



NRL IDL Movie Tools

**STEREO SWG
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NRL IDL Movie Tools

- Introduction

- These are IDL tools in Solarsoft written specifically for LASCO/EIT/SECCHI images
- Movie files are uncompressed byte arrays with file and frame headers
- An alternative set of tools to Festival with some overlap, some different features
- Recent revision of base routines for improved interface and common sub-procedures (SCC_PLAYMOVIE)
- For details see <http://secchi.nrl.navy.mil/wiki> or SSW/stereo/secchi/doc/secchimvi.htm

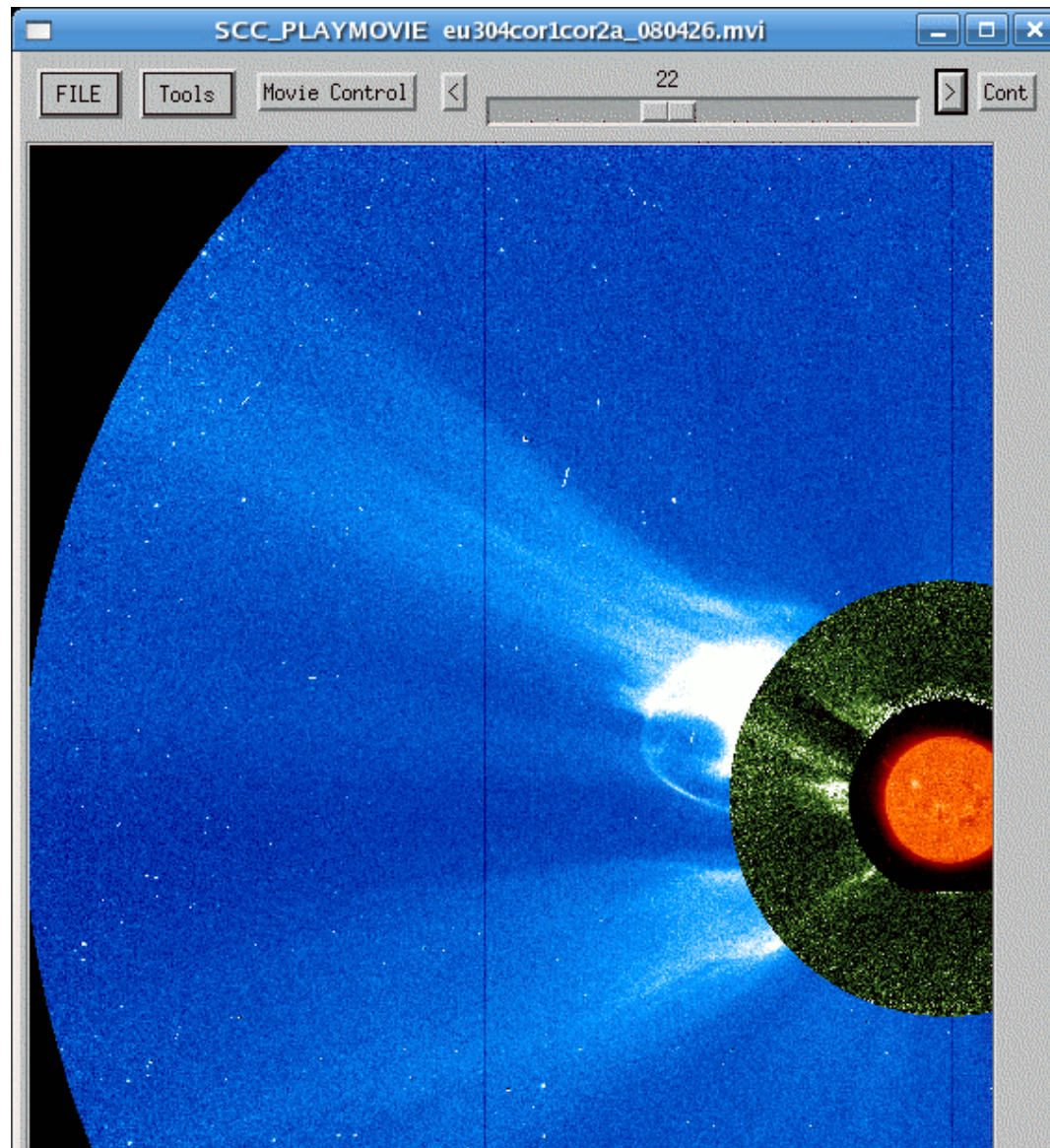


SCC_PLAYMOVIE (1)

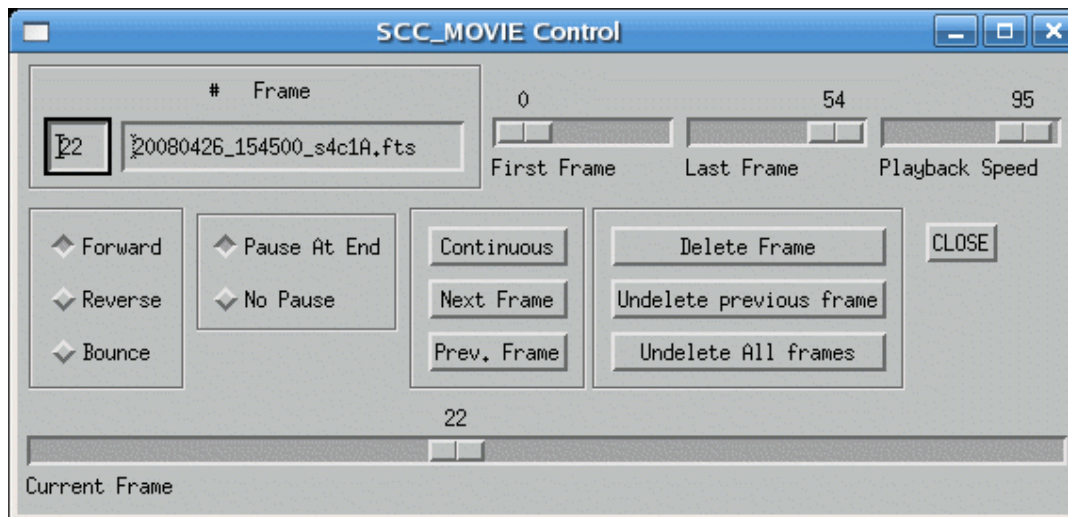
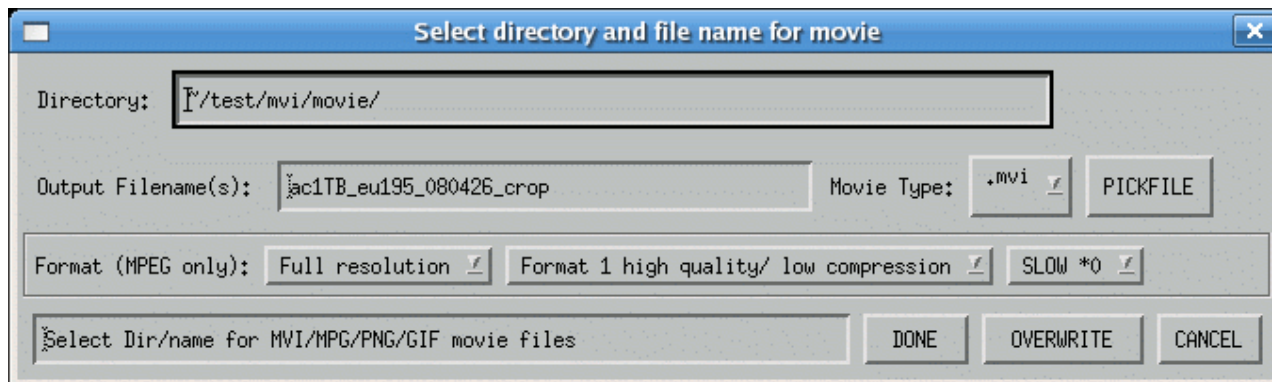
- **Replaces scc_wrunmovie.pro**
 - **Simpler menu-driven interface with added features**
 - **Standardizes features with SCC_PLAYMOVIE.M.PRO**
 - **Cross-platform compatibility**
 - **DirectColor graphics support (uses XLOADCT)**
 - **Writes and reads in both GIF and PNG frames which are defined by a .hdr file**
 - **Options to draw grid and/or de-project (HI only)**
 - **Works with most LASCO and EIT movies**
 - **Control start position and length with keywords**
 - **Allow 1024 pixel full display (without scroll bars)**
 - **Track user-defined area on EUV disk and compute/plot pixel averages**
 - **Crop**
 - **Annotate**
 - **Still considered to be a Beta revision (some kinks to be resolved)**



SCC_PLAYMOVIE (2)



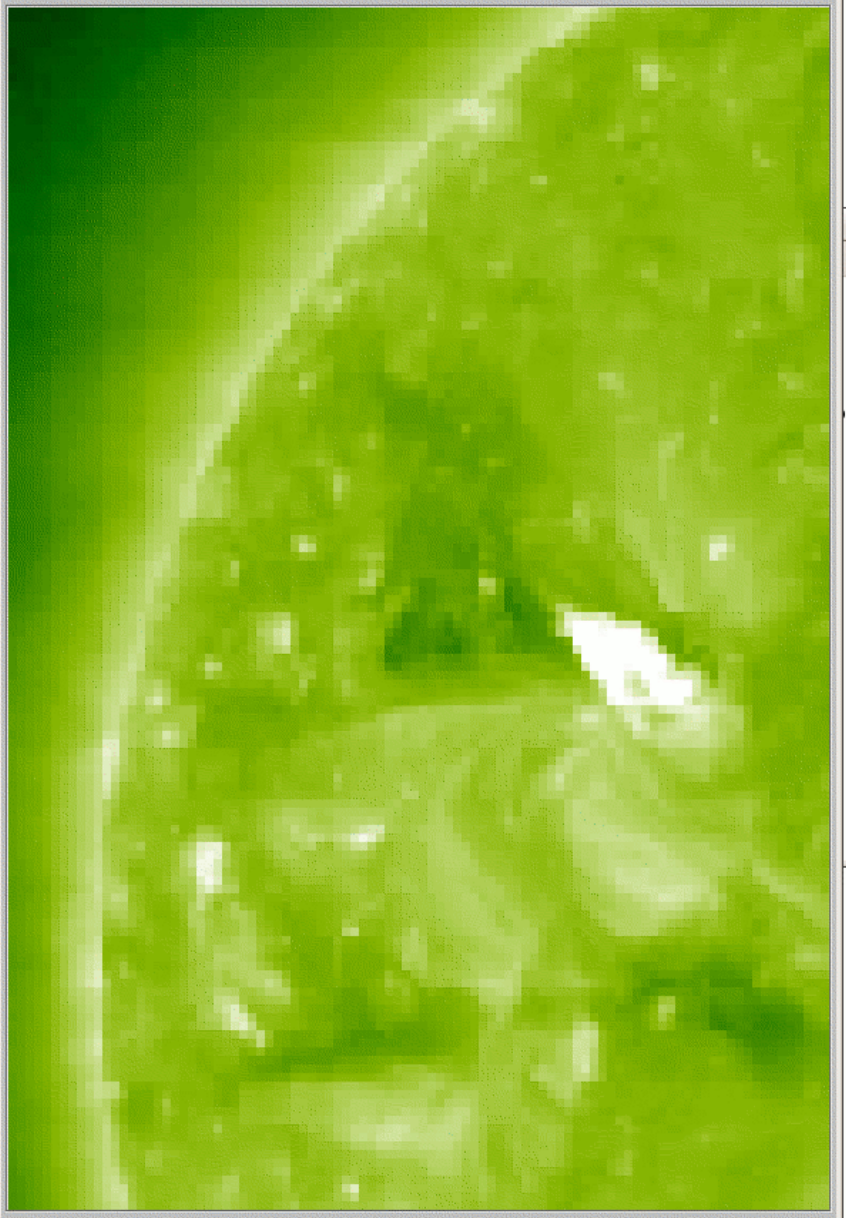
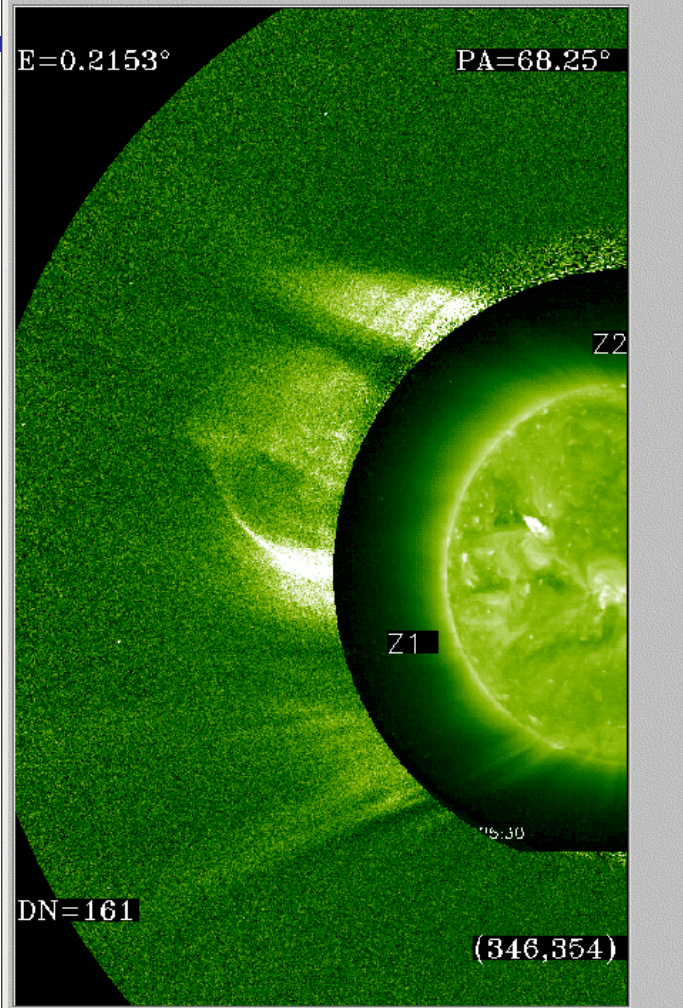
SCC_PLAYMOVIE (3)



SCC_PLAYMOVIEM (1)

- Replaces SCC_WRUNMOVIEM.PRO
 - Displays/records cursor coordinates
- Same features as SCC_PLAYMOVIE Plus:
 - Save/read in individual frames while retaining header information
 - Display/record coordinates as heliographic cartesian
 - Default units for Height is Degrees
 - Added hi_fix_pointing call on 2009/07/14; without this correction, HI2 can have an error on the order of 0.3 deg
 - Synchronize time and position with Jmaps via TOOL2A.PRO (and vice versa)
 - Indicate coordinate system units in HT file





195
 196 <HI
 NAME
 197 <UL
 198
 199
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 201

CROP CONTROL

Use mouse to select lower left corner

SELECT Crop Area Crop Movie CANCEL

me: L
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 ulation: X
 butto
 butto
 se but
 DATE
 -04-26
 -04-26

File

Painting

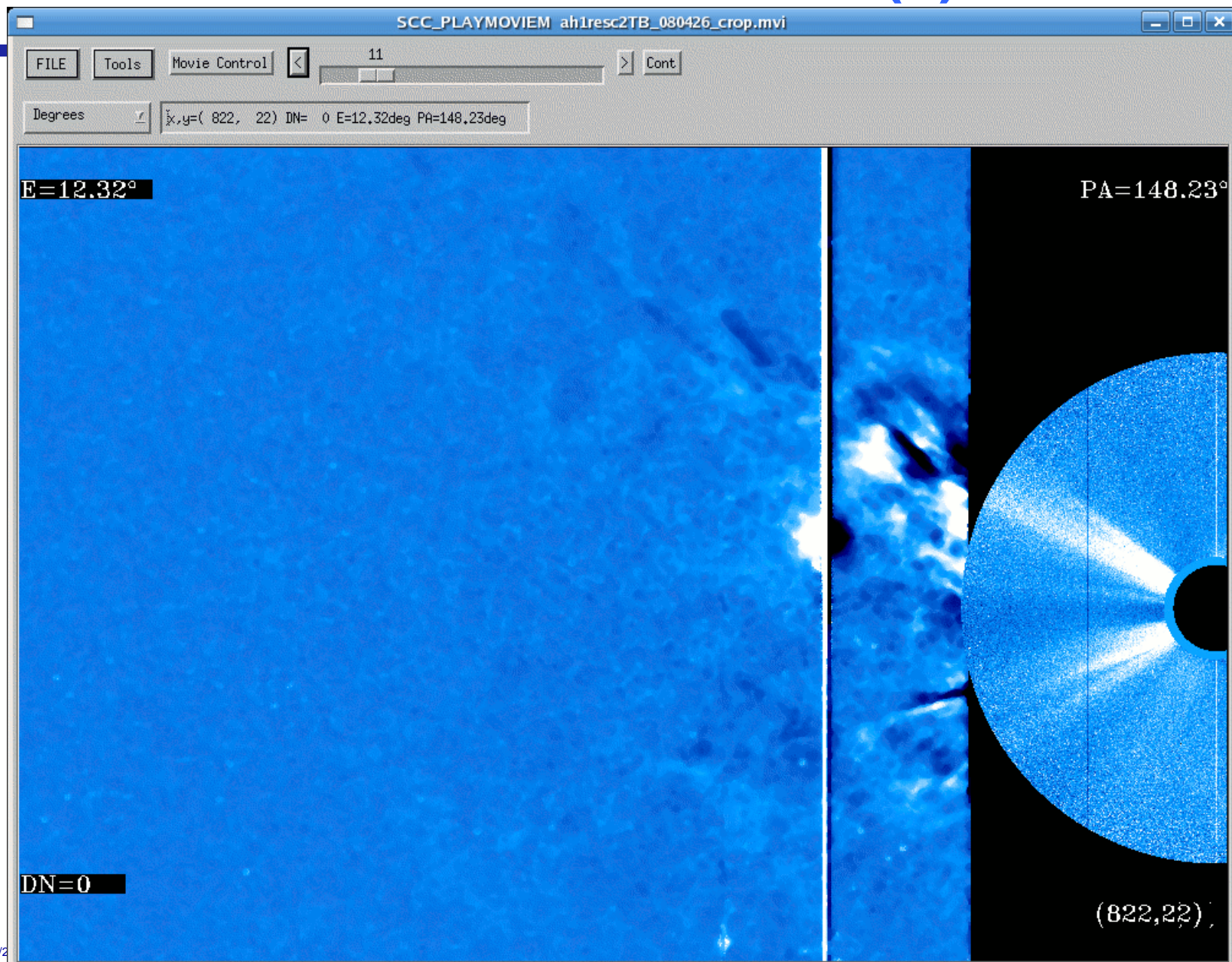
Operations

Modifying

Brushes

Layers

SCC_PLAYMOVIEM (3)

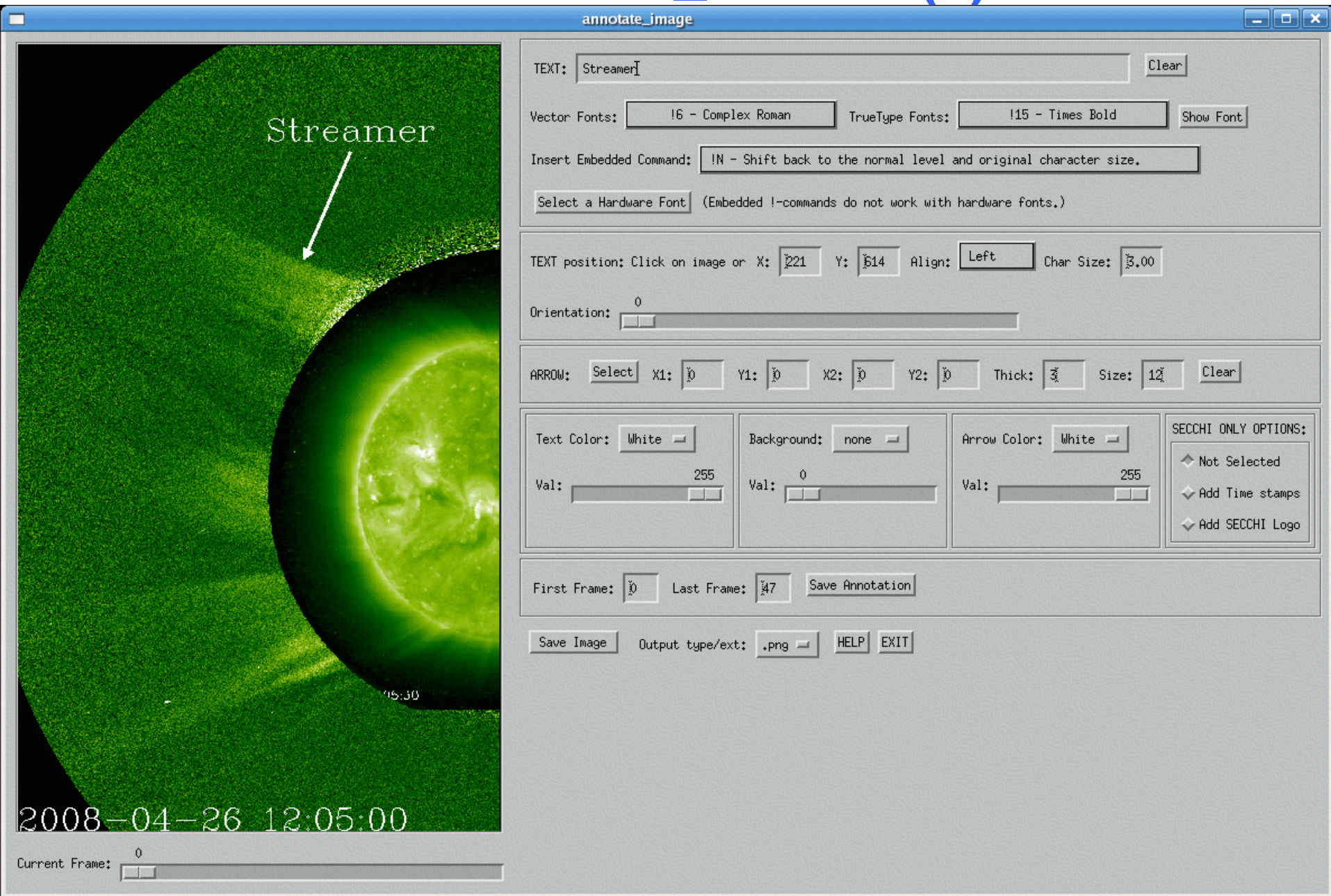


ANNOTATE_IMAGE (1)

- **ANNOTATE_IMAGE.PRO**
 - New widget routine to annotate movies or images.
 - Includes features such as arrows, option to use hardware fonts, control color of annotation.



ANNOTATE_IMAGE (2)



WSSC_COMBINE_MVI (1)

- Following is an overview of new features and updates since 2008 for existing MVI and associated routines in `$SSW/stereo/secchi/idl`. Please send queries to `<mvi@cronus.nrl.navy.mil>`.
 - Full User Guide at `$SSW_SECCHI/doc/secchimvi.htm`
- `WSSC_COMBINE_MVI.PRO`:
 - Output MVIs now work with `scc_playmoviem.pro`
 - Save movie as individual PNG frames with `.hdr` file to allow retrieval of header information
 - Works with truecolor input movies



WSCC_COMBINE_MVI (2)

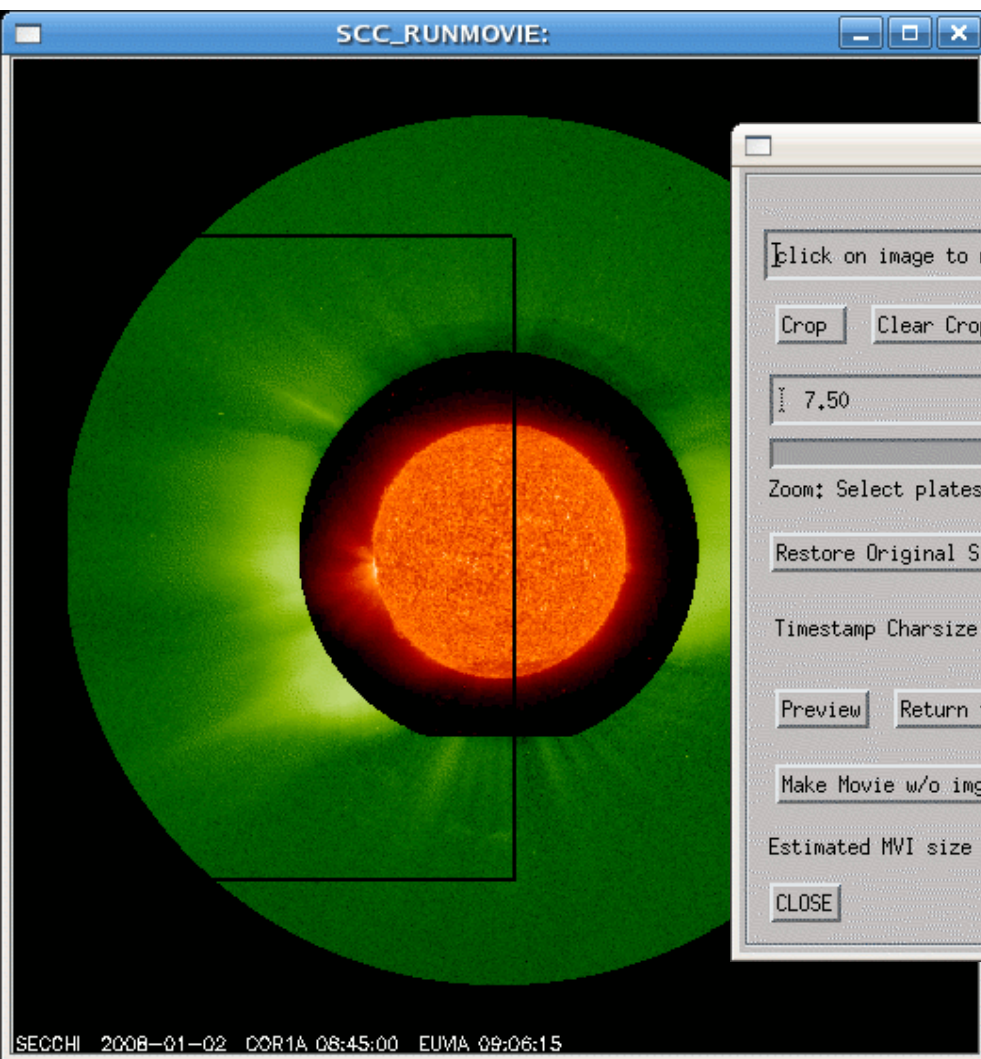
SECCHI Combine Movie Tool

Movies to combine

MVI0 :	<input type="text" value="/net/venus/secchi2/movie/euvi_02jan08a.mvi"/>	<input type="button" value="Select"/>	MVI5 :	<input type="text"/>	<input type="button" value="Select"/>
MVI1 :	<input type="text" value="/net/venus/secchi2/movie/cor1_02jan08a.mvi"/>	<input type="button" value="Select"/>	MVI6 :	<input type="text"/>	<input type="button" value="Select"/>
MVI2 :	<input type="text"/>	<input type="button" value="Select"/>	MVI7 :	<input type="text"/>	<input type="button" value="Select"/>
MVI3 :	<input type="text"/>	<input type="button" value="Select"/>	MVI8 :	<input type="text"/>	<input type="button" value="Select"/>
MVI4 :	<input type="text"/>	<input type="button" value="Select"/>	MVI9 :	<input type="text"/>	<input type="button" value="Select"/>

Color : Time Stamps:

WSCC_COMBINE_MVI (3)



SCC_COMBINE_MVI Control

Combine_MVI Controls

Click on image to recenter crop position

Zoom: Select platescale value (arcsec/pixel)

Timestamp Charsize (0=none)

Estimated MVI size = 144MB PNG or GIF movie size = 48MB

Masks

0 = No Mask
-1 = Use FITS File

HI2_A	<input type="text" value="1.00"/>	HI2_B	<input type="text" value="1.00"/>
COR2A	<input type="text" value="1.00"/>	COR2B	<input type="text" value="1.00"/>
COR1A	<input type="text" value="3.500"/>	COR1B	<input type="text" value="3.500"/>
EUVIA	<input type="text" value="1.600"/>	EUVIB	<input type="text" value="1.600"/>

WSCC_MKMOVIE

WSCC_MKMOVIE

pB Series Options:
None

Image Scaling
BYTSCL Min Max
 Automatic scaling
Unsharp/Smooth Box
 Use SECCHI_PREP color table
Fill Color (1-256)
(-1 for median)
Sharpen Ratio Factor
 Do Median
Use Linear Scaling

Type of Movie
 Straight
 Difference
 Running Diff
 Unsharp
 Ratio
 Sharpen Ratio
Running diff of
For Base Frame Use
Monthly Min
 New bkg each frame
Use every file
from input.
 Average skipped frames
FFV size:

Options
 Display Date
 Normalize to exptime
 Sort by Date
 Flat field/vignet
 Physical units
 Rotate North Up
 Use SECCHI Logo
 Show Limb
 Mask Outer Field
 Both A and B (Match)
 Both, A on left
 Add Objects (HI2)
Date size:
Do Not Mask Occulter
Do Not Fill Data Gaps

Subfield Coordinates
 Use interactive subfield
 Clear Subfield
Relative to 2048x2048 image
X1 X2
Y1 Y2
Use Integer Factors
(Ex: Y1=512 Y2=1535)
 Use Box Normalization
Relative to 2048x2048 image
X1 X2
Y1 Y2

CREATE MOVIE TEST MOVIE XLOADCT CANCEL

More IDL Movie Tool Enhancements (1)

- **GENERIC_MOVIE.PRO:**
 - Added HDRS= keyword to allow input of header structures if input is a data cube.
 - If input is a string array of .jpg or .png filenames and 2 or 3 dimensions [nimgs,ncols,nrows], combines images in 2nd/3rd dimensions into a single Truecolor frame.
- **SCC_PNGPLAY.PRO**
 - (requires browse images in \$SECCHI_PNG, probably NRL only)
 - Combine any combination of SECCHI telescopes PNG or JPG browse images into a single movie
 - Added CADENCE= keyword
 - Added keyword /HDRS to find and read in associated FITS file headers so that SCC_WRUNMOVIEM can be used
- **SCCWRITE_HT.PRO**
 - Varies column headings according to the type of coordinate system being written. (Make HT-files from scc_wrunmoviem.pro)



More IDL Movie Tool Enhancements (2)

- **SREM_MOVIE.PRO:**
 - Added option to input date instead of file list and to do both A and B movies and display side-by-side with `wsc_combine_mvi.pro`; added `/AUTOSAVE` option
- **MVI2CARRMAP.PRO**
 - Produces Carrington maps from MVI files
 - Works for EIT/LASCO movies
- **REMEMBER:**
 - For details see <http://secchi.nrl.navy.mil/wiki> or [\\$SSW/stereo/secchi/doc/secchimvi.htm](http://$SSW/stereo/secchi/doc/secchimvi.htm)

