Welcome

To the

SJAC

Meeting
Building my Home Observatory

“PFO”

By Mike Powell
Where to Build?
Finding the spot!
Pier Base

- Deeper than 3’ to get below frost line. (actual 5’)
- Use Concrete (7 bags) and rebar
- 4pc x ¾” threaded rod for mounting pier.
- 12” x 12” steel template to align holes for mount.
Pour Gravel Base

- 8 tons of ½” clear crushed limestone.
- Shovel and wheelbarrow (many trips)
- Rest spread out in driveway

- To keep floor even gravel was spread over a 15’ x 9’ area.
- Allowed to settle over the winter and added to again in spring.
The Floor

- Decided on 8’ x 12’
- Standard shed size
- Allows for possible 4’ x 8’ warm room
- 2” x 6” construction
- 16” on center

- ¾” 4 x 8 plywood used for floor base
- Only needed 3 sheets
Testing the Views
The Pier

- Pier design by Mike Powell
- Built by Bourque Industrial
- 6” x 6” square steel tubing with ¼” wall thickness
- Bottom plate 12” x 12”
- Top plates 8” x 8”
- Stainless steel threaded rod for adjustment and leveling
- Fully gusseted top and bottom.
- Bubble level in center
- Painted black
Pier in Place

- Pier bolted to base using ¾” stainless steel washers and nuts
- Rubber washers also added for anti-vibration
- Offset from center to allow for future warm room
Views

South
First Wall
Three Walls
Frame and Window are done
Walls Installed
Roof Supports in Place
“V” Casters and Angle Iron Installed

- 10pc “V” casters purchased from StoreIt Systems.
- 1 ½” X 1 ½” Angle Iron to keep the rain and snow off.
Views with Walls installed

East

North

South

West
Added roof rafters

- Roof rafters built
- Rolled off to see if idea would work!!!
- Worked Perfect !!!
- Roof built with 12” overhang to help keep out water
Finishing the Roof

- Roof Nailed down and trim added.
- Again, Roof opened to check for ease of movement

So far so good !!!
Reinforcing Roof Supports

- Door frame installed
- Roof supports beefed up to hold heavier roof.
- 4” X 4” beams used to support roof.
- Cross members added to stop lateral movement.
- Stops added to keep roof from rolling off the ends
Roof Tie downs

- Turnbuckles used to tie down roof when not open
- One put at each end in the center
Shingles / Siding & Deck installed

- Shingles, Siding added
- Colours to match the house
- 6’ X 12’ Deck added for Guests to use
- Ready to move in !!!
PFO Complete (Ready for Scope)
Last View Roof Open & Closed
Scope Installed
The End

WARNING

The last person that touched my telescope is in my backyard!

Thanks