

丽江高美古在站紧急情况处置条例

Regulation for Emergency Response at the Gaomeigu Station

在站如遇紧急情况，观测值班人员与技术值班人员应通力合作，在保证现场值班人员人身安全的情况下优先保障设备安全。

In case of on-site emergency, the observational team and the technical support and maintenance team will work together to prioritize equipment safety while ensuring the personal safety of on-site duty personnel.

一、供电故障 Power Supply Failure

There are kinds of power failures: 1. Planned (prior information) 2. unplanned (no prior information).

1.有计划停电 Planned Power Outage

- 接到供电所停电计划后，第一时间在微信工作群里通报；在供电所通知的停电计划前 1 小时主动联系供电所确认停电计划有无更改，情况及时通报并联系云南天文台值班人员做相应处理。

Once the power outage plan from the power (electricity) supply station has been received, please report it immediately in our WeChat group. Proactively contact the power supply station 1 hour before the notified power outage plan to confirm whether there are any changes in the power cut. If so, promptly report it in the WeChat group. Contact the duty personnel of Yunnan Observatories, CAS to deal with it accordingly.

- 停电发生时，第一时间在微信群里通报，安排值班人员进行处理。

When the power outage occurs, report it immediately in our WeChat group. Arrange the duty personnel to deal with it.

- 若停电预计发生在白天（非观测时间）If the power outage is expected to occur during the daytime (or non-observation time):

1) 保持 1.6 米多通道测光巡天望远镜及五十公分望远镜阵列设备处于关闭、断

电状态;

Shutdown the facilities of Mephisto, the twin 50cm telescope array and the ancillary equipment;

2) 密切关注停电情况。若停电时间超过 10 分钟, 立即对数据中心设备进行关机操作, 步骤参照如下:

Pay close attention to power outage: if it lasts more than 10 minutes, shut down the equipment in the data center immediately, following the steps below:

(1) 登录数据中心登录节点

Log in to the login node of the data center

(2) 按照超算运维手册, 依次运行命令关闭进程及相关服务 (仅供参考, 详细请参考浪潮高性能集群维护手册)

According to the operation and maintenance manual, run the commands to shut down the supercomputers in sequence (for reference only, please refer to the Inspur High Performance Cluster Maintenance Manual for details)

① 关闭高性能计算节点。

Turn off high-performance computing nodes.

② 卸载高、低速存储后, 关闭高、低速存储服务器。

After un-mounting the high- and low-speed storage, turn off the high- and low-speed storage servers.

③ 关闭数据库服务器。

Shutdown database servers.

④ 关闭登录节点及空调。

Turn off the login nodes and the air-conditioner.

- 若停电预计发生在晚上 (含测试及观测时间) If the power outage is expected to occur at night (including testing and observation time):

1) 提前关闭五十公分望远镜阵列, 步骤参照如下:

Shut down the 50cm telescope array in advance, following the steps below:

- (1) 望远镜 park，关闭主镜盖；赤道仪关机。

Park for the telescopes, and close the primary covers; shutdown the Equatorial mounts.

- (2) 相机回温，至室温后断连关机。

Warm up the cameras to the ambient temperature, and then disconnect them and shut them down.

- (3) 关闭平移顶和升降门，相应工控机关机。

Close the roll-off roof and lifting door, and then shut down the relevant Industrial Personal Computers.

- (4) 查看现场情况，关闭设备电源（含望远镜供电、一楼计算机供电及交换机电源）。

Check the on-site situation and turn off the power supply (including the power supply for telescopes, computers on the first floor, and the exchange board).

- 2) 密切关注停电情况。若停电时间超过 5 分钟，立即对 1.6 米多通道测光巡天望远镜进行关机操作。1.6 米多通道测光巡天望远镜关机步骤参照如下：

Pay close attention to power outages: if the power outage lasts more than 5 minutes, shut down the facilities of Mephisto immediately. The steps are as follows:

- (1) 相机回温，关闭风机房大风机、主天窗和侧窗；望远镜 park 后，关闭望远镜主镜盖和大快门；关闭 TCS，关闭望远镜总电源。

Warm up the cameras, turn off the ventilator, the main window and side windows of the dome, park the telescope, close the primary cover and the big shutter, close TCS, and turn off the power supply of the telescope.

- (2) 待相机回温后，关闭 ICS，断开相机电源。

After the cameras reach to the ambient temperature, close ICS, and turn off the power supply of the cameras.

- (3) 关闭观测室 OCS、TCS、ICS、五十公分望远镜阵列远程主机及其他

主机。

Shut down the PCs of OCS, TCS, ICS of Mephisto facility and the remote-control computers for the twin 50cm telescope array.

(4) 关闭四楼设备间设备（封窗除露系统、水冷机、干燥柜），关闭风机房小风机。

Hut down the equipment on the fourth floor (including dew removal system, chillers, drying cabinet), and turn off the small ventilator.

3) 当停电时间超过 10 分钟，立即对数据中心设备进行关机操作。

If the power outage lasts more than 10 minutes, shut down immediately the equipment in the data center

- 设备妥善关闭后，查看不间断电源 UPS 状态及日志，与供电所联系，确认停电持续时间。视停电时长可关闭 UPS，拉下入户电闸，以保护设备安全。检查所有设备及现场情况，及时在群里通报。

After the equipment is properly shut down, check the status and logs of the Uninterruptible Power Supply (UPS), contact the power supply station, and confirm the duration of the power outage. Depending on the duration of the power outage, the UPS can be turned off and the household power switch can be pulled down to protect the equipment. Check all the equipment, and promptly report the situation in our WeChat group.

- 供电恢复后，查看不间断电源 UPS 状态和日志，与供电所联系确认后续是否还有停电计划。视情况重启设备，恢复观测。情况及时在群里通报。

After the power supply is restored, check the status and logs of the UPS, and contact the power supply station to confirm whether there is any further power outage hereafter. Depending on the situation, restart the device and resume the observations. It is requested to promptly report the situation in our WeChat group.

2. 紧急供电故障 Emergency Power outage (no notification)

- 出现供电故障，立即停止当前工作；第一时间在群里通报；联系值班人员进行

紧急处理。

If a power supply failure occurs without notifications, stop immediately the current operations. Report it immediately in our WeChat group. Contact the personnel on duty for emergency treatment.

- 若故障发生在白天（非观测时间）If the power supply failure occurs during the daytime (or non-observation time):

- 1) 保持 1.6 米多通道测光巡天望远镜及五十公分望远镜阵列设备处于关闭

Shutdown the facilities of Mephisto, the twin 50cm telescopes and the supporting equipment;

- 2) 密切关注故障情况。若故障时间超过 10 分钟，立即对数据中心设备进行关机操作。

Pay close attention to power supply failure: if the power supply failure lasts more than 10 minutes, shut down immediately the equipment in the data center.

- 若故障发生在晚上（含测试及观测时间）If the power supply failure occurs at night (including testing and observation time):

- 1) 立即通知所有观测值班人员和技术人员。Notice all the observational team and technical support immediately.

- 2) 第一时间到五十公分望远镜阵列查看现场情况，关闭设备电源。

Check the on-site situation of the twin 50cm telescope array and turn off the power supply.

- 3) 若故障时间超过 5 分钟，立即对 1.6 米多通道测光巡天望远镜设备进行关机操作。

If the power supply failure lasts for more than 5 minutes, shut down the facilities of Mephisto immediately.

- 4) 若停电时间超过 10 分钟，立即对数据中心设备进行关机操作。

If the power supply failure lasts more than 10 minutes, shut down immediately the equipment in the data center.

- 设备妥善关闭后，查看不间断电源 UPS 状态及日志，与供电所联系，确认故障原因、持续时间等，判断故障严重性。视故障严重情况可关闭 UPS，拉下入户电闸，以保护设备安全。检查所有设备及现场情况，及时在群里通报。

After the equipment is properly shut down, check the status and logs of the UPS, contact the power supply station, confirm the cause and duration of the power supply failure, and judge its severity. The UPS can be turned off and the household power switch can be pulled down to protect equipment safety if necessary. Check all the equipment, and promptly report the situation in our WeChat group.

- 供电恢复后，与供电所联系确认故障恢复情况。视情况重启设备，恢复观测，情况及时在群里通报。

After the power supply is restored, contact the power supply station to confirm the recovery situation. Depending on the situation, restart the device and resume observations. A prompt report of the situation in our WeChat group is requested.

二、人员意外 Personnel accidents

若发现在站人员出现紧急情况，包括但不限于严重高原反应、毒蛇咬伤、及其他人身意外等，立即拨打 120，并联系云南天文台值班人员和王德清老师（电话：**18108881875**）；根据人员意外情况采取相应急救措施，保障人员安全。情况及时在群里通报。在 1.6 米 2 楼休息室，数据中心会议室和 50cm 控制室均备有便携氧气瓶和急救药箱。定期检查急救药箱，氧气瓶等急救用品。

If an emergency situation occurs to the on-site personnel, including but not limited to severe altitude sickness, venomous snake bites, and other personal accidents, immediately call 120, contact the duty personnel of Yunnan Observatories and Deqing Wang (Phone number: **18108881875**); Take corresponding first aid measures to ensure safety. Promptly report the situation in our WeChat group. In the room 2nd floor of 1.6m telescope, meeting room of data center and control room of 50cm telescope array, there are oxygen bottles and first-aid box. Check the first aid box and oxygen bottles regularly.

三、火灾 Fire

1.6 米多通道测光巡天望远镜观测楼、五十公分望远镜平移顶以及数据中心必须配备灭火装置，并定期检查灭火装置保证其处于正常状态，在站值班人员都应会使用灭火器。

若站上出现火情，立即拨打 119，并联系云南天文台值班人员和王德清老师（电话：**18108881875**）。依据火情大小，在保障人身安全的前提下使用灭火器进行灭火，保障重点设备安全。情况及时在群里通报。

The main building of Mephisto, the twin 50cm telescope array, and the data center is equipped with fire extinguishers: check them regularly to make sure they work. The personnel on duty should be able to use fire extinguishers.

If a fire occurs or is found at the station, immediately call 119 and contact the duty personnel of Yunnan Observatories and Deqing Wang (Phone number: 18108881875). Based on the on-site situation, use the fire extinguishers and ensure that the personal and key equipment safety. Promptly report the situation in our WeChat group.

四、暴雨雷电 Rainstorm and Lightning

若遇暴雨雷电天气，第一时间妥善关闭 1.6 米多通道测光巡天望远镜及五十公分望远镜阵列相关设备，密切关注供电线路及防雷安全；前往数据中心进行驻守，若出现停电或供电故障，及时关闭数据中心设备。情况及时在群里通报。

In case of rainstorm and lightning, properly shut down facilities of Mephisto and the twin 50cm telescope array in the first place, and pay close attention to safety of the power supply line and personnel safety. One people need to stay at the data center. In case of power outage or power supply failure, the person can promptly shut down the equipment of data center. Promptly report the situation in our WeChat group.

The dome should not be open if the weather is bad or in case of possible rain/thunderstorm. Nevertheless, in the worst situation the main window of the dome should be closed first to protect

the equipment and then follow the other subsequent procedures.

Emergency contact number from our group and YNAO :

刘项琨 Xiangkun Liu (SWIFAR) : 15198997821

王宇 Yu Wang (SWIFAR) : 15288106504

杜国王 Guowang Du (SWIFAR): 18468178560

祝旭锋 Xufeng Zhu (SWIFAR): 18468241957

王德清 Deqing Wang (YNAO) : 18108881875

范玉峰 Yufeng Fan (YNAO) : 13388884802

冯元杰 Yuanjie Feng (YNAO-GMG): 151 9883 0119

Power station :

供电所:李建立 18487149190, 输电所: 阳广留 15287322263