

WIYN Observatory Policy for Instrument Acceptance

Draft by the WIYN Science Steering Committee, on 12 APR 2019

The WIYN Observatory provides a variety of instrumentation for users at its partner institutions. Instruments may be developed, built, and installed on the telescope by the Observatory, by individual scientists at partner institutions and their collaborators, or by external entities. WIYN welcomes new instruments that extend its overall scientific capabilities in a manner that is consistent with the needs and goals of the consortium and that can operate within the resources available to the Observatory. This document describes the general principles and policies of WIYN with regard to the definition and acceptance of instruments. Specific requirements and details of institutional arrangements for any particular instrument are left to individual Memoranda of Understanding (MOUs) that will be developed on a case-by-case basis. The overarching goal of the WIYN policy for instruments is to provide a flexible but well documented process that encourages the development and provision of appropriate instrumentation for WIYN while minimizing the burden on the instrument builder and protecting the interests of all concerned parties. This document provides a comprehensive instrument procurement and acceptance policy, incorporating the “WIYN Observatory Policy for Facility Instrument Acceptance and Builder Compensation” document adopted by the WIYN Science Steering Committee (SSC) on 15 July 2013 and the visitor instrument policy listed on the WIYN web site.

The WIYN SSC has responsibility for evaluating the scientific merits and appropriateness of any additions to, or removals from, the WIYN instrumentation suite. In addition, in coordination with WIYN management¹, the SSC will consider the logistics of these changes, including impacts on Observatory operations. Requests for WIYN resources related to instrumentation development will be submitted by the SSC to the WIYN Board of Directors, which has financial responsibility for the Observatory.

Definitions of Instrument Classes

PI visitor instruments.

PI visitor instruments are brought to the observatory by the instrument team and connected to the telescope for relatively brief periods of time. The main responsibility for operating the instrument lies with the team in coordination with Observatory staff.

An example of a current PI visitor instrument is the speckle camera DSSI.

PI instruments at WIYN long term.

These instruments remain at the Observatory and may be used frequently. The original team retains some connections to and control over the instrument, such as for maintenance, input on its utilization by others, and potentially assistance to observers with data acquisition and reduction.

Examples of this instrument class currently include HexPak and GradPak.

Facility Instruments.

Facility instruments are intended to be of general use and are available to all users of WIYN. In contrast to PI instruments, facility instruments are the responsibility of WIYN Observatory after their formal acceptance. Consequently facility instruments must be robust and reliable and be

¹ WIYN Executive Director and Telescope Scientist, or similar roles under any future management plan.

provided with adequate description, documentation, and as appropriate, spare components to ensure adequate multi-year Observatory support, maintenance, and operation.

Facility instruments are expected to be of wide interest to the WIYN partnership and users. They should complement and expand the spatial, spectral, and/or time domain coverage, or throughput, provided by existing instruments and enhance the scientific capability of the telescope.

Examples of existing facility instruments include ODI, WHIRC, the Bench Spectrograph and two of its feeds (Hydra and SparsePak).

Avenues for Incorporating New Instruments

In keeping with its goal of flexibility, WIYN anticipates that instruments may come to the Observatory by means of a number of avenues that respect both the Observatory's strategic plans and the scientific opportunities provided by individual instrument teams.

- a) The Observatory may choose to issue a call for facility class instrumentation or request a PI instrument in keeping with its plans for strategic development. Responses to these solicitations would be evaluated by the SSC in plus Observatory management and technical staff, and/or an external expert review panel, using criteria clearly defined in the documentation of the call or request.
- b) The Observatory will consider unsolicited proposals for the design and development of instruments or the utilization of existing instruments by qualified individuals or groups. All such inquiries should be relayed to WIYN management, the Board, and the SSC at least two months before any proposal deadlines. A waiver of the two month minimum may be requested of the Board President in exceptional circumstances. The appropriateness of such instruments in the context of the existing suite of WIYN instrumentation, WIYN staff requirements, and current strategic planning will be evaluated by the SSC in coordination with WIYN management.
- c) PI class instruments may be upgraded to facility class instruments at the instigation of either the PI or the Observatory. Such a transition would require that the instrument meet the basic expectations for a facility class instrument based on demonstrated effectiveness, performance, potential for scientific productivity, and impact on Observatory resources, as reviewed by the SSC and WIYN management.

Procedures

All proposals to WIYN for new instrumentation, or changing the status of existing instruments, will be reviewed by the SSC plus WIYN management and reported to the Board. While some overlap is anticipated, the SSC primarily will evaluate the appropriateness of the instrument for potential scientific impact and coherence with the goals of the consortium, while Observatory management primarily will evaluate the impact on existing operations and resource needs. The procedure for instruments that are to be built is as follows:

- a) The initial proposal to WIYN should be received at least two months in advance of the submission of any funding proposal to develop the instrument. This proposal should contain sufficient design detail, realistic performance goals, likely location on the telescope, and potential impacts on the Observatory so that WIYN can adequately evaluate the proposed instrument. The SSC will recommend to the Board whether to proceed to subsequent stages of the process.
- b) If WIYN resources beyond those of normal Observatory operations will be required to complete the instrument, the instrument team will provide WIYN management and the SSC with a preliminary estimate of the nature and scope of these resources before the

submission of any funding proposals. If this resource request is found to be reasonable and appropriate, the SSC will recommend that the Board provides these resources as needed during the instrument development.

- c) The SSC may request a letter of support from an appropriate WIYN official (e.g., Board President, Executive Director) for the PI to include in any external funding proposals for the instrument.
- d) The instrument team will submit a functional performance requirements document and an operational concepts definitions document.
- e) The instrument team will provide updates to WIYN concerning the anticipated Observatory resource requirements.
- f) The MOU between the Observatory and the instrument team will be finalized before construction of the instrument begins.

The procedure for bringing existing PI visitor instruments to WIYN or changing the status of WIYN PI instruments to facility instruments is as follows:

- a) The initial proposal to WIYN should be received at least six months in advance of the start of the observing semester in which the instrument would be used. The SSC will decide whether to proceed to subsequent stages of the process.
- b) If WIYN resources beyond those of normal Observatory operations will be required the SSC will recommend to the Board that these resources be made available.
- c) The MOU between the Observatory and the instrument team will be finalized and approved by the Board before observing with the instrument begins or before an existing PI instrument becomes a facility instrument.

The content of the MOU will depend on the specific instrument and circumstances. For example, it may include as appropriate, performance specifications for the instrument; a timeline for development and delivery; any resource allocations expected from WIYN, whether monetary, equipment, or personnel, for development and installation; provisions for observing time to commission the instrument; Observatory resources expected for routine operation; any anticipated impacts on other instruments, Observatory functions, or scientific operation of the Observatory; requirements for documentation, computers, software, spare components, etc.; criteria for acceptance of the instrument; any compensation to the instrument team; plus any other elements necessary for a particular instrument.

The following apply to any existing PI instruments once their use has been approved:

- a) Plans for delivery and installation must be coordinated with the WIYN Operations Manager. These include scheduling, storage of equipment, usage by other institutions, special handling equipment, safety inspection, etc.
- b) The WIYN "New Instrumentation Policy" (WODC 00-04) must be completed and submitted to the Operations Manager 60 days prior to the first-time use of any new PI instruments at WIYN.
- c) WIYN will be responsible for any cabling inside the telescope and through any cable wraps. Cabling requirements must be reviewed with the Site Engineer at least four weeks prior to installation. All other cabling will be the responsibility of the instrument team.

The following apply to PI visitor instruments:

- a) Installation/removal of a visitor instrument will be the responsibility of the visiting observers. Removal of the instrument must be completed by noon of the day following the last night. If the installation or removal of a visitor instrument requires the use of WIYN resources, the WIYN "Resource Allocation Policy" (WODC 00-03) must be submitted 30 days prior.
- b) WIYN personnel will balance the telescope or instrument rotator after the installation or removal of the visitor instrument. Installation must be completed by 2pm of the day

observing is to begin so that balancing can occur during normal staff hours.

Acceptance

Detailed criteria for acceptance of a facility instrument by the Observatory will be laid out in MOUs on a case-by-case basis. It is expected that the instrument team will work closely with Observatory staff during the installation, testing, commissioning, and handover of the instrument. Acceptance of any facility class instrument will be based on evaluation of a commissioning report and, if appropriate, documented scientific use that demonstrates that the instrument meets the requirements laid out in the MOU. The SSC, in coordination with WIYN management and staff, will provide the review and make a recommendation to the Board regarding formal acceptance of the instrument.

Compensation

Any proposal for an instrument may include a proposal for compensation to the instrument builder. The form and amount of compensation will be determined on a case-by-case basis by the Board based on the instrument class, the proposal from the instrument provider, and the detailed criteria specified in the MOU for instrument scope and acceptance.