

# ADV File Format

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# Video File Format Considerations

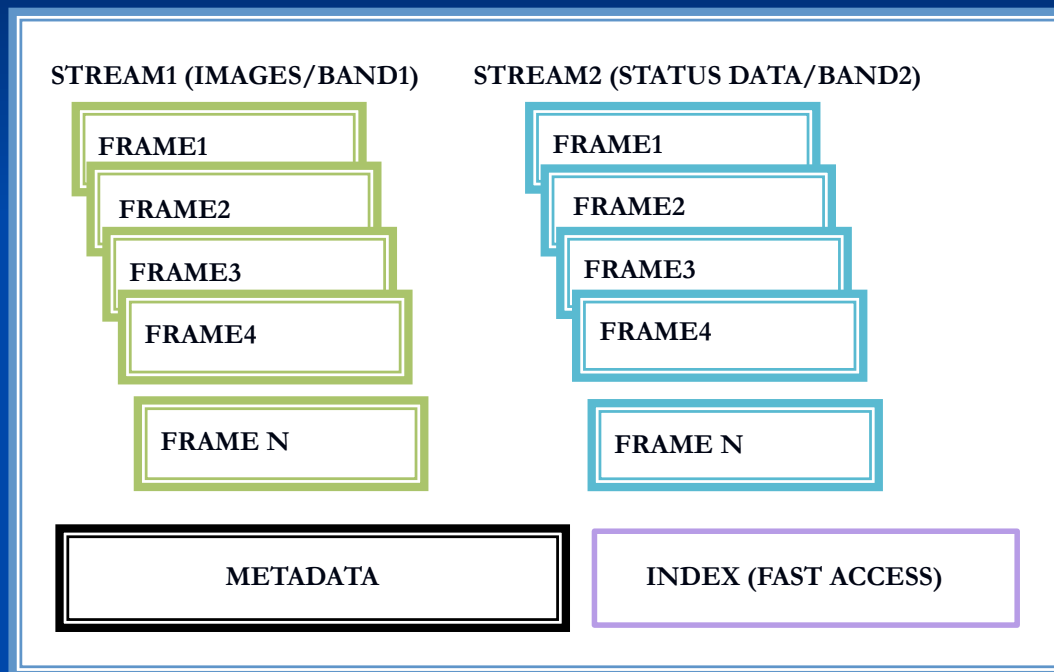
- Minimize file size as possible
- Single video file
- Power-off tolerant
- Data corruption tolerant + allow recovery
- Extensible
- Allow user data storage (during and post reduction)
- Open format with free libraries to read/write

# ADV File Format

## FITS



## ADV



## Astro Digital Video (ADV) File Structure



<http://www.astrodigitalvideo.com.au/CurrentADVFileFormat.pdf>

# ADV Status Stream



1. GAIN
2. GAMMA
3. OFFSET (BRIGHTNESS)



4. SYSTEM TIME
5. ADVR SYSTEM MESSAGES



6. TIMESTAMP
7. EXPOSURE
8. TRACKED SATELLITES
9. GPS FIX STATUS

# Read by Tangra 3

The screenshot displays the Tangra v2.0 software interface. The main window shows a star field with a white crosshair in the center. A smaller inset window on the right shows a zoomed-in view of a star with a white circle around it. The interface includes a menu bar (File, Frame Actions, Video Actions, Tools, Add-ins, Settings, Help), a toolbar, and a status bar at the bottom. The status bar shows "Ready", "Gamma = 1.00", "Frame: 0", and "ADV".

**ADV State Channel**

Tracked Satellites: 5  
Almanac Status: Uncertain  
GPS Fix: G Fix

Central Exposure Time: 30 Dec 2011 11:20:09.282  
Exposure Duration: 1283 ms

Gamma: 1.000  
Gain: 24.00 dB  
Offset: 0.00 %

Copy

Add Object

Measuring: 0 targets

- Move to the first frame you want to measure  
- Select your first target

Reset Start

Signal Method: Numerical Psf Photometry  
Background Method: Average Background


-10sec -1sec -1Fr [Play] [Stop] 1Fr+ 1sec+ 10sec+ Jump To

Ready Gamma = 1.00 Frame: 0 ADV

# ADV Viewer - Tangra

ADV Viewer

File Metadata | Summary | **Frames** | Tools



Start Exposure: 30 Dec 2011 11:20:08.000  
End Exposure: 30 Dec 2011 11:20:09.282  
Exposure: 1282.7 ms (1 fps)

Number of Sattelites: 5

Gamma: 1.000  
Gain: 24.00 dB  
Offset: 0.00 %

System Time: 30-Dec-2011 11:20:15.694  
Layout: #2 - KeyFrameBytes

Name	Value
GPSAlmanacStatus	0
GPSFixStatus	1
Gain	24.00 dB
Shutter	1.3 ms
Offset	0.00 %
Gamma	1.000
UserCommand[1]	Frame rate changed to 2 sec per frame

Frame 0 of 4

- ADV (ver1) - Open source C++ and C# libraries available to record in ADV format  
<https://github.com/AstroDigitalVideo/ADVLib>
- ADV (ver1) - Already supported by other recording software
  - Genika Trigger
  - Hostenstein's High Speed Video Recorder
- New ADV version 2 being developed
  - Lagarith16 lossless compression
  - More powerful and extensible
  - Larger development group

Questions?