

*WADW Astrophotography
Using A
DSLR*

by

Andreas Gada

Oak Heights Astronomical

Objectives

On completion of this workshop you will know how to take images of the night sky and be introduced to the use of time-lapse imaging to show the motion of the heavens. Photography of the following will be

- covered:
- Constellations
 - Meteors
 - Satellites
 - Northern Lights
 - Planetary Conjunctions
 - Star Trails
 - The Moon

Basic Equipment

- Tripod
- DSLR Camera
- Remote Control Cable / Timer (optional)
- Flashlight with red filter

Basic Equipment



Digital Camera On Tripod With Remote Timer

Composition

- Start by visualizing what you want to capture
- Attach the camera to the tripod and level the tripod
- Aim the camera at the subject and adjust the position of the camera until the subject is positioned in the view finder as desired
- Check the corners and edges of the frame for distracting elements
- Take trial exposures to verify composition

Focus

- Most auto focus systems do not work properly in dim lighting and will result in out of focus pictures
- Turn auto focus off and focus lens manually
- Use old style manual focus lens and set at infinity
- Take a test image and review to verify that the subject is in focus

Exposures

- Set the ISO to the highest setting possible (800 – 1600)
- Set the lens f/ value to the lowest value (3.5 or lower)
- Set the shutter speed to the longest duration possible (8” – 30”)
- Turn long exposure noise reduction on
- Turn high ISO noise reduction on



Summer Milkyway, July 11, 2010, Oak Heights

Canon 20Da, 10mm f/3.5, 60", ISO-1600 No Noise Reduction

Summer Milkyway, July 11, 2010, Oak Heights

Canon 20Da, 10mm f/3.5, 60", ISO-1600 Dark Frame



Summer Milkyway, July 11, 2010, Oak Heights

Canon 20Da, 10mm f/3.5, 60", ISO-1600 With Noise Reduction



Taurus, Gemini and Orion, Oct 13, 2007, Oak Heights

Canon 20Da, 16mm f/3.5, 25", ISO-1600



Circumpolar, Sept. 16, 2007, Oak Heights

Canon 20Da, 16mm f/3.5, 60", ISO1600



Milky Way, Aug 13, 2007

River Place Park, Mount Forest

Canon 20Da, 16mm f/3.5, 30",
ISO1600



Leonid Meteor, Nov 16, 2009, Sandy Flats

Canon 20Da, 16mm f/3.5, 30", ISO-1600



Fireball, Nov 16, 2009, Sandy Flats

Canon 20Da, 16mm f/3.5, 30", ISO-1600



ISS and Shuttle, Sep 9, 2009, Sandy Flats

Canon 40D, 16mm f/3.5, 30", ISO1600, composite of 3 images



Venus, Saturn and Mercury, Oct 11, 2009, Sandy Flats

Canon 20Da, 48mm f/5, 1", ISO-800



Zodiacal Light, Nov 18, 2009, Grafton, photo by Malcolm Park

Nikon D3, 14mm f/3.2, 25", ISO 1600



Northern Lights, Aug 4, 2010, Oak Heights,
Canon 40D, 10mm f/3.5, 60", ISO 1600



Northern Lights, Aug 4, 2010, Oak Heights,
Canon 40D, 10mm f/3.5, 60", ISO 1600



Northern Lights, Feb 1, 2010, Kvaløya, Norway, photo by Fredrik Broms,
Nikon D3, 20mm f/2.8, 6", ISO 1000, full moon conditions



Northern Lights, Feb. 11, 2008, Fairbanks, Alaska, photo by Lance Parrish,
Nikon D3, 12 – 24 mm f/4, 8", ISO 1000

Dealing With The Cold and Dew

- Cold weather can drastically reduce the camera battery life
- An external battery packs/supplies can be used to provide continuous power
- During the night as the temperature drops dew/frost can form on the camera lens and body
- Camera shrouds and lens heater can be used to combat dew and protect camera

Essential Accessories



- External Power Supply
- 2 Gig Memory Card
- External Camera Battery
- Dew Heater
- Camera Shroud

The Camera Ready For Action



Star Trails

A long-exposure photograph of a night sky showing numerous concentric, circular star trails. The trails are centered on a bright star, likely the North Star, and radiate outwards in a spiral pattern. The sky is a deep, dark blue-grey. In the foreground, the dark silhouettes of trees and bushes are visible against the bottom edge of the frame.

Traditional Star Trails

- Typical exposures 5 minutes or longer
- Set the ISO to 400 or slower depending on exposure length
- Set the lens to f/8 or higher depending on exposure length
- Turn long exposure noise reduction on
- Turn high ISO noise reduction on
- Attach the remote control timer and set the exposure time
- Start timer and twice the length of the exposure to allow for long exposure noise reduction to take place



Circumpolar, Sep 16, 2007, Oak Heights

Canon 20Da, 16mm f/3.5, 60", ISO1600



Circumpolar Star Trails, Sep 16, 2007, Oak Heights

Canon 20Da, 16mm f/8, 60 minutes, ISO-400



Gemini Star Trail, Nov 19, 2007, Oak Heights

Canon 20Da, 16mm f/8, ISO 800, 30 minutes



ISS Flyby, Mar 18, 2010, Sandy Flats

Canon 40D, 10mm f/3.5, ISO 200, 5 minutes

Composite Star Trails

- Combine many short exposure images taken sequential over 5 minutes or longer periods of time
- Set the ISO to 1600 or higher
- Set the lens to f/3.5 or lower
- Turn long exposure noise reduction off
- Turn high ISO noise reduction on
- Attach the remote control timer and set the exposure time to 30'' - 60'' seconds
- Set the interval to 33'' - 63'' to allow for processing time between exposures
- Take five to ten dark frames



Fireball, Nov 16, 2009, Sandy Flats

Canon 20Da, 16mm f/3.5, 30", ISO-1600



Circumpolar Star Trail Composite, Nov 16, 2009, Oak Heights

Canon 20Da, 16mm f/3.5, 30", ISO-1600, 400 images, 3.5 hours



Quadrantid Meteor Shower Composite, Jan 03, 2009, Sandy Flats

Canon 40D, 10mm f/3.5, 30", ISO-1600, composite of 25 images



ISS, Sep 13, 2009, Sandy Flats

Canon 40D, 16mm f/3.5, 2.5", ISO1600, composite of 236 images



Night Search, Jul 17, 2010, Sandy Flats

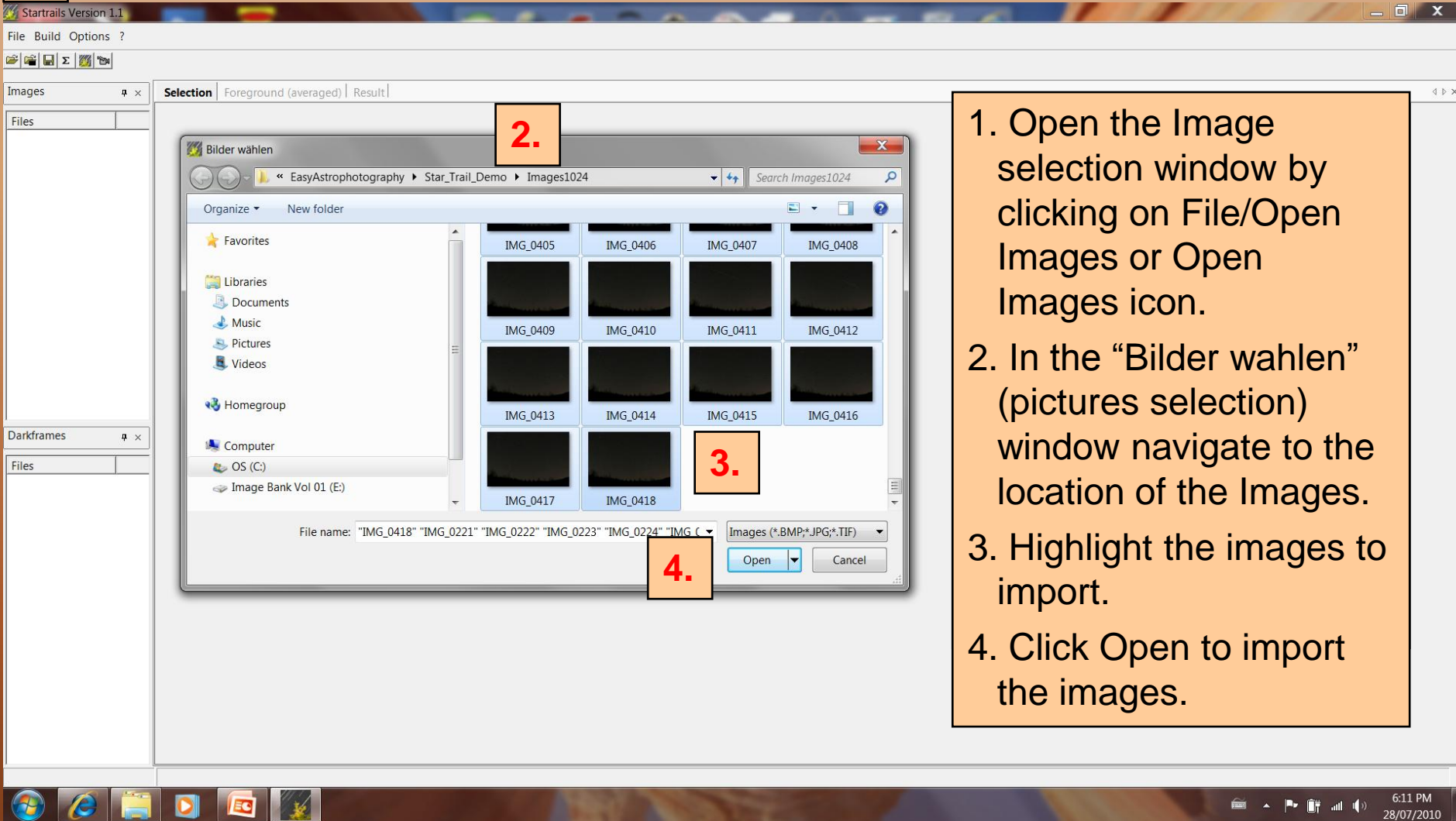
Canon 40D, 22mm f/4.5, 60", ISO1600, composite of 75 images

Startrails Software

- Freeware developed by Achim Schaller
- Automatically combines 200 – 300 short exposure images to create as Star Trail composite
- Autoamatically applies dark frames when suppliedd
- <http://www.startrails.de/html/software.html>

Creating Composites Using Startrails

1.



1. Open the Image selection window by clicking on File/Open Images or Open Images icon.
2. In the “Bilder wahlen” (pictures selection) window navigate to the location of the Images.
3. Highlight the images to import.
4. Click Open to import the images.

1. Creating Composites Using Startrails - Darkframes

1.

Startrails Version 1.1

File Build Options ?

Images Selection Foreground (averaged) Result

Files: C:\OakHeightsAstr

- ✓ IMG_0222.JPG
- ✓ IMG_0223.JPG
- ✓ IMG_0224.JPG
- ✓ IMG_0225.JPG
- ✓ IMG_0226.JPG
- ✓ IMG_0227.JPG
- ✓ IMG_0228.JPG
- ✓ IMG_0229.JPG
- ✓ IMG_0230.JPG
- ✓ IMG_0231.JPG
- ✓ IMG_0232.JPG
- ✓ IMG_0233.JPG
- ✓ IMG_0234.JPG
- ✓ IMG_0235.JPG
- ✓ IMG_0236.JPG
- ✓ IMG_0237.JPG
- ✓ IMG_0238.JPG

Darkframes

Files

Bilder wählen

Star_Trail_Demo DarkFrames1024 Search DarkFrames1024

Organize New folder

Favorites

Libraries

- Documents
- Music
- Pictures
- Videos

Homegroup

Computer

- OS (C:)
- Image Bank Vol 01 (E:)

File name: "IMG_1191" "IMG_1185" "IMG_1186" "IMG_1187" "IM" Images (*.BMP;*.JPG;*.TIF)

Open Cancel

2.

3.

4.

1. Open the Darkframe selection window by clicking on File/Open Darkframes or Open Darkframes icon.

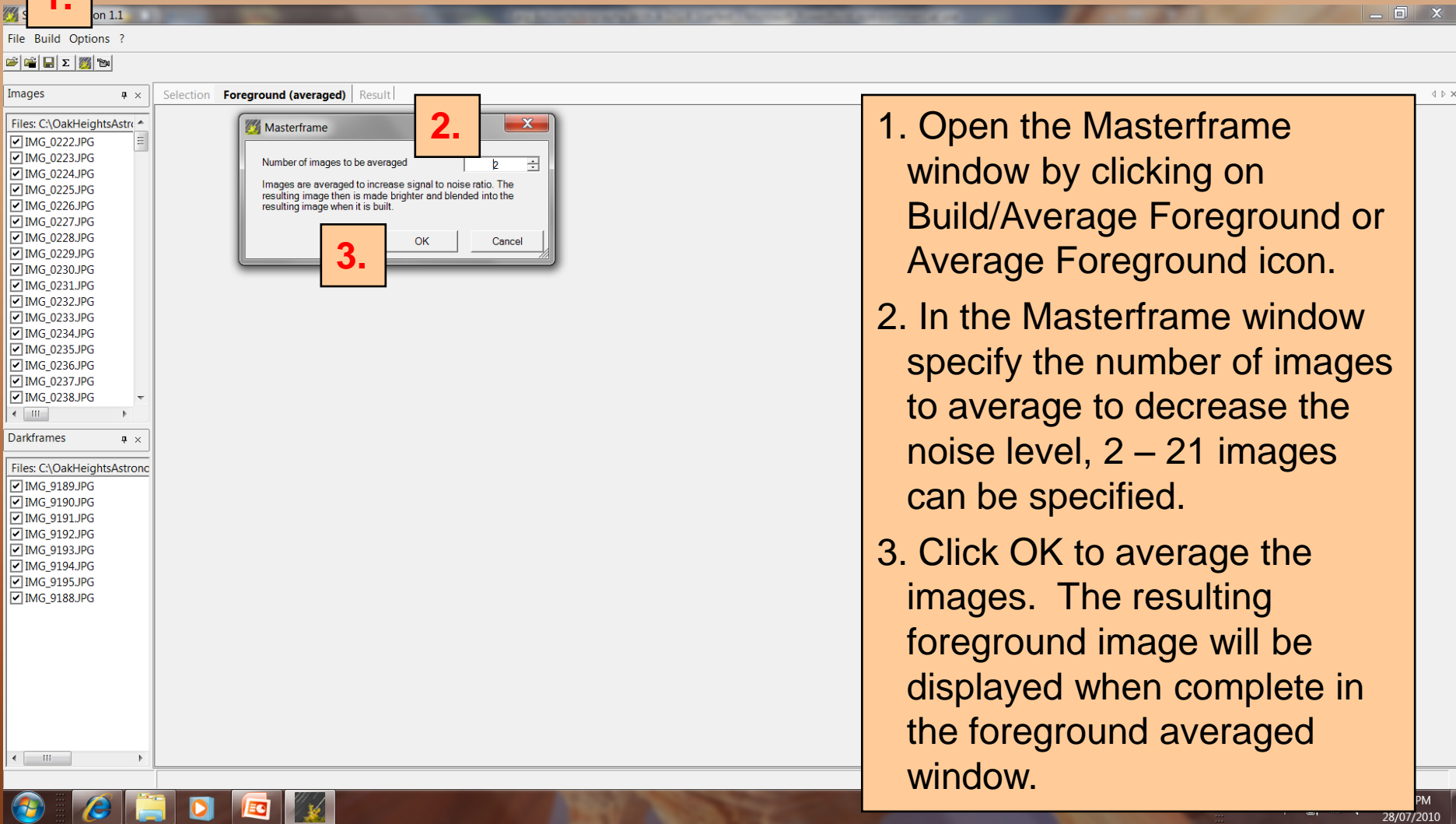
2. In the "Bilder wählen" (pictures selection) window navigate to the location of darkframe images.

3. Highlight the darkframes to import.

4. Click Open to import the darkframes.

Creating Composites Using Startrails - Masterframe

1.

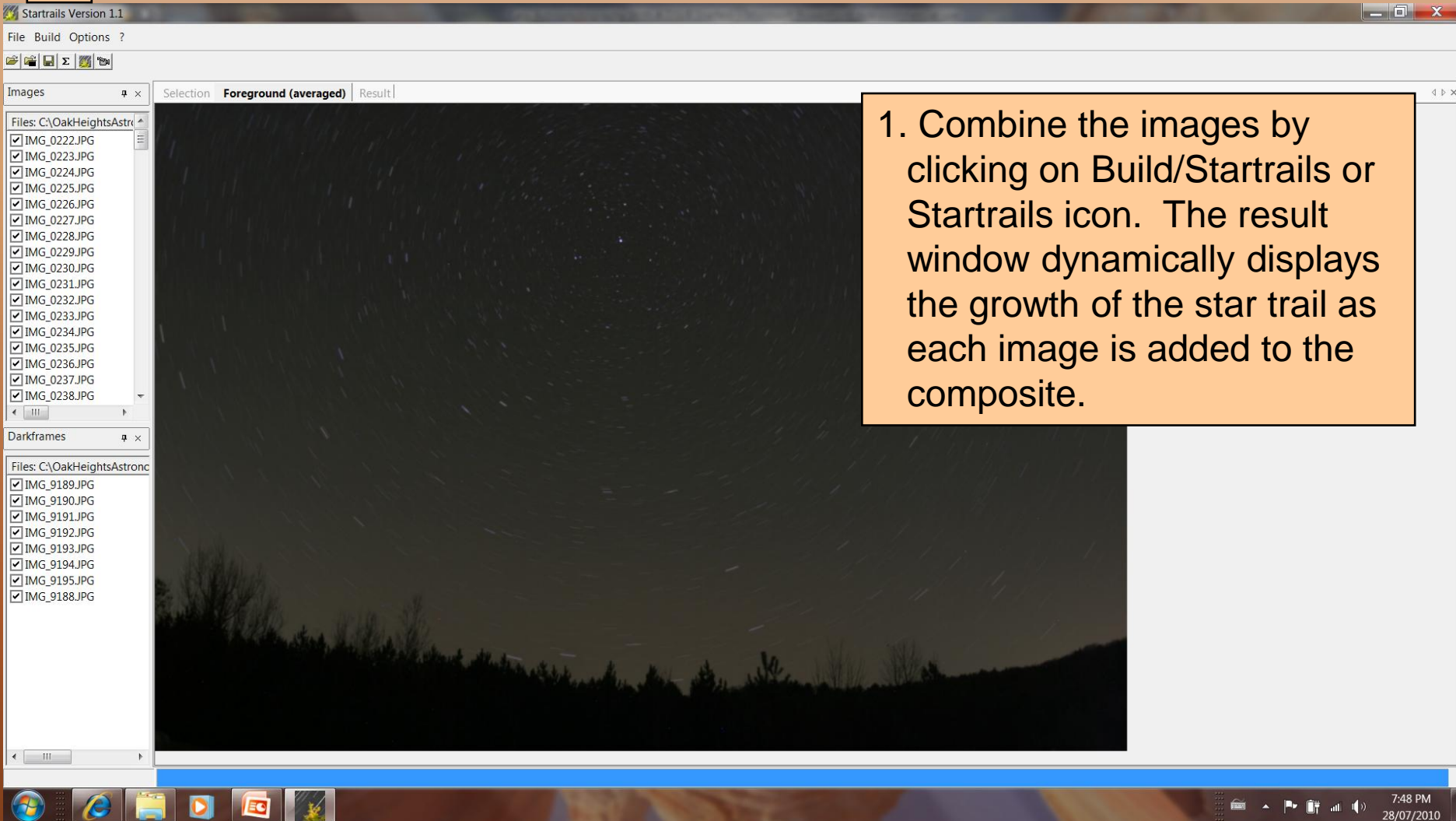


The screenshot shows the Masterframe software interface. On the left, there are two panels: 'Images' and 'Darkframes'. The 'Images' panel lists 20 files from 'C:\OakHeightsAstr...' with checkboxes. The 'Darkframes' panel lists 8 files from 'C:\OakHeightsAstronc...' with checkboxes. The main window has a menu bar (File, Build, Options, ?) and a toolbar. A 'Masterframe' dialog box is open in the center, titled 'Masterframe'. It contains a text field 'Number of images to be averaged' with the value '2'. Below the text field is a note: 'Images are averaged to increase signal to noise ratio. The resulting image then is made brighter and blended into the resulting image when it is built.' At the bottom of the dialog are 'OK' and 'Cancel' buttons. Three orange boxes with numbers are overlaid on the image: '1.' is in the top-left corner of the software window; '2.' is over the 'Number of images to be averaged' text field; '3.' is over the 'OK' button.

1. Open the Masterframe window by clicking on Build/Average Foreground or Average Foreground icon.
2. In the Masterframe window specify the number of images to average to decrease the noise level, 2 – 21 images can be specified.
3. Click OK to average the images. The resulting foreground image will be displayed when complete in the foreground averaged window.

Creating Composites Using Startrails – Trail Build

1.

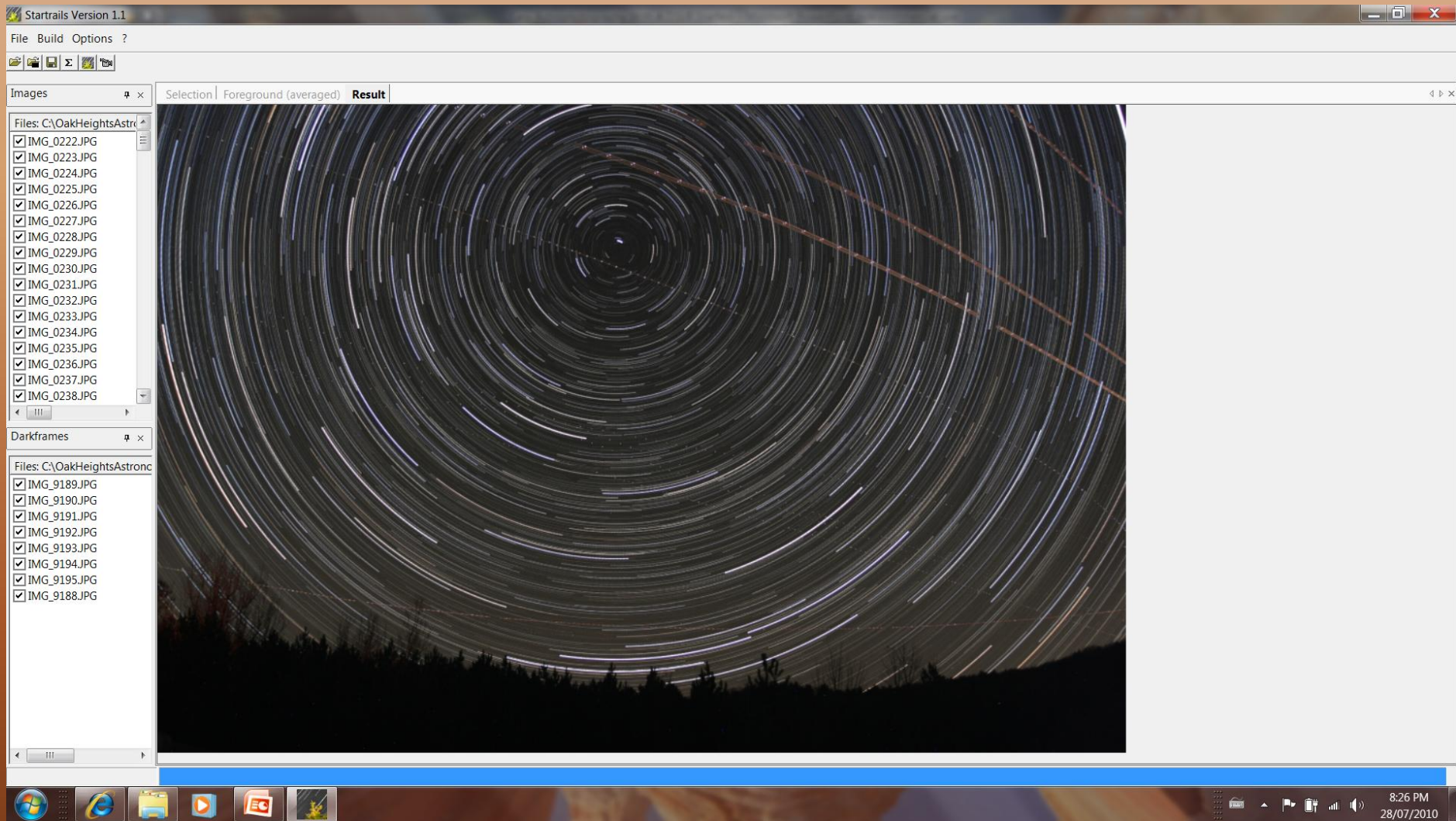


The screenshot shows the Startrails Version 1.1 application window. The main display area shows a dark sky with a star trail composite in progress. The interface includes a menu bar (File, Build, Options, ?), a toolbar, and two panels on the left: 'Images' and 'Darkframes'. The 'Images' panel lists 20 files from 'C:\OakHeightsAstr...' with checkboxes, all of which are checked. The 'Darkframes' panel lists 8 files from 'C:\OakHeightsAstronc...' with checkboxes, all of which are checked. The main window title is 'Startrails Version 1.1' and the active window is 'Foreground (averaged)'. A text box on the right side of the window contains the following text:

1. Combine the images by clicking on Build/Startrails or Startrails icon. The result window dynamically displays the growth of the star trail as each image is added to the composite.

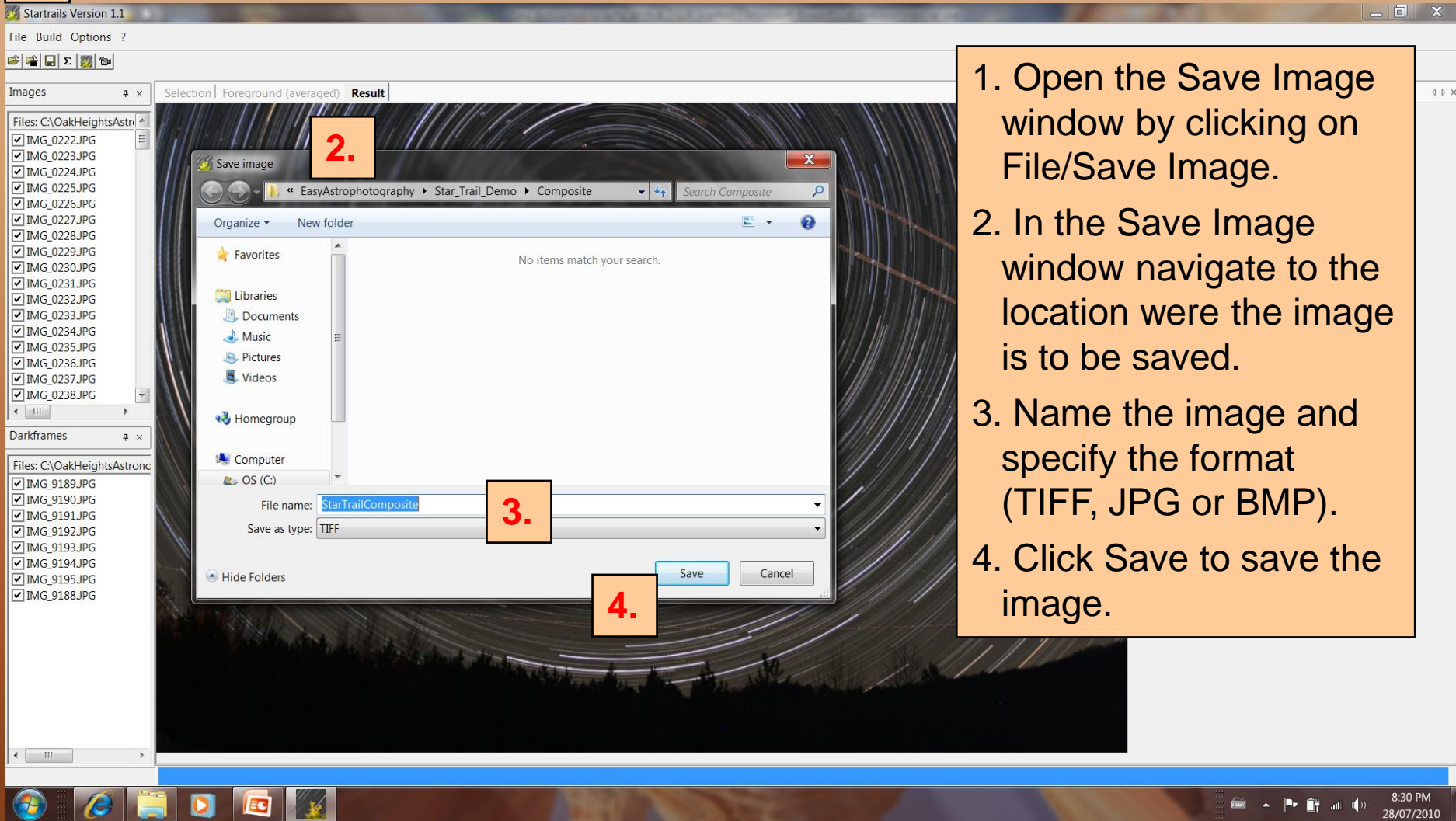
The Windows taskbar at the bottom shows the system tray with the time 7:48 PM and date 28/07/2010.

Creating Composites Using Startrails - Result



Creating Composites Using Startrails – Save Composite

1.



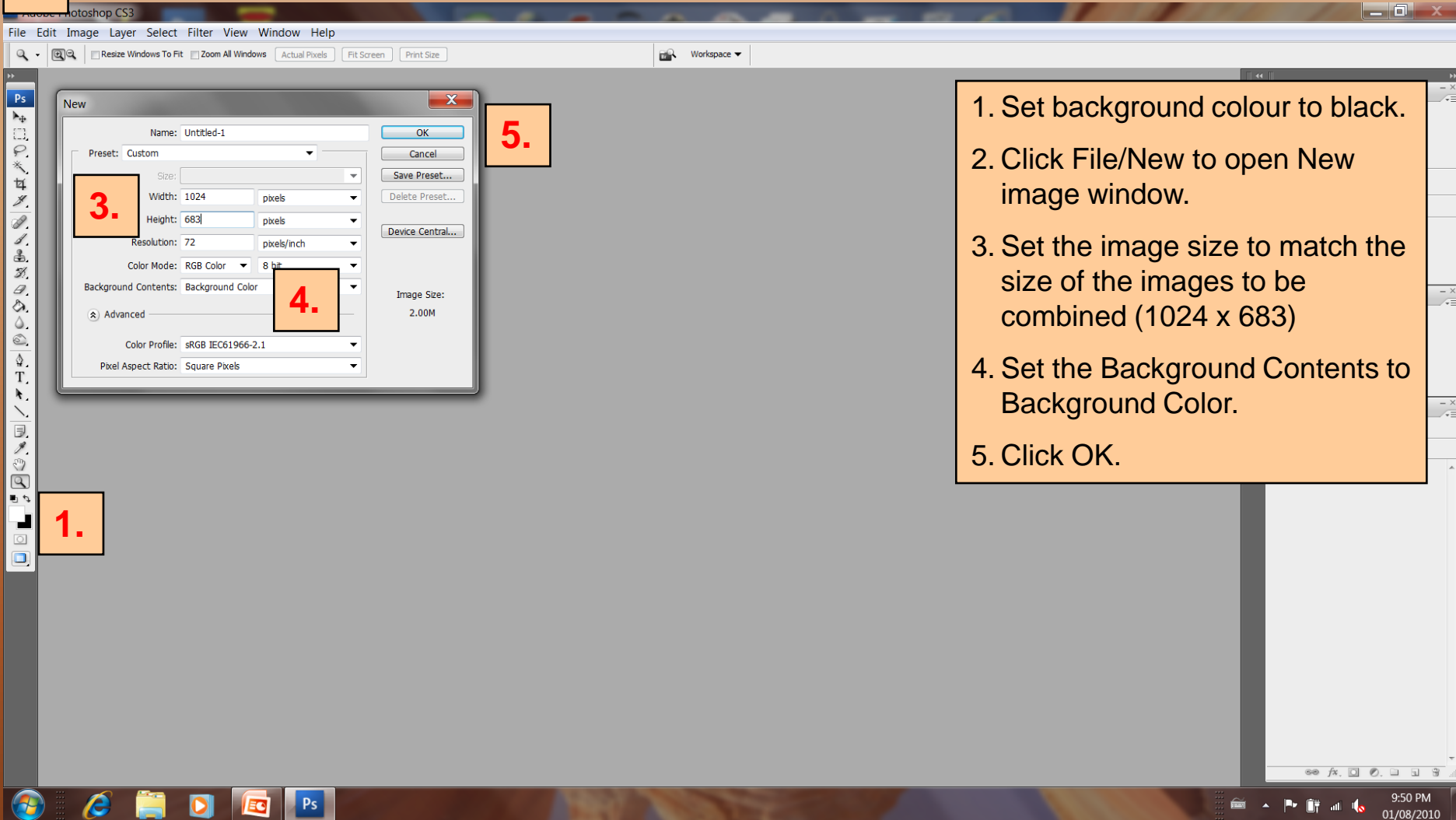
1. Open the Save Image window by clicking on File/Save Image.
2. In the Save Image window navigate to the location where the image is to be saved.
3. Name the image and specify the format (TIFF, JPG or BMP).
4. Click Save to save the image.

Creating Star Trails With Photoshop

- Photoshop can be used to combine two or more images to create star trails by combining layers using the lighten blend options.
- This process can be automated using actions and batch processing capabilities.
- This is a multi-step process:
 1. Determine the steps that need to be followed to combine two images together using the lighten blend option.
 2. Create an Action by recording the steps that were used to combine the images.
 3. Playback the Action using the File/Automate/Batch selection
- Actions can be replayed as often as required
- Actions can be created to automate many routine image processing activities

Creating Star Trails With Photoshop – Black Background Image

2.



5.

1. Set background colour to black.
2. Click File/New to open New image window.
3. Set the image size to match the size of the images to be combined (1024 x 683)
4. Set the Background Contents to Background Color.
5. Click OK.

1.

3.

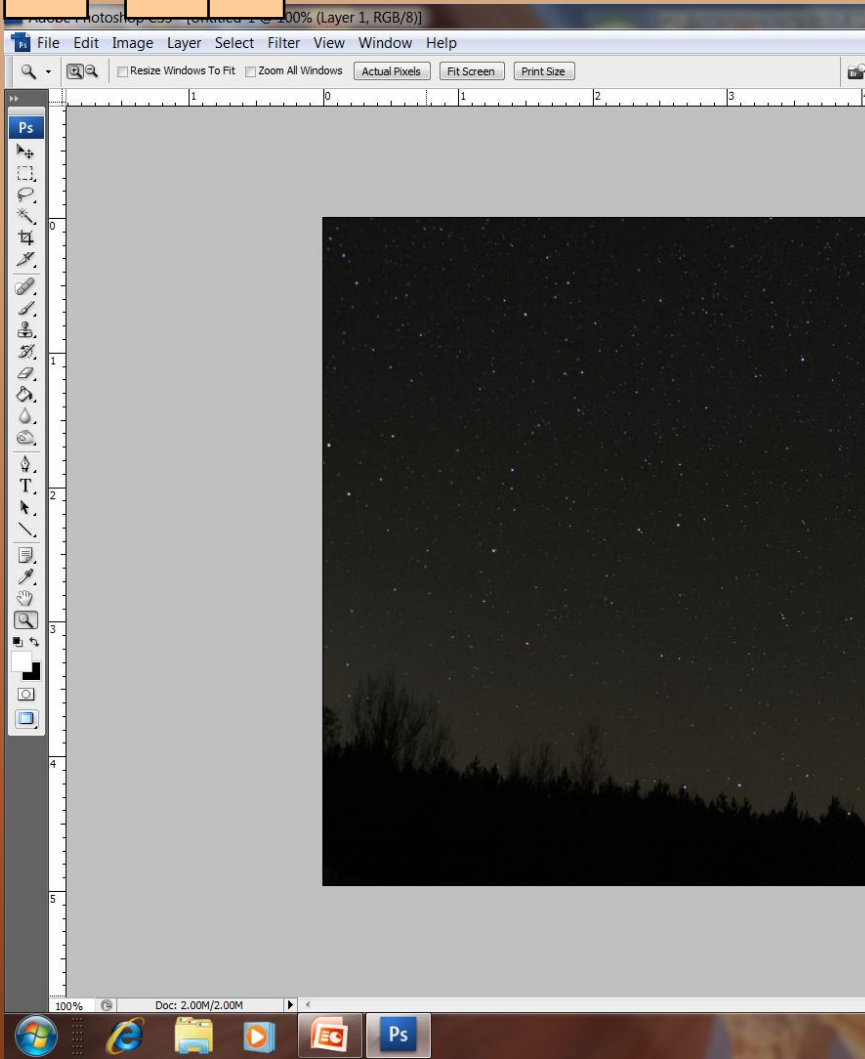
4.

Creating Star Trails With Photoshop – Combine Images

1.

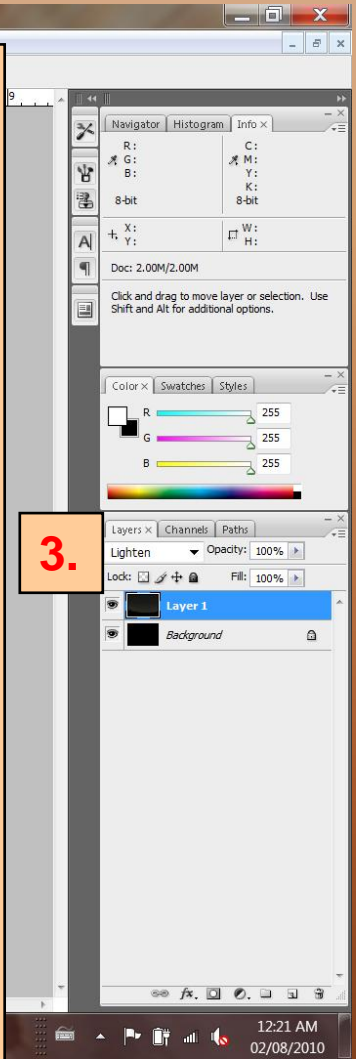
4.

2.



1. Open Image:
 - Click File/Open
 - Navigate to location of image
 - Highlight Image
 - Click OK
2. Copy/Paste Image as Layer:
 - Click Select/All
 - Click Edit /Copy
 - Click File/Close
 - Click Edit/Paste
3. Set Blend Option to Lighten.
4. Click Layer/Flatten Image.
5. Save Image:
 - Click File/ Save As
 - Navigate to location of Save Folder
 - Enter File Name
 - Select File Format
 - Click Save
6. Repeat for each image.

3.



Creating Star Trails With Photoshop – Create An Action

1.

2.

3.

4.

5.

6.

2.

1. Click Windows/Show Actions to open Actions Window.
2. Click New Action Icon.
3. Enter action a name.
4. Click record to start recording.
5. Record combine image process:
 - Open image to be added
 - Click Select/All
 - Click Edit/Copy
 - Click File/Close
 - Click Edit/Paste
 - Set Layer Blend to Lighten
 - Click Layer/Flatten
 - Click File/Save As
6. Click Stop Icon to stop recording.

Creating Star Trails With Photoshop – Using A Batch Command

1.

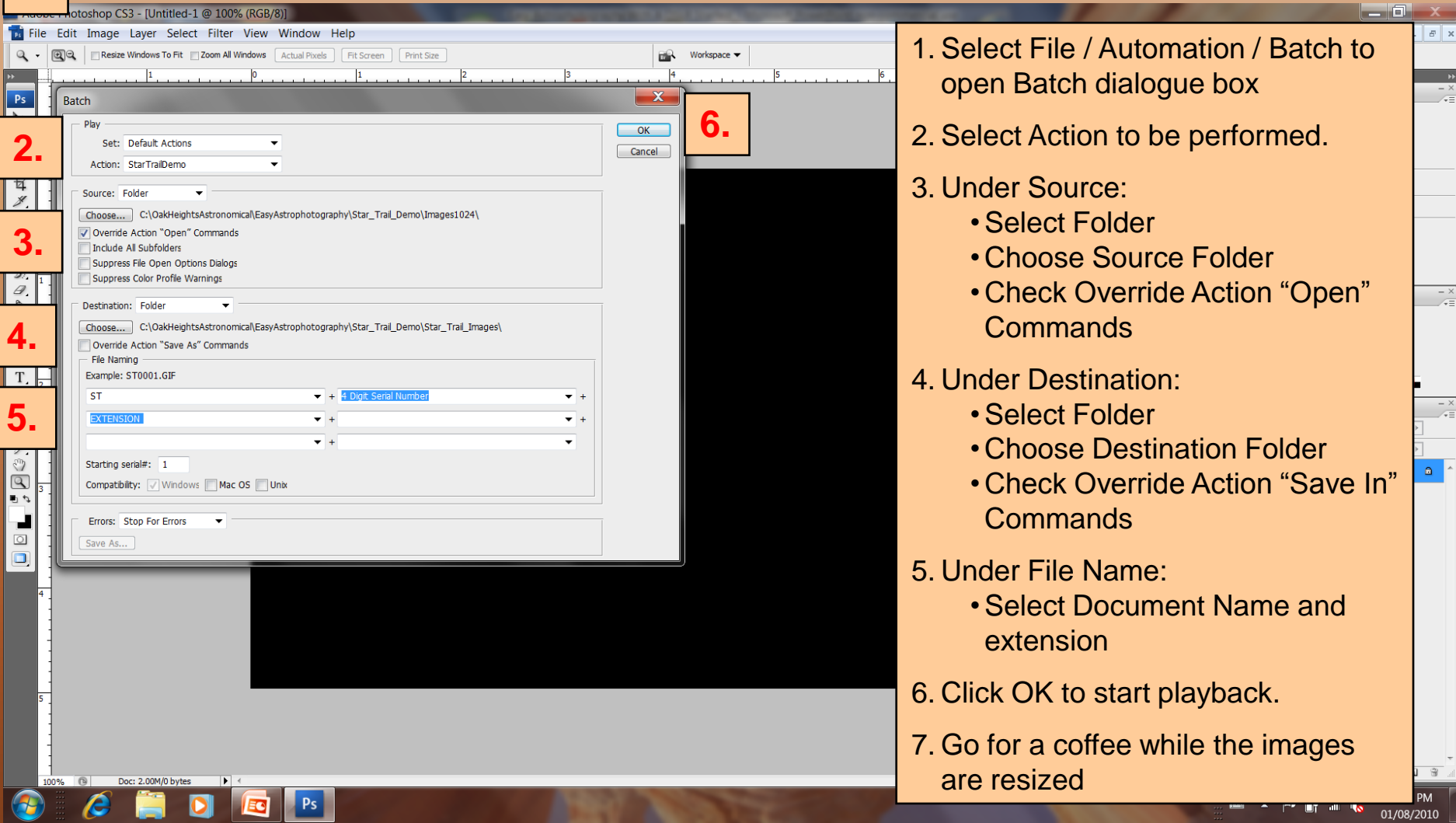
2.

3.

4.

5.

6.



1. Select File / Automation / Batch to open Batch dialogue box
2. Select Action to be performed.
3. Under Source:
 - Select Folder
 - Choose Source Folder
 - Check Override Action “Open” Commands
4. Under Destination:
 - Select Folder
 - Choose Destination Folder
 - Check Override Action “Save In” Commands
5. Under File Name:
 - Select Document Name and extension
6. Click OK to start playback.
7. Go for a coffee while the images are resized

Creating Movies Using Proshow

ProShow Producer - Andreas Gada - Untitled ProShow 1 *

File Edit Project Show Slide Audio Create Window Help

New Open Save Play Timeline Show Opt Slide Opt Styles Layers Effects Captions Music Create Output

Untitled ProShow 1 Tool Bar 1 slide (0:08.00) [No Audio Tracks]

1. Folders List

Name	Used	Type	Size	Date Modified	Dimensions
IMG_0221.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0222.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0223.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0224.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0225.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0226.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0227.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0228.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0229.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0230.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0231.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0232.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0233.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0234.JPG		JPEG Image	548 KB	07/28/10 04:22 pm	1024 x 683
IMG_0235.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0236.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0237.JPG		JPEG Image	547 KB	07/28/10 04:22 pm	1024 x 683
IMG_0238.JPG		JPEG Image	547 KB	07/28/10 04:22 pm	1024 x 683
IMG_0239.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0240.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0241.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0242.JPG		JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0243.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0244.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0245.JPG		JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683

2.

3. Slide List (Press Tab for Timeline)

4. Timeline

5. Slide Duration

1. In Folders List window navigate to folder containing images, the thumbnails of images will appear in window below Folders List.

2. Select the first image, then drag and drop it onto the Timeline.

3. Click on the Slide Duration and set it to .06

4. Click on the Transition Effect and select Cut.

5. Click on the Transition Duration and set it to 0.

JPEG Image - IMG_0221.JPG (545.88 KB - 1024 x 683) - Showing 198 Files

4:02 PM 31/07/2010

Creating Movies Using Proshow

The screenshot displays the ProShow Producer interface. The top menu bar includes File, Edit, Project, Show, Slide, Audio, Create, Window, and Help. Below the menu is a toolbar with icons for New, Open, Save, Play, Timeline, Show Opt, Slide Opt, Styles, Layers, Effects, Captions, Music, and Create Output. The main workspace is divided into three sections: Folders List, a central table, and a Preview window.

Folders List: Shows a tree view of folders including EasyAstroCD, Movies, Presentation, SchoolImages, Software, Star_Trail_Demo, Composite, DarkFrames1024, Images1024, and Movies.

Table: A table listing image files with columns for Name, Used, Type, Size, Date Modified, and Dimensions. A red box with the number '1.' is placed over the first few rows of the table.

Name	Used	Type	Size	Date Modified	Dimensions
IMG_0221.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0222.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0223.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0224.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0225.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0226.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0227.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0228.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0229.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0230.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0231.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0232.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0233.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0234.JPG	✓	JPEG Image	548 KB	07/28/10 04:22 pm	1024 x 683
IMG_0235.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0236.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0237.JPG	✓	JPEG Image	547 KB	07/28/10 04:22 pm	1024 x 683
IMG_0238.JPG	✓	JPEG Image	547 KB	07/28/10 04:22 pm	1024 x 683
IMG_0239.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0240.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0241.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0242.JPG	✓	JPEG Image	546 KB	07/28/10 04:22 pm	1024 x 683
IMG_0243.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0244.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683
IMG_0245.JPG	✓	JPEG Image	545 KB	07/28/10 04:22 pm	1024 x 683

Slide List: A horizontal timeline showing slides 190 through 194. A red box with the number '2.' is placed over the slide list area.

Preview Window: Displays a dark landscape image with a starry sky. A play button is visible at the bottom left of the preview window.

Soundtrack: A section at the bottom of the interface for adding background music, with a prompt to 'Drop background songs here. Double click to edit.'

Taskbar: Shows the Windows taskbar with various application icons and the system tray displaying '197 Files Selected (105.18 MB) - Showing 198 Files', '4:08 PM', and '31/07/2010'.

1. Select the remaining images, and drag and drop them onto the timeline
2. Click on the play button to preview the movie.

Creating Movies Using Proshow

1.

The screenshot displays the ProShow Producer software interface. The 'Create Output' dialog box is open, showing various output formats. A red box with the number '2.' highlights the 'Video File' option. The 'Preview' window on the right shows a video slide with a landscape background. The 'Slide List' at the bottom shows a sequence of slides from 190 to 198, each with a 'cut' icon and a duration of 0.06. The 'Soundtrack' section is visible at the bottom of the slide list. The Windows taskbar at the bottom shows the system tray with the date and time: 4:16 PM, 31/07/2010.

1. Click on the Create Output Icon to open the Create Output window.

2. In the Create Output window select the output format appropriate for the display device that will be used to show the movie.

Creating Movies Using Proshow

The screenshot displays the ProShow Producer software interface. The main window is titled "Star Trail Demo" and shows a "Create Video File" dialog box in the foreground. The dialog box has a "1." in a red box next to its title bar. The "Video Preset" section shows "Type" set to "HD" and "Quality" set to "720p". The "Format Settings" section shows "Format" set to "MPEG 2" and "Compression" set to "MPEG Video". The "Display" section shows "Aspect Ratio" set to "4:3 (TV)", "Rotation" set to "No Rotation", and "Encoding" set to "Normal Quality". The "Anti-Flicker" section has "Apply anti-flicker filter to video" checked. The "Color Profile" section has "Create output for a specific ICC color profile" checked and "sRGB Color Space Profile" selected. A "2." in a red box is next to the "Create" button. The "Preview" window on the right shows a dark landscape with a star trail. Below the dialog box is a "Slide List" showing slides 190 to 198, each with a "cut" button and a duration of 0.06. The "Soundtrack" section is visible at the bottom. The Windows taskbar at the bottom shows the system tray with the date and time: 4:40 PM, 31/07/2010.

1. In the Create Video File window specify the Type, Quality and other settings.

2. Click Create.

Creating Movies Using Proshow

1. In the Save video file window navigate to the location where the file is to be saved.

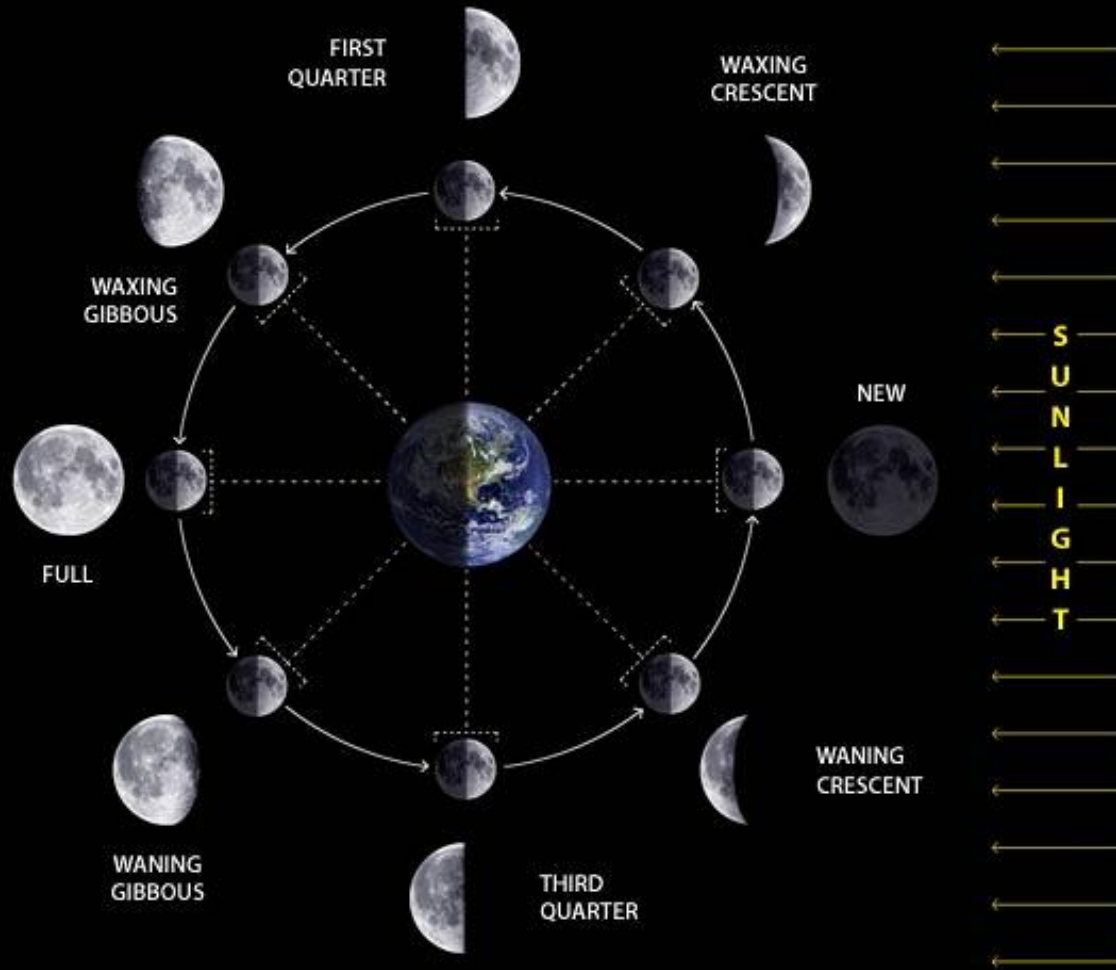
2. Specify the File Name.

3. Click Save. To render the video and save it. A rendering progress window will open and a message will be displayed when the rendering is complete.

The Moon



Moon Phases



Moon Exposure Table

ISO	f/ Stop				
100	2.8	4	5.6	8	11
200	4	5.6	8	11	16
400	5.6	8	11	16	22
800	8	11	16	22	32
1600	11	16	22	32	44
3200	16	22	32	44	64
Moon Phase	Exposure Time				
Full Moon	1/2000	1/1000	1/500	1/250	1/125
Gibbous	1/1000	1/500	1/250	1/125	1/60
First / Last Quarter	1/500	1/250	1/125	1/60	1/30
Thick Crescent	1/250	1/125	1/60	1/30	1/15
Thin Crescent	1/125	1/60	1/30	1/15	1/15
Earthshine	1/4 - 3"	1/2 - 2"	3" - 4"	2" - 8"	2" - 13"



Moon Over Gobi Desert, Jul 19, 2008, Gobi Desert Mongolia,
Canon 40D, 200 mm f/8, 1/180", ISO-800



Moon Rise Over Gobi Desert, Jul 19, 2008, Gobi Desert Mongolia,
Canon 40D, 200 mm f/9.5, 1/30", ISO-800



Moon Set over the Mediterranean, Feb 1, 2010, Tripoli Libya

Kodak DX4330, 24 mm f/4.8, 4", ISO 400



Mongolian Moon Rise, Jul 31, 2008

Canon 40D, 200mm f/6.7, 0.7",
ISO-400



Mongolian Moon Set, Aug 3, 2008

Canon 40D, 200mm f/11, 1/10",
ISO-200



Moon and Venus, Jan 20, 2007, Oak Heights

Canon 20Da, 200mm f/6.3, 1/2", ISO-800



Lunar Halo, Mar 15, 2008,

Sandy Flats,

Canon 20Da, 10 mm f/3.5, 8",
ISO-400

Painting With Light



Mongolian Ger Camp, Canon 20Da, 10mm f/3.5, 60", ISO-1600



ISS with Star Trails, Sep 12, 2009, Sandy Flats

Canon 40D, 16mm f/3.5, 60", ISO-1600, composite of 80 images



Moonlit landscapes, Aug 13, 2009, Muskoka

Canon 40D, 59 mm f/4.5, 30", ISO-1600



Observing at Sandy Flats, Apr 7, 2008, Sandy Flats

Canon 40Da, 10 mm f/3.5, 30", ISO-1600



Observing Session, Aug 31, 2008, Oak Heights

Canon 40D, 10mm f/3.5, 60", ISO-1600

Astrophotography Assignment

The Basics

1. Review your camera's instruction manual to determine if it has night landscape and/or manual mode and learn how to use these modes.
2. Using a tripod, photograph the night sky. Take several photographs with different exposures. Point the camera north, south, east and west.
3. Using a tripod, photograph the moon.

Astrophotography Assignment

The Challenge

1. Using the images and software provided create a composite star trail image.
2. Using Windows Movie Maker (or ProShow Gold) create a time-lapse movie showing the motion of the stars. Add titles and music to your movie.

Web Resources

<http://www.skynews.ca/>

<http://www.skyandtelescope.com/>

<http://www.heavens-above.com/>

<http://www.nyaa.ca/>

Astrophotography Contest



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Astrophotography Contest

Shoot the Stars

The night sky in Lennox and Addington County is so pristine that it offers the best area in southern Ontario to stargaze...and to shoot the night sky! In partnership with the Napanee Photo Club, Lennox and Addington County is holding its first photo contest to capture the beauty of our night skies. Whether you are an amateur or professional photographer, we invite you to join us for this unique experience.

Register now for this free event to have a chance of winning one of three prizes – First - \$250 Second - \$125 and Third - \$75.

Award winners will have their photos displayed at the Lennox and Addington County Museum and will be featured on Lennox and Addington County and Napanee Photo Club's web sites. There will be a 'best show' recognition award as well.

What: Photo contest open to all photographers – amateurs, hobbyists and professionals alike – and features a workshop by Terence Dickinson on how best to capture the beauty of the night sky. Following this tutorial, participants will be driven to one of the best locations north of Napanee to put their knowledge to work.

When: Wednesday, September 15, 2010 commencing at 6:30pm with a reception followed by Mr. Dickinson's tutorial and field shoot.

Where: Workshop held at the Smiling Wilderness Restaurant Banquet Hall (824 Palace Rd/Hwy 401). Participants will receive a comprehensive tool kit outlining submission requirements, timelines and award structure.



Please RSVP for this event by contacting Rob Plumley at 613-354-4883 ext. 271 or rplumley@lennox-addington.on.ca. Space is limited so please register now.