a dark sky park by the International Dark Sky Association .

= = Rooftop Telescope = = =

The Rooftop Telescope is a 9 @.@ 5 @-@ inch refractor that was originally constructed in 1894 by Warner and Swasey for their own use . The telescope was the first instrument of the Warner and Swasey Observatory and was originally used at the Taylor Road facility , but was put into storage when the Astronomy Department of Case Western Reserve University was relocated to the A. W. Smith building on the main campus . In 1986 the telescope was reinstalled in a new dome on the roof of the A. W. Smith building .

The telescope remains in excellent condition today and is available for use by all students , faculty , and staff at CWRU once they go through a seminar on proper telescope use . It is also often used for public observing nights by the university 's Physics and Astronomy Club .

= = Research = =

Observers using the Warner and Swasey Observatory have made important contributions to astronomical research . An early example is work carried out by the observatory 's then director , Jason Nassau , on the classification of carbon stars and M @-@ type stars in 1949 ; more recently , observations made using the Burrell Schmidt telescope led to the discovery of the galaxy Andromeda VIII in 2003 . This galaxy orbits the more famous Andromeda Galaxy , and was previously undiscovered due to its position in front of the bright disk of the parent galaxy . The Burrell Schmidt has also recently been used to image the intracluster light in the Virgo Supercluster . The intracluster light is a thousand times fainter than the night sky , and was observed after combining seventy images of the cluster which were taken with the Burrell Schmidt telescope .