NRO Solar Radio Net User's Guide

(version 3.1 - 2010-8-16)

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0. Table of Contents

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1. Introduction

Detailed information is on our NRO SolarNetwork web page at

        http://solar.nro.nao.ac.jp/computer/

Questions and comments are welcome at

        manager@solar.nro.nao.ac.jp

We will reply as soon as possible.

2. How to Use Solar Radio Net

(1) Getting an Account, Temporal Usage for Short Term

We will give a user ID to anybody
who wants to study the astronomical/solar plasma physics by using
Nobeyama data (Radioheliograph, Radio Polarimeter).
You can get a form from our web site.

There is also a guest account. Contact a manager for the
ID name and password.

(2) Templates for Configuration files

Some Templates files are copied in your home directory
when you first login our network.

You can also use other templates in /share/template
by copying and modifying them to fit your taste.

(3) Computers and Devices

The NRO Solar Radio Net consists of the following machines.

・Hosts and their Sites

Room 21

helios1	Terminal(PC Linux-UbuntuCore2Duo 2.4GHz)
helios4	Terminal(PC Linux-UbuntuCore2Duo 3.0GHz)
helios7	Terminal(PC Linux-UbuntuCore2Duo 3.0GHz)
aten2	Terminal(PC Linux-UbuntuPentium4 3.2GHz)
aten3	Terminal(PC Linux-UbuntuPentium4 3.0GHz)
delta	Terminal (PC WinXP)
prcl	Both-sides Color Printer (Epson LP8800)
pre1	Both-sides Monochrome Printer (Epson LP9200PS3)
prxe	Both-sides Color Printer (Fuji Xerox DocuCenter-II C4300)

Room 22

helios0	Terminal(PC Linux-UbuntuCore2Duo 2.4GHz)
helios2	Terminal(PC Linux-UbuntuCore2Duo 2.4GHz)
helios3	Terminal(PC Linux-UbuntuCore2Duo 2.4GHz)
helios5	Terminal(PC Linux-UbuntuCore2Duo 3.0GHz)
helios6	Terminal(PC Linux-UbuntuCore2Duo 3.0GHz)

Room 26

aten0	Terminal(PC Linux-UbuntuCore2Duo 3.0GHz)
aten1	Terminal(PC Linux-UbuntuCore2Duo 3.0GHz)

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    prc1       Both-sides Monochrome Printer (Canon LBP3410)

 Room 20
    burst1     Analysis Server (PC Linux-SuSE)
    burst2     Analysis Server (PC Linux-SuSE)
    burst4     Gateway  Server (PC Linux-RedHat)
    burst6     Analysis Server (PC Linux-Ubuntu)
    radio1     Analysis Server (PC Linux-RedHat)
    radio2     Analysis Server (PC Linux-RedHat)
    media1     Terminal (NEC/EWS SVR4)

 Non-fixed Terminal
    letsnote   Terminal (LT-PC WinXP)

* I/O Devices

    Note: Every terminals have own DVD-ROM/RW

    radio1, (Linux-RedHat)
       DAT DDS4
    media1 (NEC/EWS SVR4)
       MO 5inch 1.3Gbyte 1024byte/sector
       8mm Tape
       DAT DDS3

(4) Disk Area
   (Except for System Area)

   /home       User's home directory
   /scr/s*     Shared work area1 (s01,s02,s03,s04,s05)
   /solardb    Solar observation data (including NRO data)
   /share      Shared softwares

  * Disk usage limitation

    The following directories have a limitation for usage.
      Home directory   /home/(username)              Maximum 1Gbyte
      User's web files /scr/web/www/(username)      Maximum 1Gbyte

(5) Softwares

Different kinds of OS's exist in our network. Refer to Item (2).

* E-mail
Use burst4 for sending and receiving e-mail,
Login directly or use APOP (from outside NAO) or POP3 (only inside NAO).
Note that the e-mail address for receiving is
"username@solar.nro.nao.ac.jp"
not "username@burst4.nro.nao.ac.jp".
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* Image Analysis
Use following powerful hosts for analysis using IDL
  radio1     Analysis Server (RHEL Xeon3.6GHz 4CPU Main Memory 8Gbyte)
  radio2     Analysis Server (RHEL Xeon3.6GHz 4CPU Main Memory 8Gbyte)
  burst1     Analysis Server (SuSE Xeon2.9GHzQuad 2CPU Main Memory 32Gbyte)
  burst2     Analysis Server (SuSE Xeon2.9GHzQuad 2CPU Main Memory 32Gbyte)
  burst6     Analysis Server (Ubuntu Xeon3.0GHz 2CPU Main Memory 4Gbyte)

* Free/Public Domain Softwares
Various free/public domain softwares are available on burst4 and other
Linux terminals.

* Windows Softwares
  Cygwin(is inclueded the X server)
  Microsoft Office
  Adobe Creative Suite 3
 Beside these, SSH(Putty), FTP, Image viewer etc.

(6) How to Print

  For printing from UNIX hosts,

    lpr -P(printername) (PostScript file name)

    Site     Name       Note
    ------------------------------------------------------------
    Room 21   prpe      A0 Color (Epson PM9200C)
    Room 22   prcl      Both-sides Color (Epson LP-8800)
    Room 22   prxe      Both-sides Color (KONICA MINOLTA C452)
    Room 22   pre1      Both-sides Monochrome (Epson LP-9200PS3)
    Room 26   prc1      Both-sides Monochrome (Canon LBP3410)

(7) Data Open by Web and Anonmous FTP

Put the files under the following directories

  /scr/web/www/(username)        # Web
  /archive/pub/user/(username)   # Anonymous FTP

These files are reachable by URLs

  http://solar.nro.nao.ac.jp/user/(username)
  ftp://solar.nro.nao.ac.jp/pub/user/(username)

(8) How to get data from outside to our Anon. FTP server

  Use following URL for getting data from ourside anonymous user.
   ftp://solar.nro.nao.ac.jp/incomings/
  The files will come to the following directory
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    /scr/incomings
  Note that this directory will be cleaned up once a month.

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3. Network
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(1) DHCP

Your laptop can connect to our network by DHCP.

(2) Access to Solar Radio Net from Outside

The access from outside NAO has to go through the gateway host.
Only SSH access is valid.

  1. Login by using SSH to the gateway host 'sshsolar'

        % ssh sshsolar.nro.nao.ac.jp

  2. After successful login to sshsolar, login again to the
     prefarable host such as burst1, power etc.

        burst4% ssh (hostname)
         (Note: burst4 is the canonical name of sshsolar)

(3) PPP Connection

PPP connection through the telephone line is available.
Contact a manager for the method.


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A1. How to Use Various Softwares
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(1) Utility

  Following utility softwares are avilable by setting path to '/share/bin'.

    · idlh --> IDL with following packages
            Nobeyama Software (NoRH,NoRP,NoRS,NoRI), Local Package,
            Solar Software(norh norp sxt hxt eit mdi lasco trace nso),
            NAOJ-IDL,Magpack2

    · mkjavamv --> make JavaScript movie

(2) Solar Software

"Solar Software" is under /share/ssw
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(3) NAOJ-IDL

IDL package for analysis of Mitaka, Norikura, Okayama data
under /share/naojidl

(4) Magpack2

Computational package of Three-dimensional magnetic field from
magnetogram produced by Prof. Sakurai (NAOJ) under /share/magpack2.

Set command path to /share/magpack2/bin.

(5) IDL Astronomy

/share/idlastron

(7) PostScript Type1 Fonts

PFA format /share/font_type1