

JUSTIFICATION FOR SOLE SOURCE (Simplified Acquisitions <\$150K)

The service or material listed on N6228514RC073AE is sole source and competition is precluded for reasons indicated below. There are no substitutes available for this material or service.

Restricted to the following source. Provide *original manufacturer's* name. (If a sole source manufacturer distributes via dealers, ALSO provide dealer information.)

Manufacturer: Ash-Dome and Astronomical Consultants & Equipment Inc. (ACE)

Manufacturer POC & phone nr.: Ash-Dome – Joy Petrusich, 815-436-9403
ACE - Josie Mack, 520-219-8722

Mfr. address:

Ash-Dome	ACE
24608 W. Lockport Street	PO Box 91946
Plainfield, IL 60544-0312	Tucson, AZ 85752-1946

Dealer / Rep: ACE - Josie Mack,

Dealer / Rep address / phone nr. ACE
PO Box 91946
Tucson, AZ 85752-1946
520-219-8722

 X Description of the item or service required, the estimated cost, and required delivery date.

The materials to be acquired under this order are an Ash Manufacturing 16'6" Model REB Dome and an ACE SmartDome Non-Radio Controller. The order includes the ACE SmartDome ASCOM application for Windows, an ACE rain-snow sensor, and the installation and set-up of the controller. The estimated cost of the Ash Dome is \$41,395.00, while the ACE SmartDome's estimated cost is \$11,450.00, not including the cost of the application, sensor, and installation. Delivery is expected within 180 days from that date of award.

 X Specific characteristics of the material or service that limit the availability to a sole source (unique features, function of the item, etc.). Describe in detail why only this suggested source can furnish the requirements to the exclusion of other sources.

The Ash Manufacturing 16'6" Model REB Dome is required as it is an identical match to the domes in place at the United States Naval Observatory Flagstaff station and Cerro Tololo Chile. The dome that is in place will be removed and the new dome must fit into the existing wall and bolt sites in both locations. Once the USNO has completed its observations in Flagstaff, the dome will be disassembled and moved to Cerro-Tololo Chile to perform observations of the Southern Hemisphere. When the dome is removed in Flagstaff, the old dome will need to be reinstalled; therefore, the building cannot be modified to accommodate another dome. The same process will happen at Cerro Tololo once the observations are completed. It is anticipated that

USNO will continue to repeat this process until funding becomes available to have a permanent dome in place in Cerro Tololo.

The ACE SmartDome Non-Radio Controller is required as radio controllers are prohibited at the stations. While other non-radio controllers exist, there are none that are equivalent to the ACE controller. Many controllers available in the market are for amateur use and fail easily. USNO is currently using a different controller at Flagstaff and it has not been reliable. The controller has failed multiple times which have required costly repairs. These failures have resulted in lost observation time which is critical to the mission of the Naval Observatory. The observations must occur on schedule and any delays in performing the observations could result in an inability to capture the data for that year. Furthermore, the ACE controller is specifically tailored to Ash domes. The Naval Observatory will be moving towards a uniform control system amongst its domes in the near future. Some of the domes are equipped with windscreens. The ACE controller is the only automated controller available capable of operating a windscreen. By having a uniform control system among its domes, USNO will be able to have the knowledge and the spare parts readily available to quickly repair a controller should a failure occur. The staff of the Naval Observatory will be properly trained on the ACE controller to ensure successful operation of the dome while in Cerro Tololo. The staff will have limited resources available to them while out of the United States; therefore, having the appropriate knowledge and tools at their disposal is critical to the success of the Naval Observatory.

____ The requested material or service represents the minimum requirements of the government.

CHECK & FILL IN ALL APPLICABLE BLANKS BELOW

____ The material/service must be compatible in all aspects (form, fit and function) with existing systems presently installed/performing. Describe the equipment/function you have now and how the new item/service must coordinate, connect, or interface with the existing system.

____ A patent, copyright or proprietary data limits competition. The proprietary data is _____

____ These are "direct replacements" parts/components for existing equipment.

____ Other information to support a sole source buy:

