

AIRE Linux

Benda Xu(续本达)², Zhuoxi Huo(霍卓玺)¹, QiJiang Fan(樊栖江)³,
Liang Xu (徐亮)¹, JianFeng Zhou (周建锋)¹

¹Center for Astrophysics, Tsinghua University, China

²Research Center for Neutrino Physics, Tohoku University, Japan

³Huazhong University of Science and Technology, China

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Outline

- 1 Review
- 2 Plans
- 3 Progress
- 4 Call for Collaborators & Volunteers

Astrophysical Integrated Research Environment (AIRE)

THCA

AIRE

Data Processing Center

Navigation links: Home, User Manual, Data Archive Center, Data Process Center, CAPPS, BBS, Chatsroom, News, Pictures, Lectures in THCA, Edit My Message, Administration, Software Support and Download.

Resources in THCA: SpacePart 03 - bouy [07], 特别邀请Bennett - denny [1/22], AIRE User Manual - (PI/odyssey), Domestic Astrophysical Institutes, High Energy Resources.

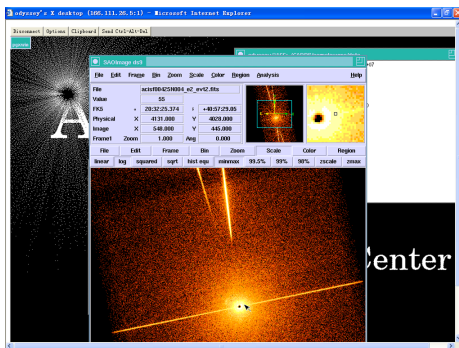
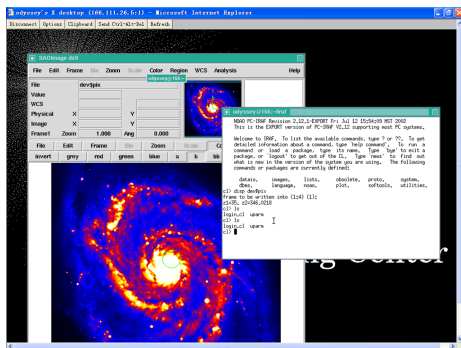
POPLOT Window 1

Chen 15 mag. ARPN EXAMINER2
30136 at 4.952 GHz 1997 Nov 08

Map center: RA: 05 21 08.063, Dec: +16 36 25.110 (J2000.0)
Map pixel: 0.37 0.36 arcsec
Contours N: -2 to 8 by 2; 0.4
Beam FWHM: 1.03 x 0.914 (mas) @ -18.0"

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Astrophysical Integrated Research Environment (AIRE)



Ambition

- To make maintenance of AIRE(Astrophysical Integrated Research Environment) easier, well-organized and more reproducible
- To explore the possibilities in virtual observatory
- To coordinate and initiate high performance computing and large data processing in astrophysics
- To practise the philosophy of free software in astronomy community

Overview

- A binary Linux distribution based on Debian <http://www.debian.org>
- People involved: THCA (THU Center for Astrophysics), TUNA (Tsinghua University Network Administrators)
- Distribution: LiveCD, LiveUSB, virtual machine

OVF

- Open Virtual Format
Standard by VMWare, Oracle, etc.
- Demonstration
 - ① Virtual Machine on VirtualBox
 - ② A normal debian installation
 - ③ Installing astronomy packages
 - ④ Export OVA from within VirtualBox

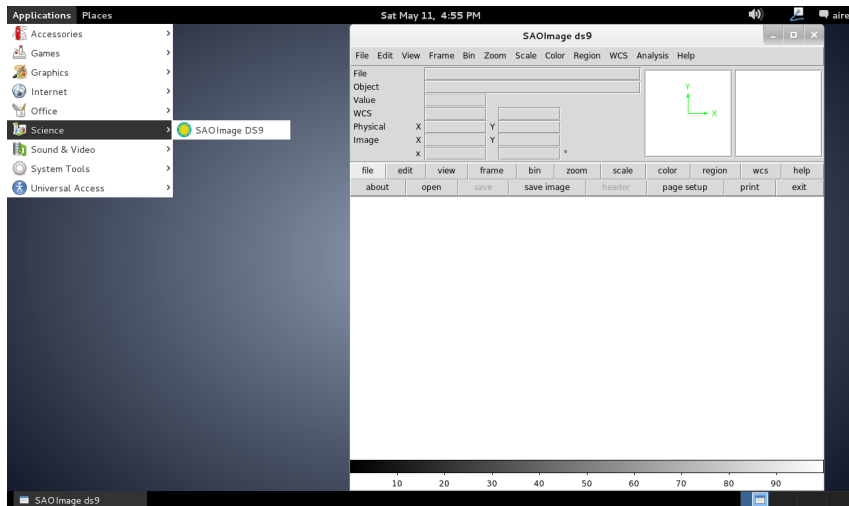
OVF Build Farm

- Automated generation over manual creation
- Input
 - ① list of packages
 - ② custom files
- Output
 - ① LiveCD
 - ② LiveUSB
 - ③ OVA
- DebianLive/Custom Makefile as framework
 - systematic way to generate customized LiveCD
- adding OVA output to DebianLive
- upgrade path using apt-get natively

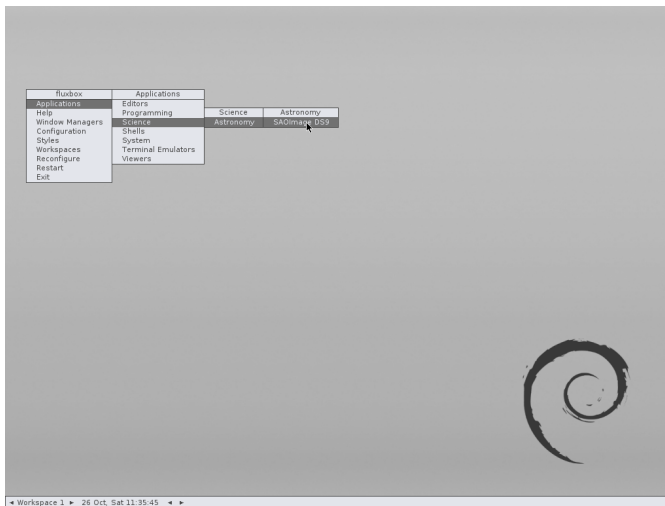
Timeline

- 2013.2 Proposal
- 2013.8 Started: build infrastructure
- 2013.10 Packaging: casa, iraf, heasoft
- 2014.1 Beta release

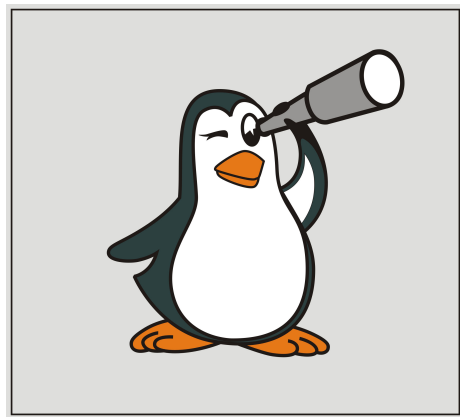
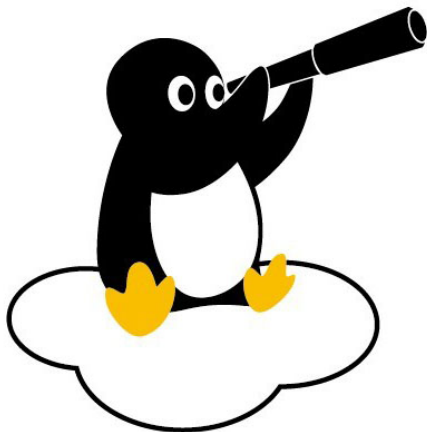
OVF (screenshot)



OVF (screenshot II)



AIRE Linux LOGOs



AIRE Linux LOGOs



Packages

Pkg	Debian	HP
iraf	ITP: #690531	http://iraf.noao.edu
casa	ITP: #688107	http://casa.nrao.edu/
heasoft		http://heasarc.nasa.gov/lheasoft/
ds9	saods9	http://hea-www.harvard.edu/RD/ds9/site/Home
fv	ftools-fv	http://heasarc.gsfc.nasa.gov/ftools/fv/fv_downlo
fftw	fftw3	http://www.fftw.org
scipy	python-scipy	http://www.scipy.org

- more packages follows

AIRE Development Committee

Working Groups :

- Development Working Group (Benda Xu, heroxbd@gmail.com)
- Cloud Working Group (Zhuoxi Huo, huozx@tsinghua.edu.cn)
- User Working Group (Jianfeng Zhou, zhoujf@tsinghua.edu.cn)

Contribute to airelinux

if you are

- an enthusiastic astronomer

Try out our release at

<http://www.airelinux.org/download.html>

- active in the community of free software, esp. Debian
Help us package and do quality assurance
- an artist

Help us with the splash screen, logo, website design, wallpaper, screensaver, etc.

Reach Us at

- homepage: <http://www.airelinux.org>
- mailing list: devel@l.airelinux.org
- sourceforge project:
<http://sourceforge.net/projects/aire>