

The Sleaford Observatory Users Manual

**Richard Huziak
Version 1.1
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Introduction

The Sleaford Observatory is jointly owned and operated by the Saskatoon Centre of the Royal Astronomical Society of Canada Inc. (RASC) and the University of Saskatchewan (U of S). The observatory is available for use by members of the RASC in good standing, students and staff of the university and by supervised guests of either group.

The observatory was established in 1996. Because of best long-term interests, the 3-acre site is owned by the university and unrestricted access and use of the property is granted to the RASC indefinitely by legal agreement.

Vital Statistics

Located approximately 50 km east of Saskatoon and 6 km south, or 11 km NNW of Colonsay. Driving time is 30 – 40 minutes from the eastern outskirts of Saskatoon.

Telephone number: (306) 225-2045 (long distance, non-attended).

Longitude: xxxxxxxxxx Latitude: xxxxxxxxxx

Emergency Response: dial 911

See Sleaford Observatory Committee section for contact names and numbers.

The Sleaford Agreement

The Sleaford Observatory is administered through a legal agreement which is in effect and spirit a Partnership Agreement. This agreement is available to all members for their review from the Treasurer. A general summary of the Agreement is:

- It is a partnership agreement in spirit reflection joint cooperation between to U of S and the RASC since 1969.
- Administrating partners are the U of S Department of Physics and Engineering Physics and the Saskatoon Centre of the RASC.
- The agreement is administered by the Sleaford Joint Site Management Committee (JSMC) which meets at least once each year. The committee contains two members from each group.

- The JSMC administers and building, usage plan and establishes terms of use.
- The site contains common infrastructure that cannot be altered or removed by either group and is joint owned and financed (such as basic electrical runs, piers, etc.)
- Costs of running the site (power, telephone, snow clearing, grass cutting) are shared equally by both parties.
- Facilities and telescopes can be built and owed by either party.
- Either party can use each others' facilities and telescopes after demonstrated proficiency.
- The agreement contains damage, liability, termination clauses.
- The agreement offers first right of refusal for ownership to the RASC should the university withdraw.

Rules of Conduct

The Sleaford Agreement required that Rules of Conduct be established by each party and that they are posted for members to see. University Rules of Conduct are posted in the astronomy lab manuals. The Rules of Conduct of the RASC are posted here:

1) Bring warm clothes.

It may be warm in the daytime but it quickly becomes very chilly on clear evenings. Bring a toque or warm hat, gloves, warm coat and warm footwear.

2) Dim headlights when entering and exiting the property.

Car headlights interfere with the eye's dark adaptation of other users and may ruin a long exposure photograph. Where possible, use only your parking lights when entering and exiting the property. Please park facing the school and avoid directing your headlights towards the observing area when leaving.

3) Use red flashlights and point flashlights towards the ground when walking on the site at night.

Please be careful not to shine flashlights in the direction of any telescopes or into anyone's eyes, even if it red. Please keep their use to a minimum.

4) Help keep the site clean and tidy.

Avoid tracking dirt or mud into any buildings on site. To avoid accidents, please do not consume food or drink in the vicinity of any telescopes. When you notice any garbage container is full, take the garbage back to the city and dispose of it. Place a clean garbage bag in the bin.

5) Follow the posted rules of operation for the composting toilet. Keep the toilet clean. Wipe up after yourself and clean it if you find it dirty.

6) Avoid smoking on the property.

Smoking is only permitted inside vehicles equipped with ashtrays and with the permission of the owner or on the gravel roadway adjacent to the property. Smoking is

not permitted outside on the property nor inside observatory buildings. In the summer, the grass is very dry, and butts may cause fires.

7) No alcohol permitted on the site.

Alcohol is not permitted on the site except for special occasions or events condoned by the RASC. Please be courteous to other users of the property and avoid foul language.

8) Exercise caution when moving the observatory's roof.

Check that no person other than the operator is standing inside the building or outside near the structure when opening or closing the roof. Telescopes must be turned off and locked in a horizontal position before operating the roof. Close the roof if it becomes windy or if rain is threatening.

9) Close the gate.

Before leaving the site, check the all doors are locked whether you used them or not, to assure nothing was accidentally left open by others. The last car to leave must close the gate behind you.

User Responsibility at the Sleaford Observatory

Although the Sleaford Agreement set out liability for each party, generally, you are responsible for all costs of repair or replacement for anything you break or lose if you choose to use equipment or facilities that are not yours. This does not mean that you shouldn't use others' equipment, but when you do, you should be fully aware of how the equipment works.

Sleaford is a Remote Site

Because the Sleaford Observatory is a remote site, the area is sparsely populated and roads are sometimes difficult to drive on in the winter or after heavy rains, let someone know that you are going to the site and when you plan to return.

Site Keys

There are 4 keys relating to the Sleaford site:

- RASC facilities & tool locker
- U of S (Roll-off Observatory)
- RASC/Roll-off locker (combination lock)
- Sleaford Schoolhouse

Getting an RASC Sleaford Key

Keys to the Sleaford Observatory RASC buildings are available to any member in good standing who desires one and completes basic training. Training can be done by any member of the Sleaford Site Committee. All RASC facilities are keyed alike, so one key opens all RASC doors. The RASC key also opens the repair tools, laser pointer and eyepiece locker.

Keys are distributed only to RASC members and U of S lab instructors, and keys are retrieved from those who leave the RASC. Key retrieval, or at least notice of the requirement to retrieve a key, is the job of the Membership Coordinator.

Keys to the U of S Roll-off

A key to the U of S Roll-off observatory is available to members who completed basic training for the Roll-off and equipment inside. The key is stored in Locker #xx. Qualified members will be given the combination to the lock after proper training.

Schoolhouse Key

The schoolhouse key opens the rear porch entrance to the school. It is located perched in an open electrical box near the warm-up shelter telephone. Make sure you put the key back after use.

Using the Property

Open the gate by pulling one or both gates open **toward the road**. There is no lock on the gate. Any portion of the property can be used for observing.

Power outlets on the outside of the U of S Roll-off building are always on, so telescopes and equipment can be plugged into these outlets at any time, even if the Warm-up main breaker is off. Exterior plugs on RASC buildings are on only when the main power breaker in the Warm-up Shelter is on.

Warm-up Shelter

The warm-up shelter consists of 3 separate rooms: the warm-up room, the cold storage and the washroom. All have separate outside entrances but are keyed the same. **If site power is required** you will generally have to enter the Warm-up Shelter. Do the following:

Enter the building. There are 3 power panels on the east wall of the main warm-up room. Open the door of the centre panel and throw the top breaker to the on position. Red lights should come on in the warm-up shelter. Do not change any of the other breakers in any of the 3 panels. When leaving, assure that only red lights switches are on in the warm-up shelter, and throw the breaker to the off position (i.e. if you turned white lights on, make sure they are off

before you shut down power). Because there are some always-live outlets and power boxes, you may notice that some small red lights remain on after main breaker is thrown. This is normal. Leave the warm-up shelter and lock the door.

Should site power not come on when the main breaker is turned on, someone may have inadvertently turned off the breaker in the panel box in the rear entrance to the schoolhouse.

If throwing these breaks on does not restore site power, then the breakers at the top of the site power pole may have been tripped by a nearby lightning strike. These breakers have to be reset by SaskPower. Call one of the Site Committee members to arrange for a SaskPower visit. This may take a day or two.

Note: In case of fire and you cannot leave via the main door, a second floor-level exit is provided under the rightmost chart table (east wall in the rear extension). Kick out the panel, and crawl through into the washroom, and exit via the washroom door.

<More on lights, heaters, power wall later>

General Maintenance of the Warm-up Shelter

Sweep the floor, take out the garbage, wipe the coffee table, report the need for any supplies (coffee, napkins, garbage bags, light bulbs, etc). A check sheet of standard supplies is posted near the hand warmer. Use the sheets as a reminder when supplies are required. That the sheet home and phone one of the site committee members about required supplies.

Using the Hand Warmer

A hot air hand dryer/warmer is in place near the entry door. Use this to warm hands, dry out boots and defog eyepieces.

Coffee and Food in the Warm-up Shelter

Regular and decaffeinated coffee are supplied for the site from surplus SSSP assets. There are also cups, stir sticks, creamer, sugar, teabags, serviettes, paper towels, etc. If you notice these supplies getting low, use a site equipment form to indicate what is deficient and let a Site Committee member know to replace the suppliers. An electric kettle is available for making tea. The Warm-up Shelter also has a microwave.

However, the site does not have water. **YOU MUST BRING YOUR OWN WATER.** Please bring enough to make coffee for all users.

You may also bring and consume food in the Warm-up Shelter and at the site. Please clean up crumbs as not to encourage the rodents.

DO NOT LEAVE WATER OR FOOD AT THE SITE. Water may freeze and crack containers. Food attracts vermin.

It is your responsibility to keep the food and beverage area clear. Wipe up after yourself and make sure containers are closed and properly stored. We are not your mother. This is a self-serve area.

Cold Storage

Instructions tbd

Washroom

A composting toilet is located through the east-facing door of the Warm-up Shelter. The site key opens the door. A red light with a dimmer slide is available. If you need white light, another switch is found on the east wall. Assure this switch is OFF before you leave.

INSTRUCTIONS ON THE USE OF THE TOILET are found on the wall. Read these and follow the instructions. **IF YOU MAKE A MESS, CLEAN IT UP.** We are not your mother, so if you dribble *anywhere*, wipe it dry. There is no water for hand-washing, but wipes and hand-gel is supplied.

How the Washroom Heaters Work: When the washroom door is opened, a proximity switch starts the heater. The heaters are on a timer, and will run for 10 days to assure proper composting of waste. If the door is reopened, the timer resets and keeps the heaters on for the next 10 days. A maintenance heater (thermostat on the north wall) maintains the room at 10-degrees C. Do NOT reset this thermostat. Should more heat be desired, a second baseboard heater will warm the room up to 25 degrees C. That heater is controlled from inside the Warm-up Shelter. If it is winter and you plan to use the toilet later, push the 25 kW button in the Warm-up shelter, and the room will heat up. This heater is turned off each night when the Main Power breaker is turned off. However, two red lights on the heater control panel in the Warm-up Shelter will remain on even if the Main Breaker is turned off, if the 10-day timer is active. Do not reset any of the washroom thermostats.

Telephone (number 306-255-2045)

The telephone cost is shared by the U of S and the RASC. Although calls are long distance to Saskatoon, you may use the phone for **short** calls when required. You are not required to record the calls you make.

The telephone does not have an answering machine, so if no one answers, there is likely no one at the site. However, it takes some time to run in and answer the phone, so ring at least 12 times if you are calling the Sleaford Observatory. The telephone has an outside ringer located

on the front of the warm-up shelter, so it should be audible from all parts of the site. **If the telephone rings, answer it!**

General Notes on Use of Observatories

RASC observatories & equipment can be used freely by any member on a first-come, first-serve basis.

U of S Roll-off and equipment are reserved for use by U of S astronomy students during scheduled lab times or if they are otherwise working on lab projects. RASC members can use the equipment at any other time, if they have completed basic training.

You may use the CCD cameras or spectrometers if you are sufficiently trained. However, telescopes that are instrumented with CCD cameras, spectrometers or similar equipment must not be disassembled or altered from the configurations that are present, since replacement of the equipment will likely result in required refocusing of the telescopes and new calibration flat, bias and dark images to be taken. Reconfiguring these instruments when it is not expected can easily take 1 to 2 hours.

Patterson Dome

Instructions tbd

University Roll-off Observatory

Entering the Roll-off

You must have received training from a Site Committee member to use this building. Do not roll the roof off if winds exceed 30 km/hr.

- Use key that is in the RASC locker to enter the building
- Turn on lights and power breakers on the plastic-covered switch boxes to the right as you enter the building.
- Unlatch and lower west end shutter door fully down
- Unlatch and lower east end shutter door fully down
- Unlatch two red hold-down latches at the NE and SE corners of the roof (there are no hold-down at the W-end of the building)
- Assure all telescopes have been left in the horizontal park/rest position
- Do not allow anyone to enter or leave the building during roof roll-off. Assure no one is near the side walls or has hands or finger on these walls. This is the most dangerous

- phase and can result in severe injury if someone is trapped between the rolling roof and the doorframe.
- Turn the roll-off switch to the left to start the roof rolling.
 - Stay at the switch and watch the roof roll past every telescope. Watch for adequate clearing to the roof support trusses so the trusses do not hit mispositioned telescopes.
 - Allow the roof to roll completely to the end of the east supports (approximately 12 feet past the end of the building). Cut-off switches will automatically shut the motors off at the end of travel when the roof is fully opened.
 - Use scopes.

Leaving the Roll-off

- Assure any set-up changes you did to telescopes are completely back to how you found them.
- Assure Telrads and spotters have their battery power switches turned off.
- Park the telescopes in the perfectly horizontal position and turn off local telescope main or pier power switches.
- Cover the telescopes with the cloth covers provided.
- Do not allow anyone to enter or leave the building during roof roll-off. Assure no one is near the side walls or has hands or finger on these walls. This is the most dangerous phase and can result in severe injury if someone is trapped between the rolling roof and the doorframe.
- Turn the roll-off switch to the right to start the roof rolling.
- Stay at the switch and watch the roof roll past every telescope. Watch for adequate clearing to the roof support trusses so the trusses do not hit mispositioned telescopes.
- Allow the roof to roll fully closed. Cut-off switches will automatically shut the motors off at the end of travel when the roof is fully closed. Turn the switch to the OFF position.
- Raise and latch east end shutter door.
- Raise and latch west end shutter door.
- Latch the two red hold-down latches at the NE and SE corners of the roof.
- Turn off lights and power breakers on the plastic-covered switch boxes just left of the door as you leave.
- Lock the door and return the door key to the RASC locker immediately.

If the Roll-off Cable Breaks

Remove coupling pin and attach roll—off crank.

Report this immediately to Site Committee member to arrange for an immediate repair.

Winter Use

The Warm-up Shelter is essential for wintertime observing. Shovels are provided in the Warm-up Shelter or Cold-Storage for shoveling snow for paths or off of decks and steps. Car block heaters can be plugged into exterior outlets the U of S Roll-off building.

Leaving the Site

- Sign out on the Log Sheet in the Warm-up Shelter
- Turn the main breaker off (Warm-up Shelter center breaker box)
- Lock Warm-up Shelter door
- Check all outside building doors (except schoolhouse) to assure they are locked even if you did not use the facility
- Wrap the chain around both gates doors.

Use by Non-Members, School Groups

Use by non-members, friends, family and school groups is encouraged, but their use is required to be supervised by a member. Non-members may not use University-owned equipment unsupervised, since RASC insurance does not cover this.

Use of Site Telescopes

Any telescope at the site, including the three university telescopes can be used after training has been completed. Pack up telescopes exactly as you found them at the end of your observing run. Remember that the University telescopes are used by students and the lab demonstrators expect that the configuration of the telescopes is the same as the last time they used them. So if you change parts of telescopes around, put them back they way they were when you found them.

Most piers have power bars. Assure the power bar and telescope power switches are off when you are done with the telescopes. Assure dust covers are installed on each scope that has one. Assure all telescopes in the Roll-off building are parked horizontally.

If the weather is cold, and especially if it is below zero, **do not** shut down the University computers and monitors. Allow them to run so they remain dry.

ALL TELESCOPES IN THE ROLL-OFF MUST BE PERFECTLY HORIZONTAL WHEN THE ROOF IS CLOSED OF TUBES AND SPOTTER CAN BE DAMAGED BY THE ROOF. WATCH THE ROOF PASS EACH TELESCOPE AS THE ROOF

SLIDES CLOSED AND REMAIN AT THE ROOF SWITCH PANEL UNTIL ALL TELESCOPES HAVE BEEN CLEARED.

RASC 16-inch Meade LX-200

In September 2006, the Saskatoon Centre purchased a Classic Meade LX-200 16" telescope from the Toronto Centre. This telescope will temporarily be mounted in the University of Saskatchewan Roll-off building until the RASC has the funds to build our own observatory.

The agreement to use the U of S Roll-off requires that for some of the time, the U of S will have exclusive access to the telescope for astronomy labs, typically September through November on Monday, Tuesday, Wednesday between 7:30 pm and 10:00 pm. At all other times, the scope will be available to RASC members who have been trained to use the roll-off building and the 16" scope. Other scopes within the roll-off may also be available for use with training. The telescope is located on the east-most of the 4 piers in the roll-off.

The telescope has go-to capability, and with such a large instrument, this is certainly an asset. The telescope has a hand-controller by which the scope can be slewed, but best control is achieved by controlling movement and positioning with a computer that will run Earth Centred Universe (ECU); the standard planetarium and control software used by the U of S. Currently, this option is not available.

To begin with, most of the training will be conducted by Richard Huziak. A complete *Meade User's Manual* can be found on-line on the Saskatoon Center Telescopes webpage.

Using the Hand Controller Alone

- Make sure the pier power switch at the roll-off entrance door is on.
- Turn on the telescope power switch on the fork front panel. The telescope will beep and the hand-controller will light up. Allow the hand paddle to initialize.
- Turn on the dew heater power switch and set dew heater adjustment knob to medium in summer or high in winter.
- Slew the telescope to a named bright star using the NSEW keys.
- Change slew speed on keypad by pressing slow speed key.
- Center the star in the eyepiece.
- Press "star" button.
- Choose "named star" by pressing <enter> once
- Use arrow keys on BOTTOM of keypad to scroll through the named star menu.
- When you find the star you centered on, press <enter> to choose the star.
- Press <enter> again and hold it down until it beeps. Display will read "telescope synchronized"
- The telescope now knows its location in the sky.

To hop to any deep-sky object, choose the object type (M – Messier, NGC – New General Catalog, etc) by pressing that key, then enter the number (ie. “33” for M33) when prompted. The telescope should immediately begin to slew and will place the object somewhere within a low power field. After several hops, the telescope may be not centering well. Use the slow slew speed to recenter the current object, then press <enter> and hold it down to sync on that object, and future hops will be more accurate.

If the telescope “runs away” for any reason, press any key on the keypad several times to stop the telescope. Alternately, turn off the power switch, though this is not advised, since all initialization and synchronization will be lost. The telescope will not find objects that are below the horizon, and will indicate this problem, on the keypad.

If the telescope fails to track when synchronized to a star, go through the 2-star alt-az alignment procedure on the keypad. Once the second star has been sync’d, the telescope will start to track properly.

Meade telescopes are famous for bad mirror flop, so achieving good focus is sometime difficult. Although we replaced the focuser bearing with an aftermarket kit, the focus tends to still be sloppy. Once a general focus has been achieved, the mirror might be locked into place, and the electric focuser can then be used with keypad control.

Once done for the night, use the fast slew to **place the telescope horizontally, turn off the Telrad**, replace all dust covers, turn off the dew heater and telescope power. Follow instructions on closing the roof without damaging the telescopes.

Univarsity 14-inch Celestron (C-14)

Turn on the pier power bar and assure the telescope power switch is on. You should hear the tracking motor running. The telescope is manually positioned otherwise. Note that there are TWO locks for the right ascension: one at the front and one at the back of the base. A electric fine adjustment box is available for fine positioning of objects within the field after the object has been roughly located. The box usually works, but sometimes it does not. If the declination fails to adjust, check to see if the sector gear in the fork is at a limit of travel, and if so, manually wind the gear back to the center.

University 12-inch Meade LX-200

The 12-inch scope is a go-to telescope. Turn on the pier power bar. Turn the telescope power switch on. The telescope will beep and go through a short initialization procedure. Once initialized, use the NSEW buttons to slew to a star and sync the telescope. The telescope should now be tracking and will work in the go-to mode. SEE THE MANUAL FOR THE LX-SERIES TELESCOPES ELSEWHERE.

University 8-inch Celestron (C- 8)

Turn on the pier power bar and assure the telescope power switch is on EXTERNAL. You should hear the tracking motor running. The telescope is manually positioned otherwise. Once done, turn the power switch to INTERNAL to stop the telescope motor.

University 6-inch Zeiss

A 6-inch Zeiss refractor is stored in a box in the Roll-off Observatory. The mount for the telescope is sitting in the middle of the yard just east of the Warm-up Shelter. Although the telescope is excellent quality, the 6-eyepieces in the rotating view leave much to be desired.

Other RASC Telescopes at the Site

RASC 12-inch Dobsonian (Eetook)

Eetook (Inuit for “Big Eye”) is a 12.5” f/4.5 Dobsonian telescope built by the Saskatoon Centre. The telescope is made from a fibreglassed paper tube, and thus is heavy; the tube assembly weighting about 65 lbs (30 kg). The scope is stored in the cold storage, sitting upright. The box sits separately. Setup is generally a 2-person job due to the weight. The scope has an 8x50 spotter. Cover the tube end, spotter and eyepiece holder with dust covers provided.

RASC 6-inch Equatorial

Instructions tbd

RASC 5-inch Celestron (C- 5)

A 5-inch f/8 Celestron telescope sits in the Warm-up Shelter locker (W-wall) in a small black case. This telescope can be used on a tripod, but it does not have a finder. The telescope is really meant as a piggyback tracking telescope for the C-8 in the Patterson dome. It has a 1/4” camera mounting adapter, and so can be used as a tracking telescope on any telescope that has a 1/4” adapter.

Eyepieces and Accessories

The Saskatoon Centre maintains a set of eyepieces for use at the Sleaford Observatory. These reside in a brown wooden box in a locker on the W-wall. Make sure all eyepieces are returned to this box after you use them. An eyepiece from this set may be on the 16" telescope.

- 32mm University Optics
- 20mm xxxx
- 12mm xxxx
- 7mm xxxxx

Other equipment available:

- extension cords
- repair tool kit
- laser pointer
- atlases & books

Computers

There are three computers at the site: one in the Warm-up Shelter and two in the Roll-off Observatory. Try to assure that the computers are sufficiently warm before starting them up. All three have ECU and a number of other useful software packages.

There is no Internet access at the site.

Photographic Tracking Platform

A modified Celestron-8 fork was rebuilt by Bill Hydromako and the Perry Balon (U of S Machine Shop) to readapt as a camera tracking platform. It works exceptionally well.

The Tracking Platform is stored on the floor in the warm-up shelter. The platform accepts a standard 1/4-inch camera mount thread, and has several holes drilled in the mounting plate for alternate mounting. The platform is capable of supporting up to 4 kilograms (10 pounds) of equipment.

Mount the Platform to the pier located to the east of the Warm-up Shelter using the 3 base mounting bolts. Use an extension cord to plug the Tracker into the Warm-up Shelter outlets. The Tracker then tracks at the synchronous rate. Exposures of up to 20 minutes have shown no tracking error for focal lengths as long as 210 mm.

The camera mount is on a quick-connect base. **DO NOT FORGET TO REMOVE THE QUICK-CONNECT FROM YOUR CAMERA.** If you accidentally take it home, phone one of the site committee members, and get the adapter back to the site asap!

Always return the Tracking Platform to the Warm-up Shelter after use.

Schoolhouse

The schoolhouse is used for Open House entertaining and for storage of equipment. **The Schoolhouse south entrance also contains the site Main Breaker Box.** Should site power not be on, it is possible that someone has turned the Main Breakers off on this panel. See the section on the Warm-up Shelter for more information on site power.

The key for the schoolhouse opens the back (south) entrance. Once inside the porch, turn on power to the school from the main breaker box. The breakers are found at the bottom of the panel. **DO NOT** turn the breakers for the Warm-up Shelter (located at the top of the box) off unless you are doing power maintenance. These breakers should always be ON.

When leaving the schoolhouse, assure the east-side crash door is fully-latched, assure schoolhouse power breakers are OFF, and the rear outside door is locked. Do not lock the inner porch door.

Outhouse

Instructions tbd

Provision for Permanent Personal Observatories at Sleaford

The Sleaford Agreement makes provision for members to build permanent personal observatories at the site. Instructions tbd

Proposed Future Buildings at Sleaford

Instructions tbd

The Sleaford Site Committee

| Member | Telephone | E-mail |
|-------------------|------------------|----------------------|
| Darrell Chatfield | 306-374-9278 | novachat@sasktel.net |
| Richard Huziak | 306-665-3392 | rickhuziak@shaw.ca |
| Les Dickson | 306-249-1990 | dicksons@sasktel.net |

Site Construction and Maintenance

This committee oversees the planning of new RASC facilities and the maintenance of the existing facilities.

General Philosophy. No one likes maintenance, so all buildings are built to National Building Code and wire to the Canadian Electrical Code. All buildings are also mouse-proofed by the addition of steel collars into the ground or by under-sheeting the buildings with aluminum flashing. All conduits into the buildings are stuffed with rodent-resistant steel wool.

General Building Maintenance: Although the Site Committee is responsible for identifying and conduction maintenance, it is the responsibility of every user to identify maintenance issues and where possible, to repair these issues when they can. When they cannot conduct immediate repairs, the user must contact one of the site committee members and report the issue. Usual maintenance issues are:

- painting of exterior wood trim and interior Warm-up Shelter floor
- staining of deck boards
- general repairs

Grass Cutting – users need to cut the grass around the buildings, under the U of S Roll-off extension and outside piers for at least 5 feet around all obstacles. A lawnmower and gasoline are located in the schoolhouse for this task. Periodically, the RM of Colonsay will cut the grass, but they cannot cut in crowded areas. It is imperative that the grass be kept shorter to keep mosquitoes down, and to reduce the risk of damage in the case of wild fires. **The grass does not cut itself. If you use the site, you are expected to cut the grass once in a while.** Cutting the grass generally takes about 1.5 hours, so come out that long before dusk.

Snow Clearing Cutting – users need to shovel snow around the buildings and away from doors, and to open up observing sites. A small snowblower and gasoline are located in the schoolhouse for this task. Shovels can be found in the Warm-up Shelter near the telephone. Periodically, the RM of Colonsay will clear the snow, but they cannot clear in crowded areas. It is imperative that the snow is cleared around doors and from the deck steps. Try not to damage the deck boards when shoveling snow. **The snows does shovel itself. If you use the site, you are expected to shovel snow once in a while.**

RM Maintenance Costs & Schedule

Large-scale snow removal and grass cutting is contracted out the the RM of Colonsay. The U of S is billed for \$65/hr which includes driving time to and from Colonsay. The RASC pays one-half of this cost. Grass cutting and snow clearing is triggered by our need. If the snow is too deep or the grass too long, a member of the Sleaford Site Committee should be alerted, and

they will make arrangements with the University to call the RM. We attempt to minimize the number of maintenance visits to keep costs down, but will clear the site whenever there is a need. The site is rarely cleared after the first quarter moon and before the third quarter moon since site use is very low. However, if there are special events where observers will use the site during bright moon periods, we can arrange to have the site cleared.

The Sleaford Joint Site Management Committee

| Committee Member | Represents | Telephone | E-mail |
|-------------------------|-------------------|------------------|-----------------------|
| Stan Shadick | U of S | 306-652-5975 | stan.shadick@usask.ca |
| Yannis Pahotouoglou | U of S | 306-652-9295 | yannis.p@usask.ca |
| Les Dickson | RASC | 306-249-1091 | dicksons@sasktel.net |
| Richard Huziak | RASC | 306-665-3392 | rickhuziak@shaw.ca |

This committee meets at least once yearly, and administers items coming from the Sleaford Agreement. By terms of the Agreement, the committee consists of 4 members, 2 each from the RASC and the U of S. Consensus on decisions is by majority vote.

The committee generally deals with site planning approval, joint finances, site problems or disputes, and general items arising out of the *Sleaford Agreement*. The committee does not get involved with detailed plans of each party.

University Astronomy Labs at Sleaford

The U of S currently conducts Astronomy 101 labs at the Sleaford Observatory. Labs run from the second week of September through the middle of November, every clear Monday, Tuesday and Wednesday. During years of heavy registration, a Thursday lab may be added. Labs run from 7:00 p.m. to 10:00 p.m., but students rarely arrive before 7:30 p.m. and generally leave by 9:45 p.m. The U of S may also add 2nd year labs, but these are currently conducted on the roof of the Physics building. During the labs, students use the roll-off (all 4 telescopes), and may use the Warm-up Shelter and Washroom. During these times, if the students are present, the RASC may not use the equipment in the Roll-off Observatory, 16-inch RASC telescope included, and must share the Warm-up Shelter. The students are to follow red light rules and Rules of Conduct similar to the RASC rules.

Annual Open House & Public Starnight

The RASC and U of S conduct a joint Annual Open House & Public Starnight at the Sleaford Observatory every October. This event is required by the *Sleaford Agreement* and is intended to show off the facility to the public. The event may be used as a fund raiser.

The History of the Sleaford School and Observatory

- School ordered out of the Eatons Catalog school kit, with the lumber brought to Saskatoon from Toronto by train, then from Saskatoon to Sleaford by horse cart in 1914. Originally, the schoolhouse sat in the SE corner of the property and was only 2/3 of its current size.
- The school was moved to its current location in 1946 and placed on a foundation with a full basement.
- The school closed in 1959 when a new school was built in Colonsay.
- The school was owned by the Colonsay Wildlife Federation from 1959 to 1995, and was used as a dance and community hall.
- In 1995, Centre President Erich Keser stumbled across the potential observatory site during the return from the Northern Prairie Starfest in North Dakota.
- The RASC and the U of S partnered in 1995 to jointly develop the observatory. At that time, the U of S Astronomy Club also considered partnering, but dissolved into the department instead.
- The observatory was purchased under the future *Sleaford Agreement* by the University from the Colonsay Wildlife Federation in 1995 for \$1.00; the sum the Federation had paid for it.
- The site was used for some casual observing in 1995, but in October 1996, the Rystrom Dome was moved from the Rystrom Observatory and renamed the Patterson Observatory, in honour of Centre builder, Gordon Patterson (1924 – 1986).
- In 1997 the Warm-up Shelter was moved from the Rytrom Observatory and expanded to twice the size, adding the Washroom.
- In 1999, the U of S added the Roll-off Observatory, which was build and moved by Prairie Iron Works from Clavet.
- In 2000 the Friends of Sleaford repaired and painted the school.
- For the 2000 Millennium Celebration, a plaque was installed on an erratic limestone bolder, placed next to the Sleaford School. The plaque, commemorating the history of the site (and required by the *Sleaford Agreement*) was unveiled at the July 1st Millennium celebration, which saw the return of 26 Sleaford students and the last teacher to teach at Sleaford (Mrs. Xxxxxx).

This Manual

Errors, changes, additions, whining about this manual are to be directed to Rick Huziak
<rickhuziak@shaw.ca>