



## WF MOS PROJECT

90.00.00.01\_83.00.00.00\_ICD

Version: 1

WF MOS to Environment

ICD

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## 1. Introduction

This document discusses the basic environmental conditions within which WFMOS must survive and operate. Document 83.00.00.01\_REF, the Gemini Environmental ICD is the key document. Changes to it for the WFMOS/Subaru environment are provided here.

## 2. Related Documents

Document Number	Document Name
80.10.10.01_REF	Subaru Telescope Performance
83.00.00.01_REF	Gemini Environment ICD-G0013B
NAO-97-0414E: 1997.7.3 (not provided here)	Subaru Environment conditions

## 3. Transportation

Section 1 of document 83.00.00.01\_REF is appropriate for WFMOS work. The BSIT offers transportation from Hilo to the summit of Mauna Kea and has environmental conditions better than those described for in 83.00.00.01\_REF.

## 4. Base Operations

Section 2 of document 83.00.00.01\_REF applies. These conditions describe the operating requirements at the base facilities and the summit, when not mounted for observations. References to the ISS, of course, should be changed to the TUE, or the Prime Focus, or the instrument rooms as appropriate.

## 5. Summit operations

The summit operating requirements are described in section 3 of document 83.00.00.01\_REF and apply here with the following exceptions:

- The summit operating ambient air temperature requirement is  $-5^{\circ}$  to  $5^{\circ}$  C.
- The instrument should survive a temperature range of  $-20^{\circ}$  to  $30^{\circ}$  C and a humidity range of 0 to 100% (base and summit).
- The nightly average temperature is  $0^{\circ}$  C.

- Ambient air temperature rate of change requirement should reflect the value for Mauna Kea, 0.2° C per hour.
- The average humidity is 40%.
- The vibration characteristics are described in document 80.10.10.01\_REF.
- The instrument should survive seismic forces of 0.4g horizontal and 0.2g vertical.
- The mechanical interfaces are described elsewhere in WFMOS documentation.