Cinematic VR

What follows

- Introduction
- Pre-production
- Production
- Post-production
- Conclusion

Introduction



Cinematic VR

- 360-degree video and ambisonic audio; audio accounts for 50% experience
- 360 camera captures the visual spherical field of human awareness
- Ambisonic mic records sound field; can be decoded to binaural audio
- Most 360 cameras record in 2D & No spatial audio
- More Senses = More Presence



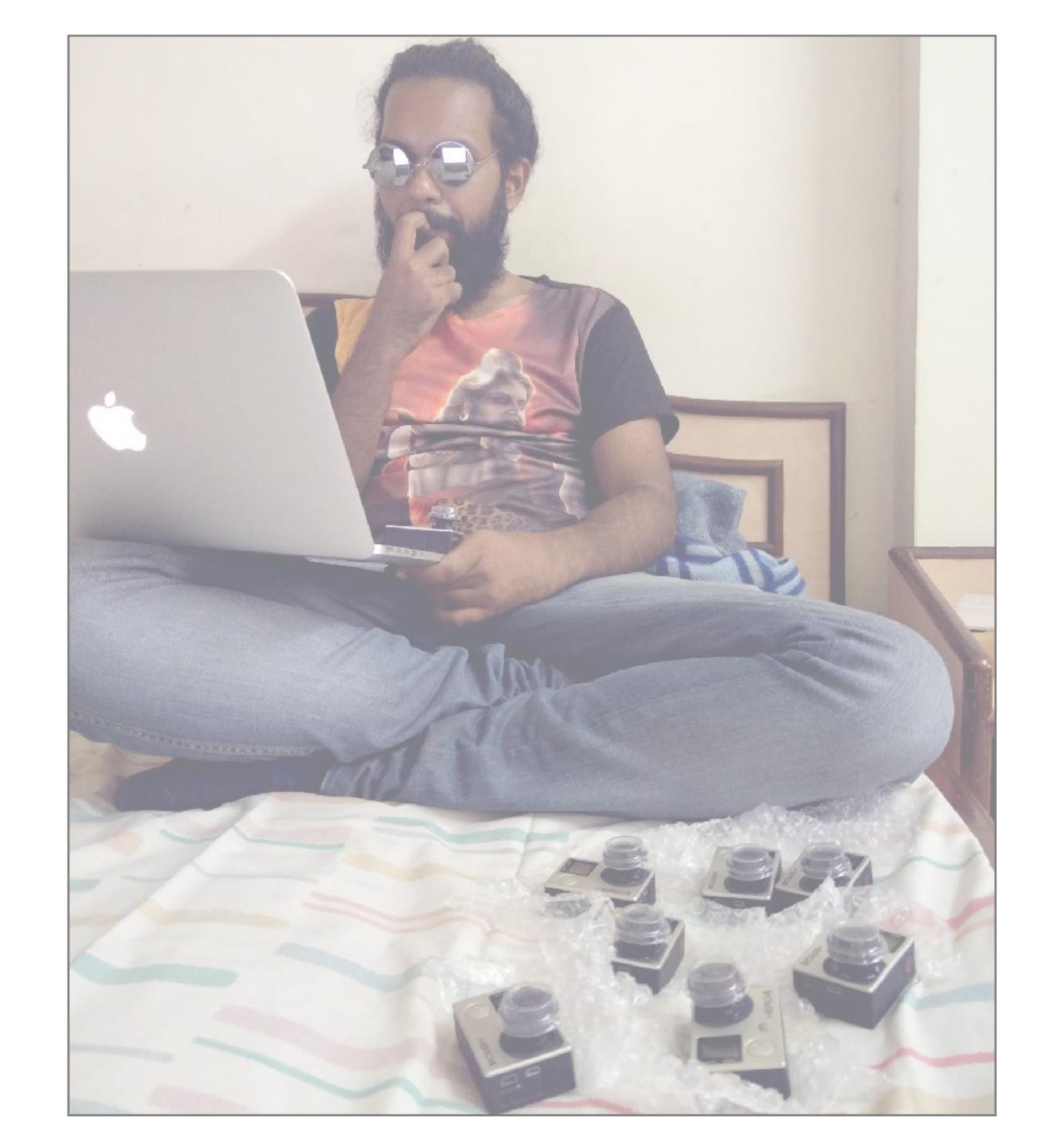
Simhasth: Kumbh Mela

- To learn live action
- Do you have a project?
- Going to Kumbh Mela and make something on Sādhus
- Reunion of Sādhus from all sects
- Largest gathering of people on Earth
- Some or no perceptions



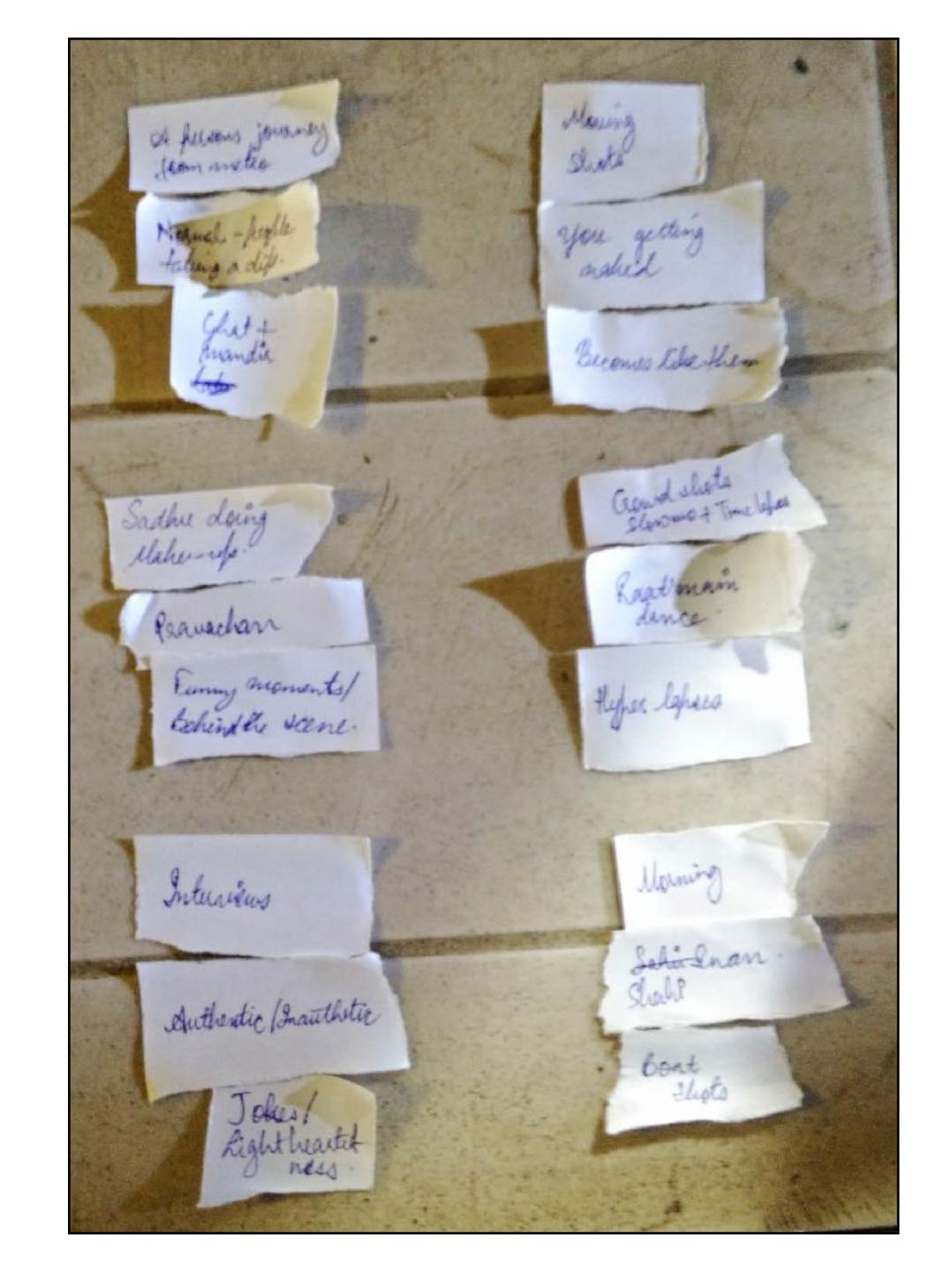


Pre-production



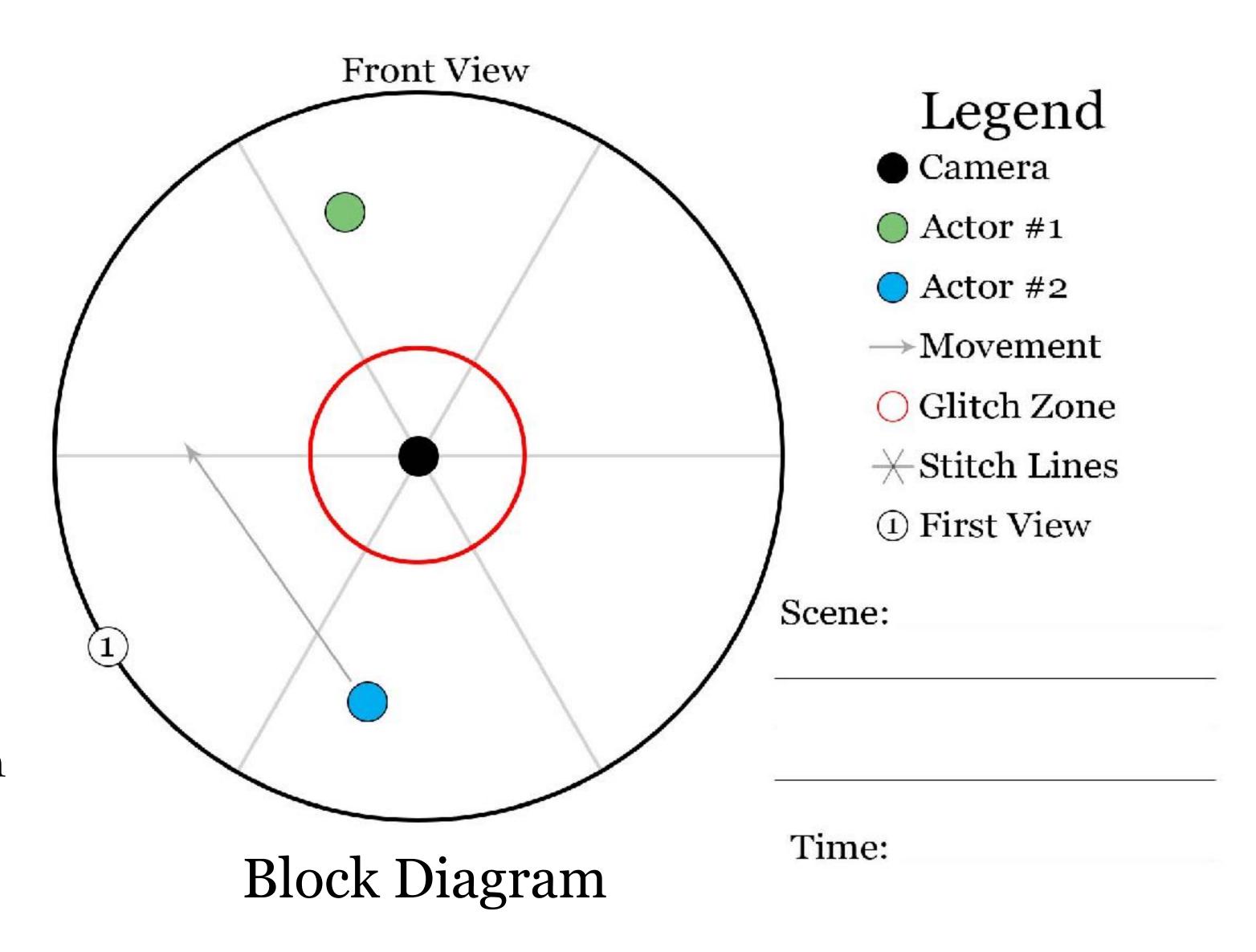
Scripting

- No Frames
- Describe entire scene
- Longer scene
- Here: Just guidelines
- Structure to follow
- Improvise



Planning

- Studio Anugraha
- Detailed scene description
- Block Diagrams
- Minimise Stitch lines
- Hiding places for crew
- Soundscape and Light Plan



Pre-check

- Use Identical Hardware
- SD cards: same brand and capacity
- Don't mix GoPro versions
- Number Hardware: Mark GoPros and SD cards
- Stereo: Left eye Uneven, right eye Even



Preparation saves work

- Configure Software: GoPro Studio
- Rename cams
- Format SD cards
- Configure GoPros
- Pair with Remote
- Charge!



Production



Shooting

Test

- Turn on WiFi
- Check settings and files
- Record with remote

Record

- Record audio + cams
- Check if all cams are running
- Mention take number

Sync

- Motion sync by moving cam head
- Audio sync with some claps
- Hide!

Done

- Shout 'cut'
- Check if all cams have recorded
- Note Unusable takes

Troubleshooting

- Always carry spare parts: Cameras, batteries, SD cards etc.
- Overheating: Biggest problem
 - Reset cam with power button or battery
 - Limit length of takes to 3mins
 - Power off rig after each take
 - Cool: Turn on fan
 - Replace malfunctioning GoPros

File Management

- Storage
 - Lot of data coming from the rig
 - One shoot can be over 1TB
 - Serious storage capacity is needed
- Organise files for easy stitching
- Rename to include camera name
- Organise into take folders

Breakdowns

- Destroyed footage: Over heating, Blur lens,
 One camera shut down, Threat by Sādhus
- Logistical issues: Entry, Timings, Permissions for Shoot and Equipment
- Health / Hygiene issues
- Re-visit
- Experience not Documentary
- Negative Self Judgment
- Existential Crisis

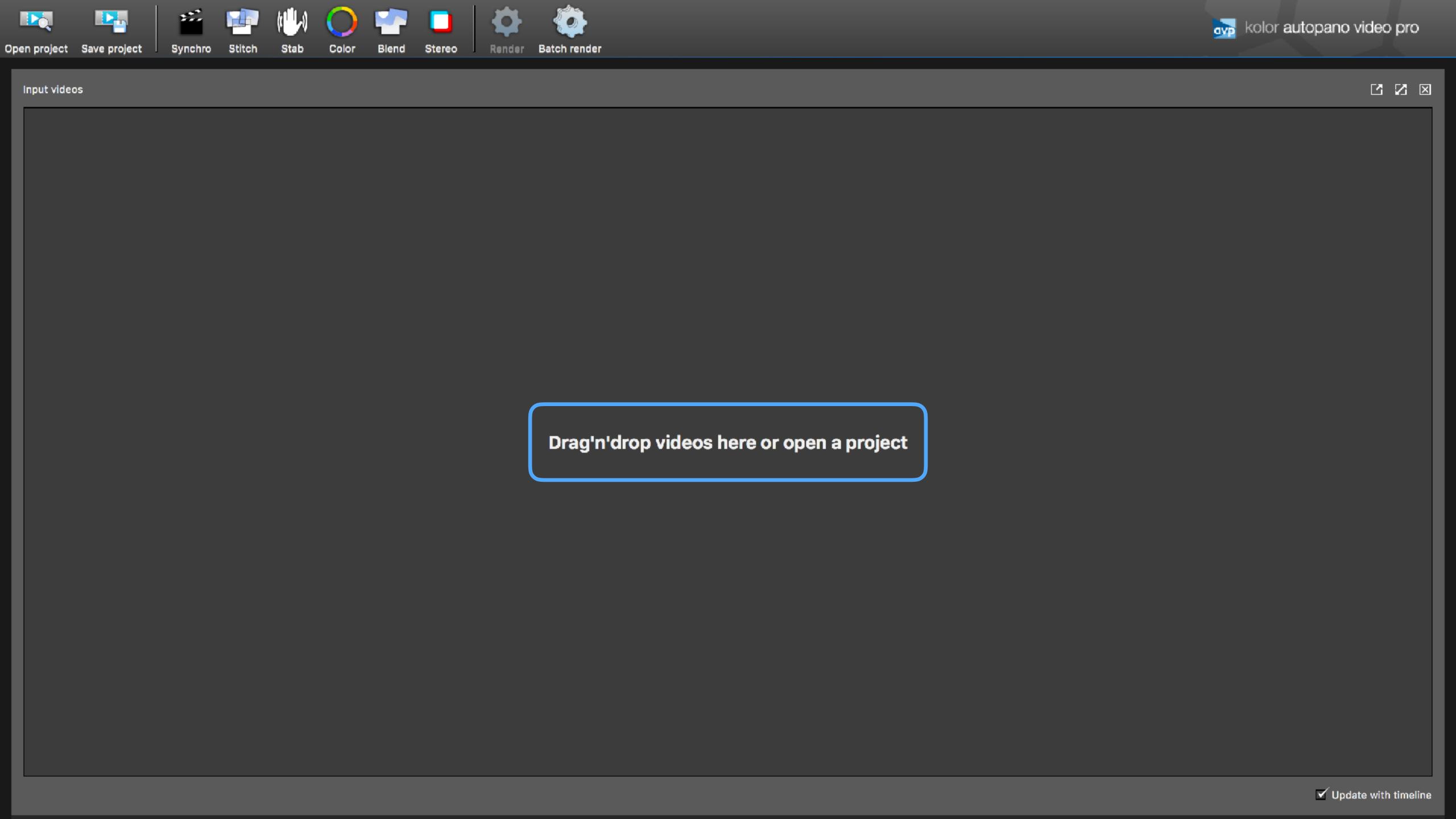
Post-production

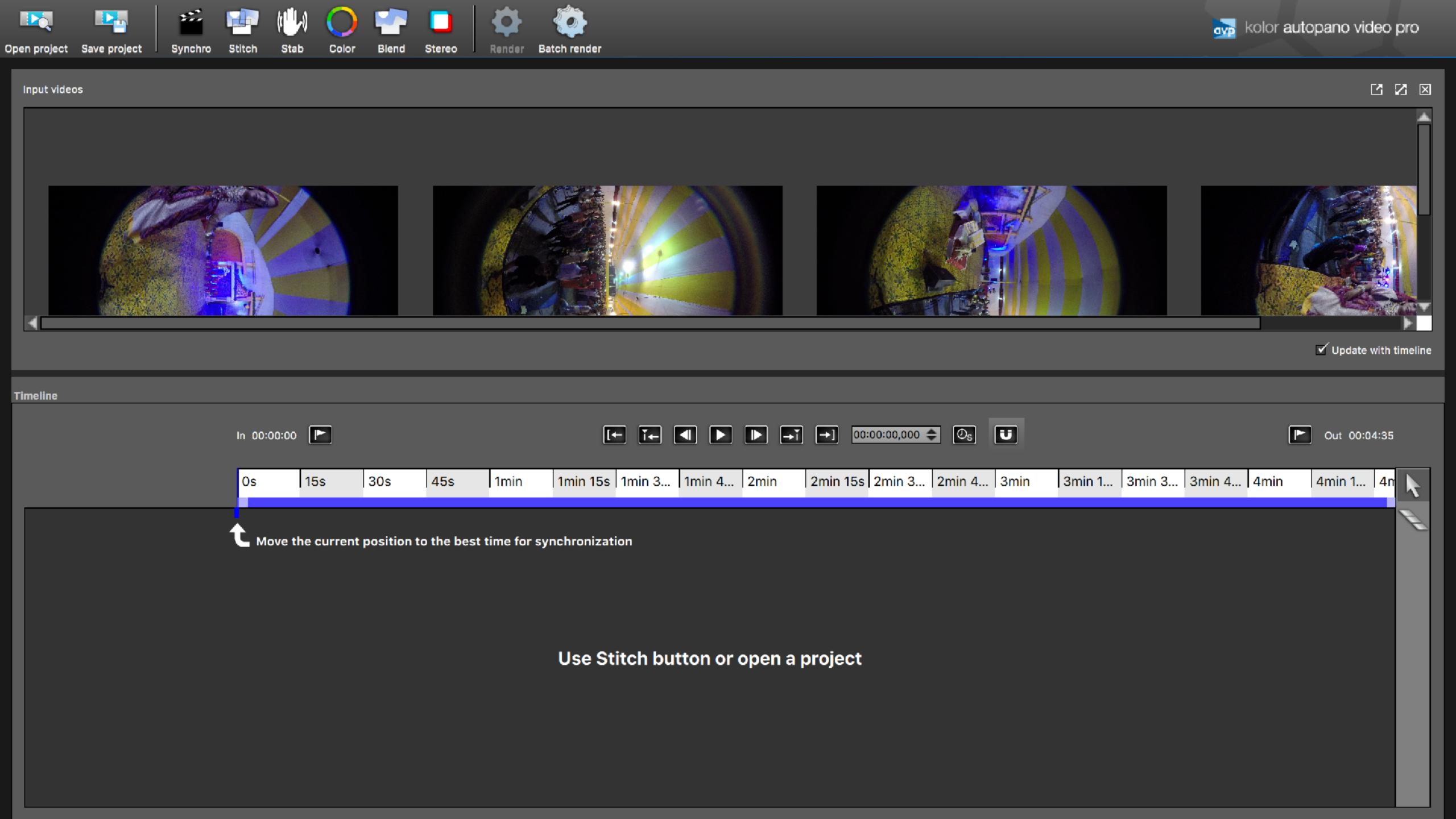


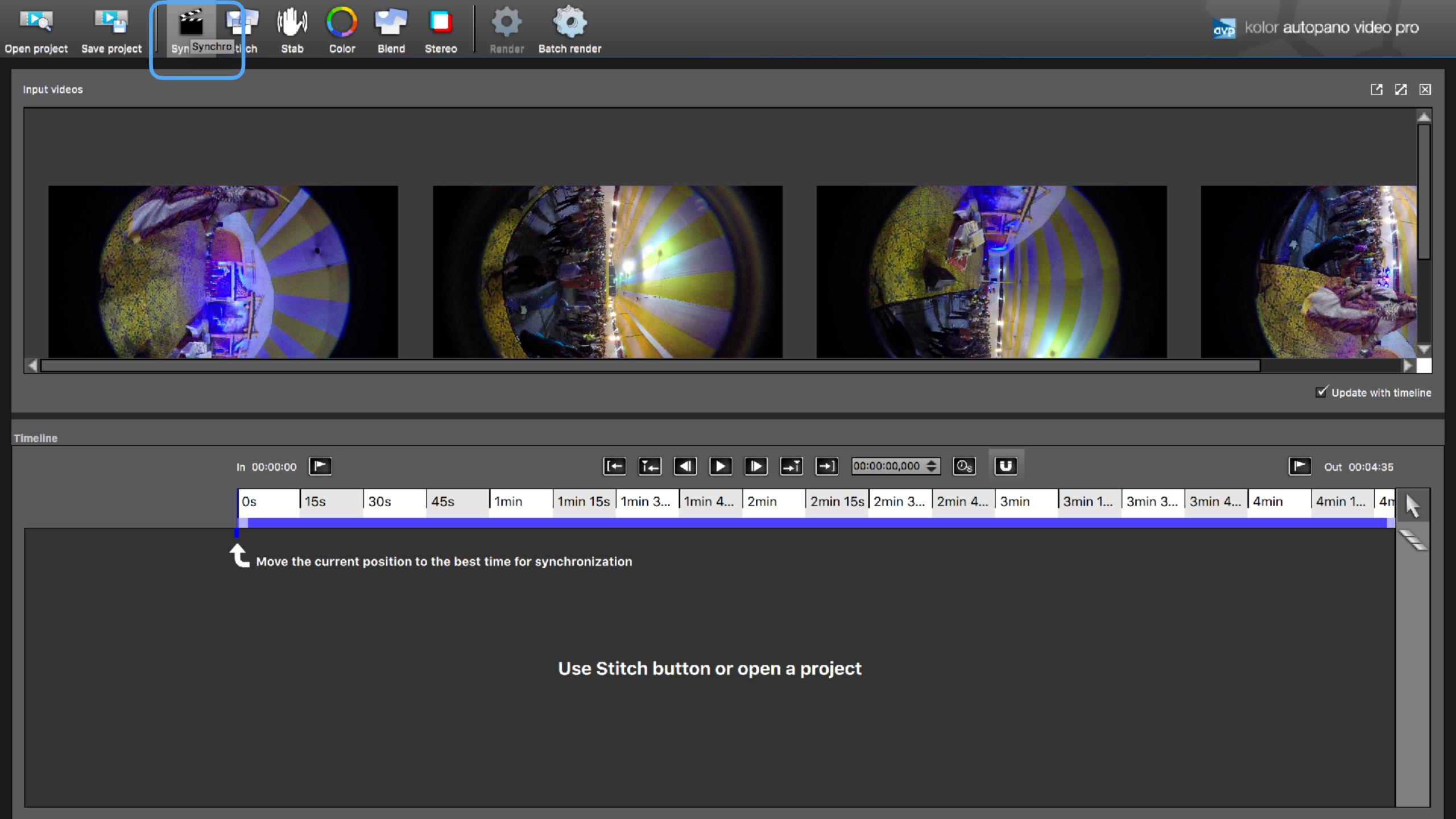
Craft of Stitching

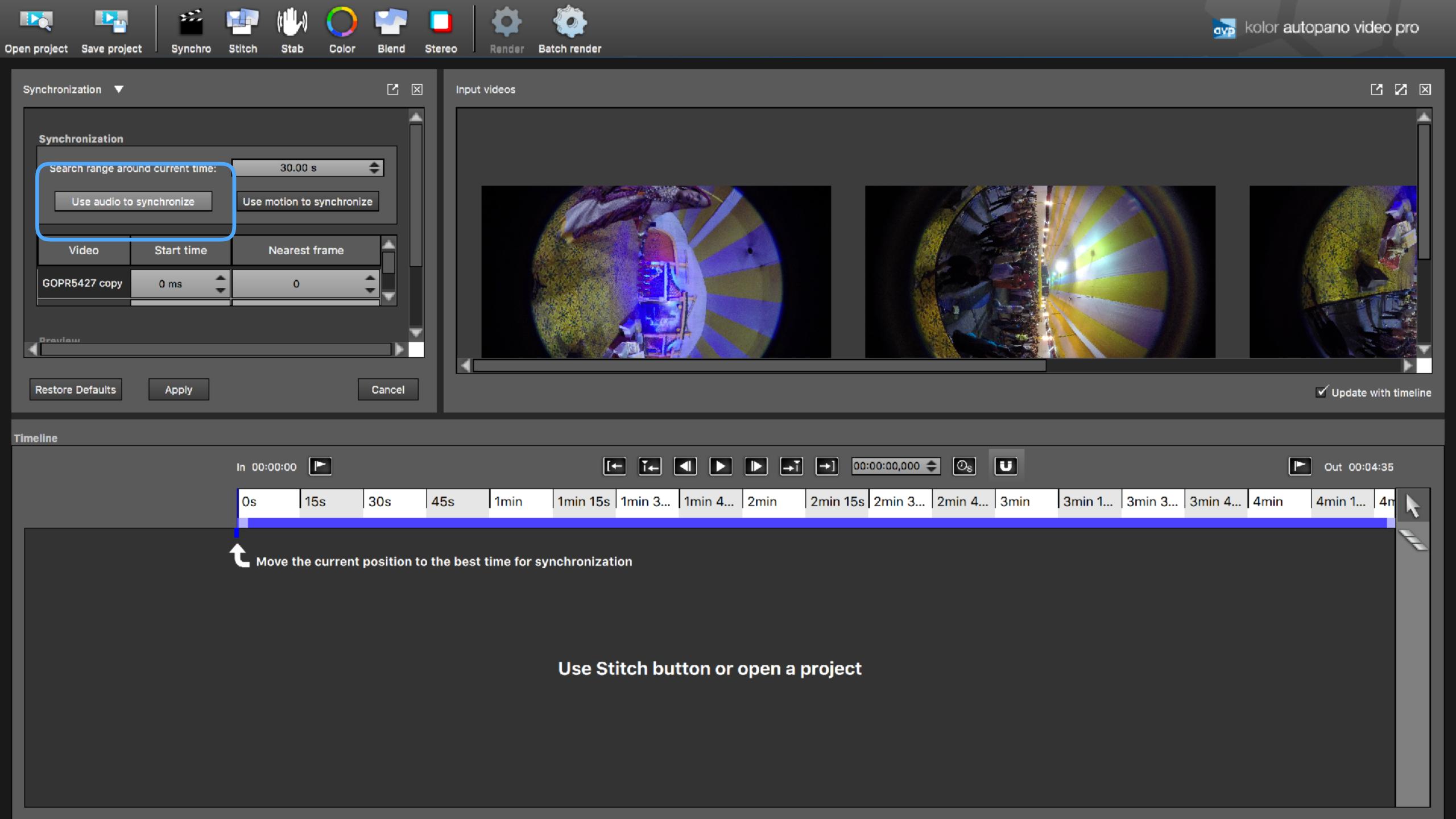
- Colour mark (Tag) takes to stitch
- Stitching Software: Autopano Video Pro
- Drag n Drop files
- Use audio to synchronise
- Stitch as GoPro or lens that is used
- Edit pano in Autopano Giga
- Rotate and strengthen horizon

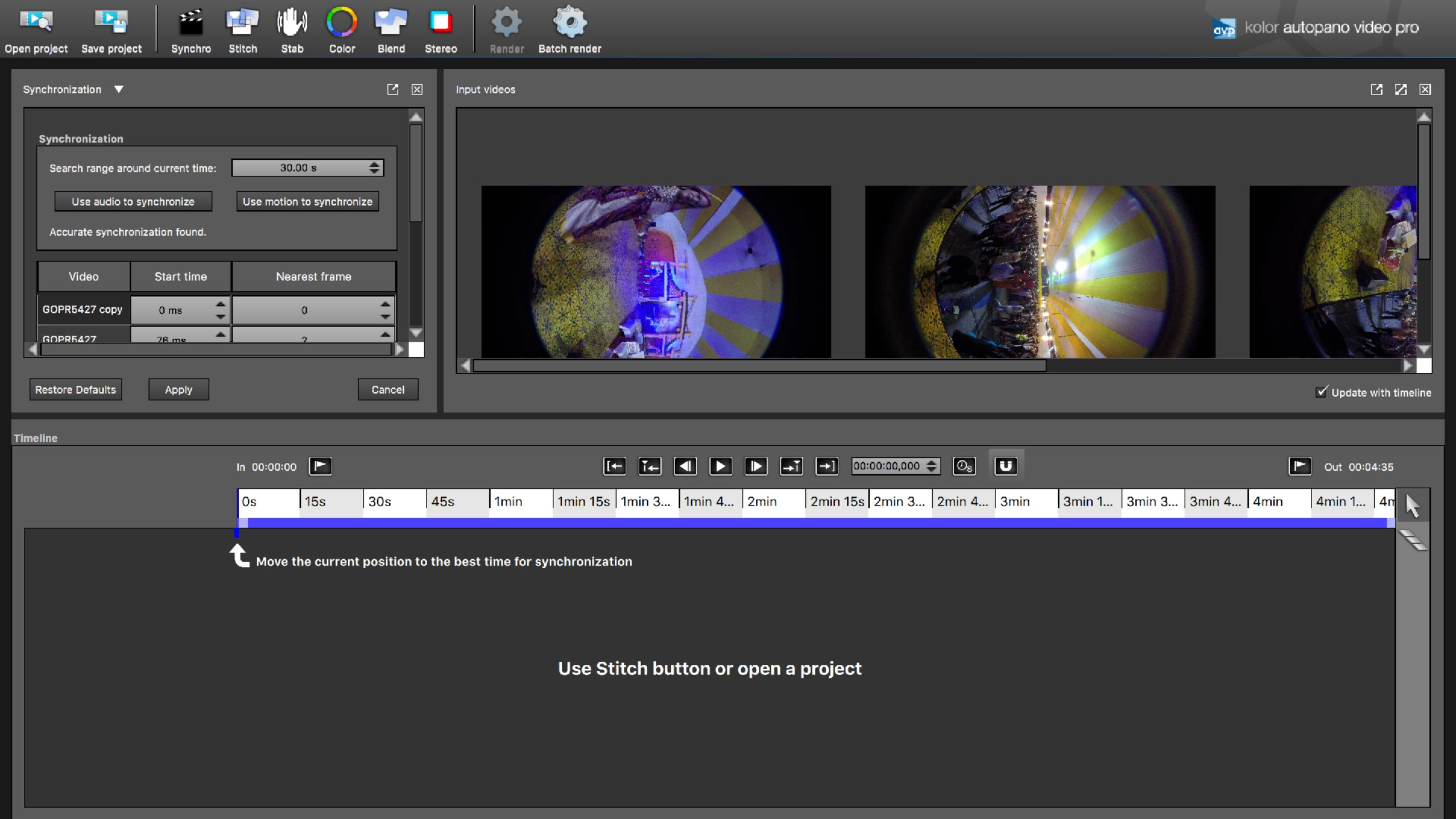
- Use markers to make selection
- Grey, orange, blue, Green
- Uncompressed 3840x1920 @ 60fps
- Add to batch renderer

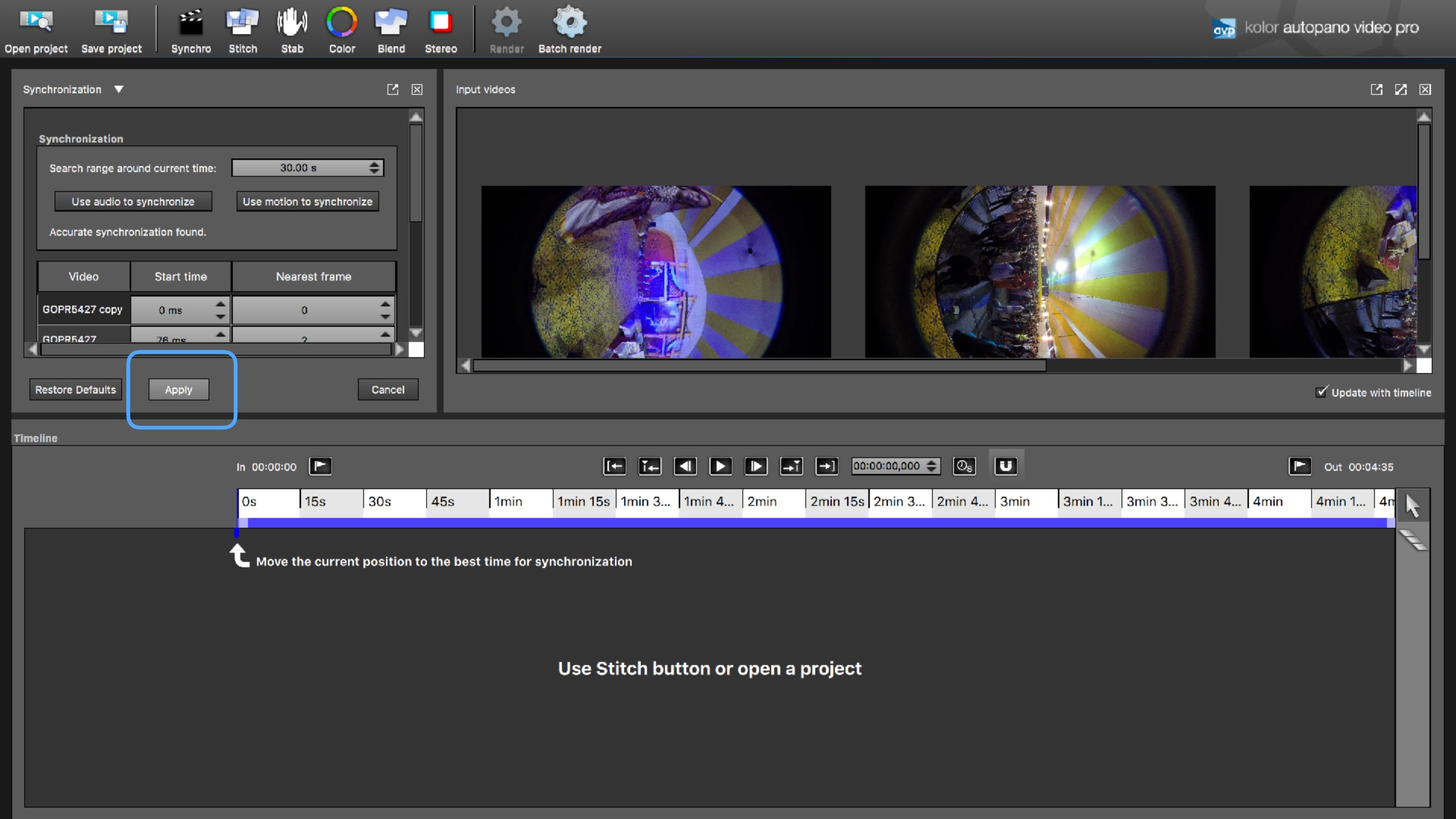


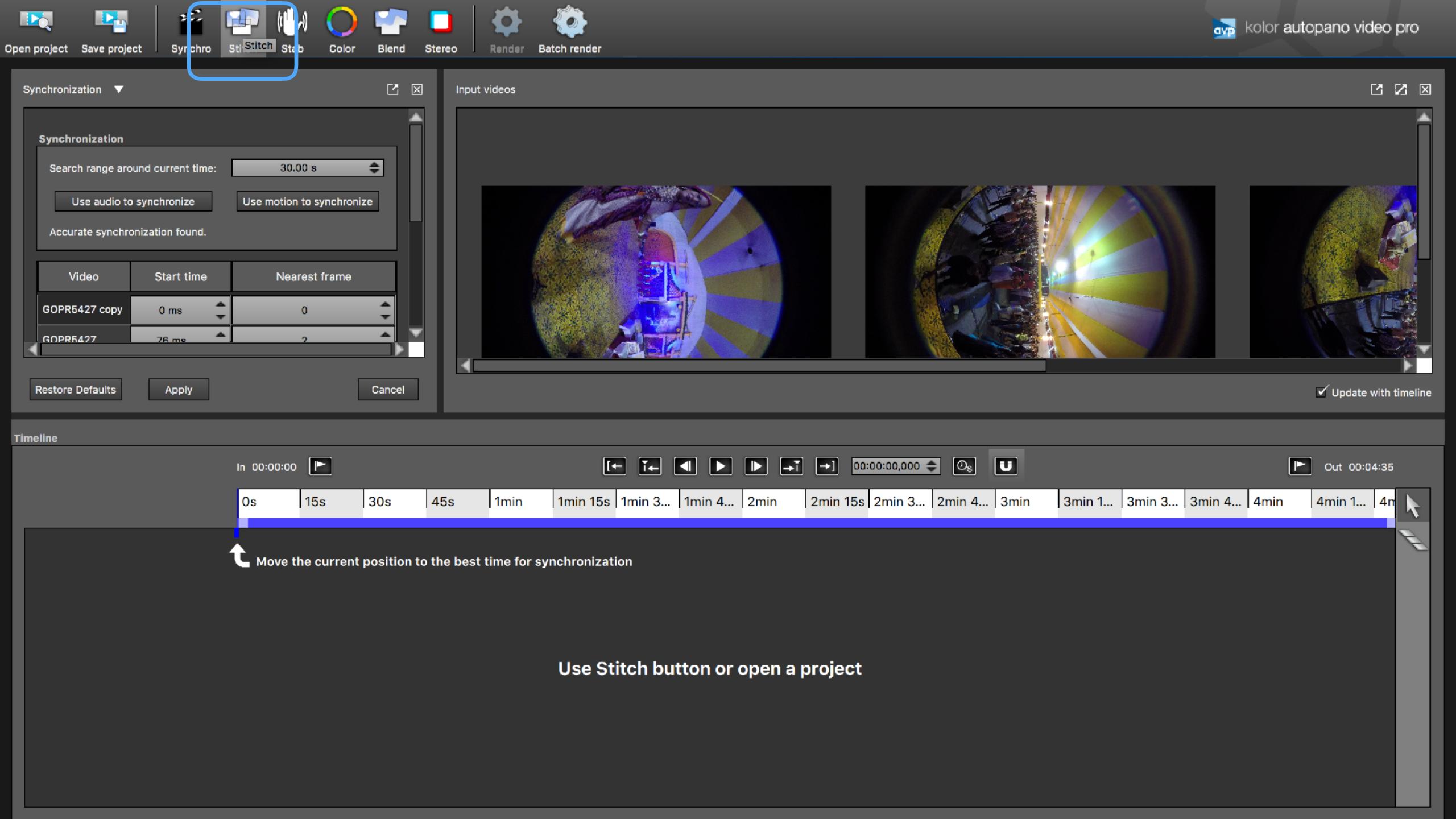


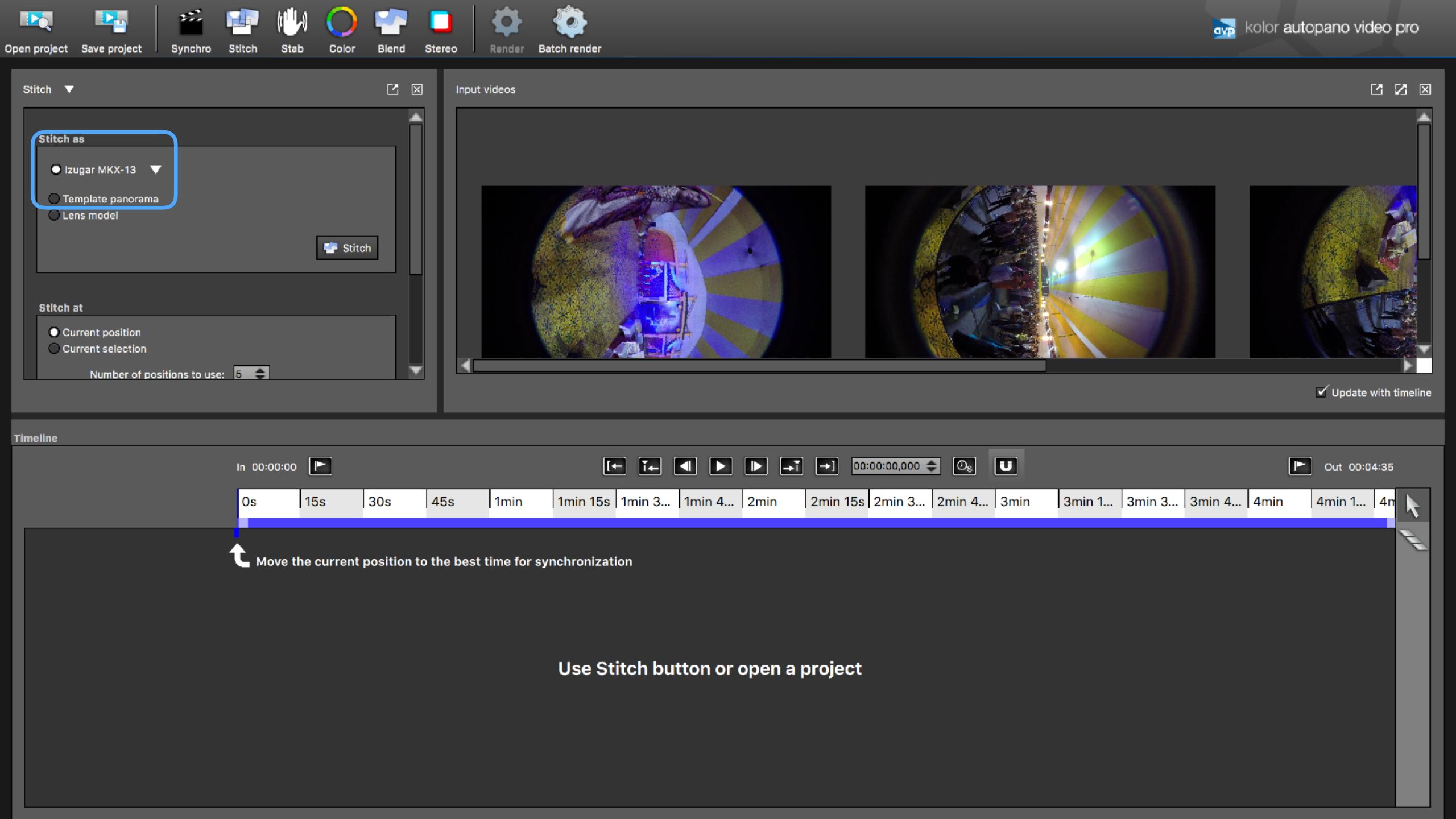


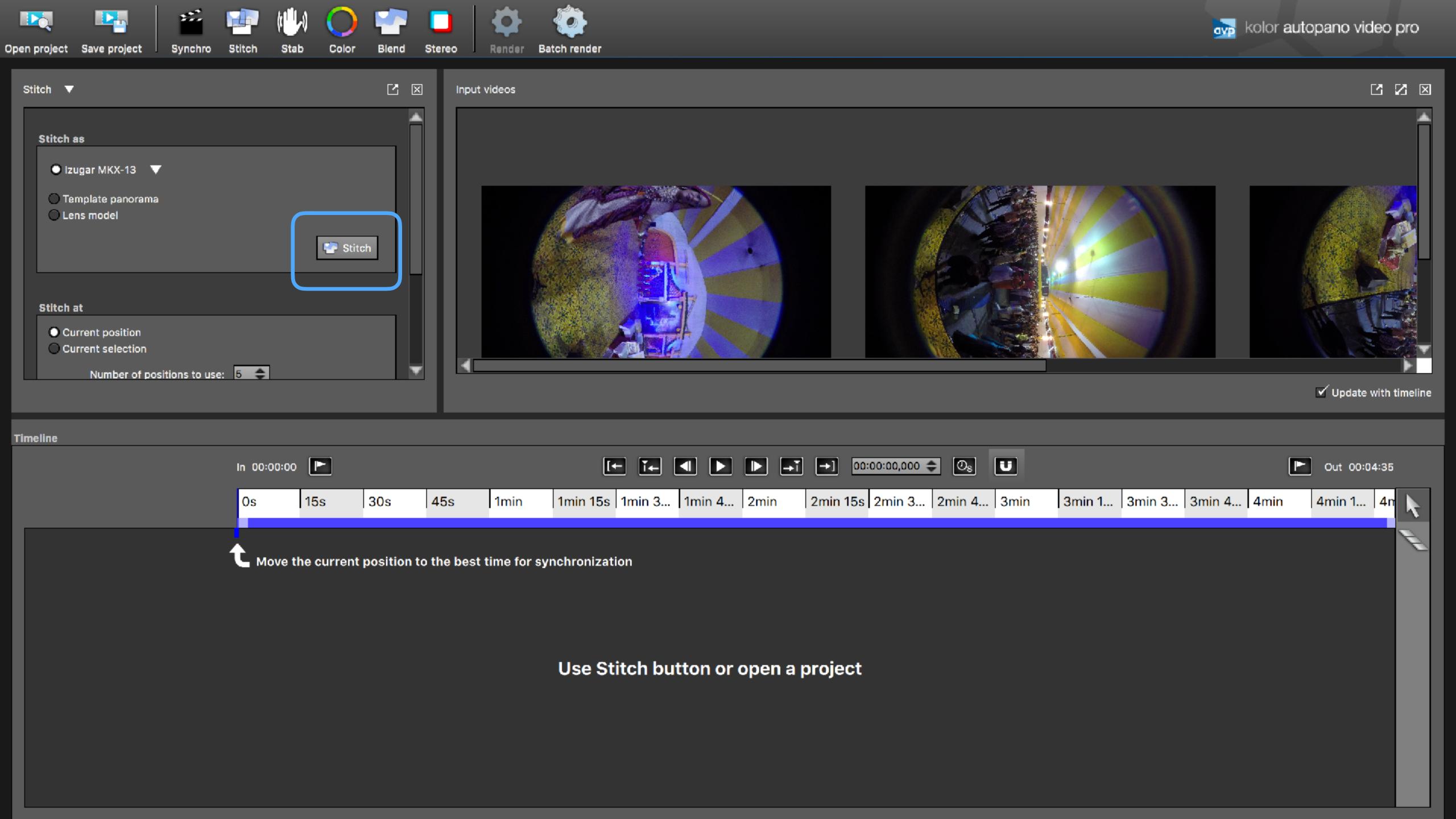


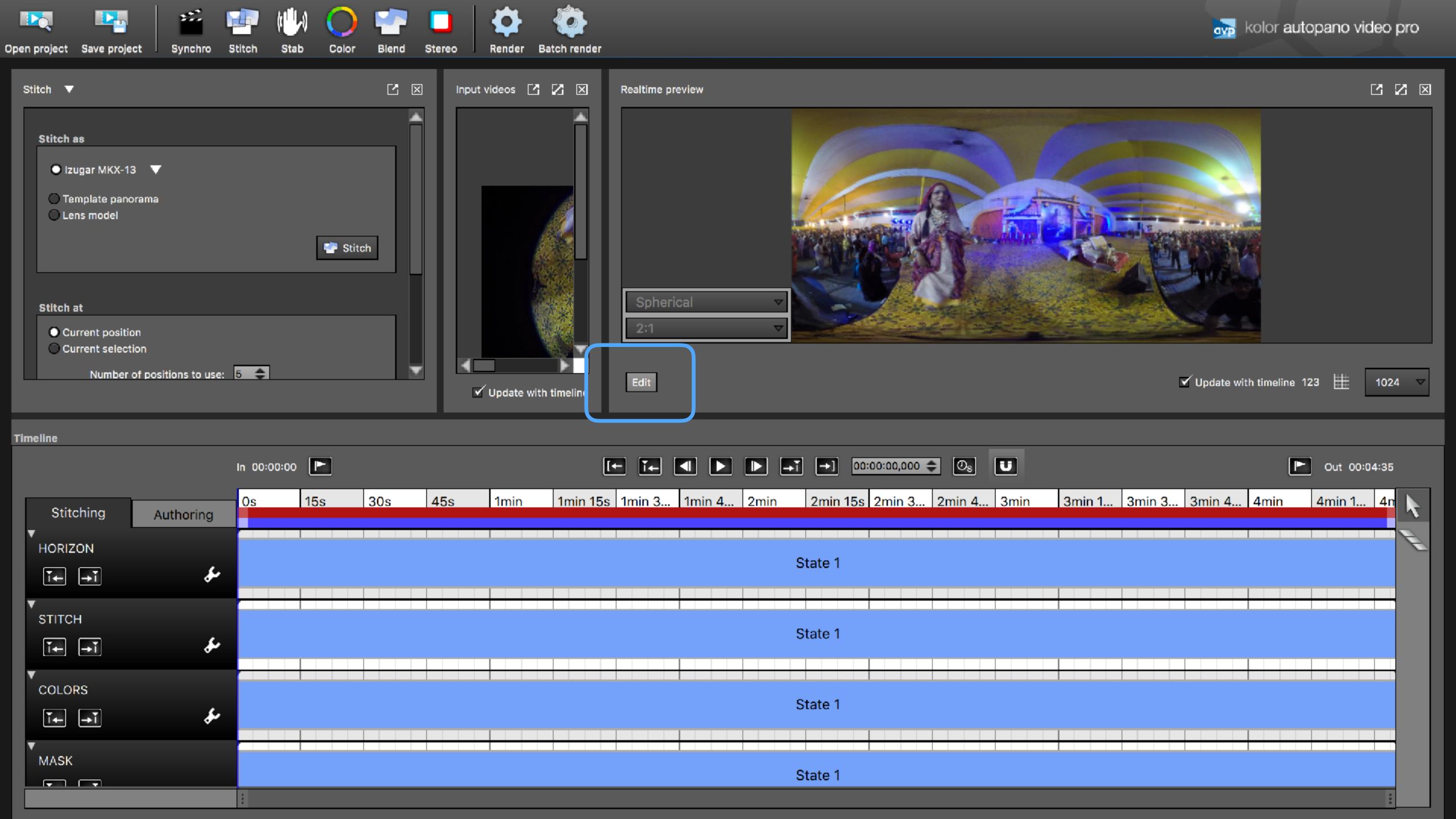


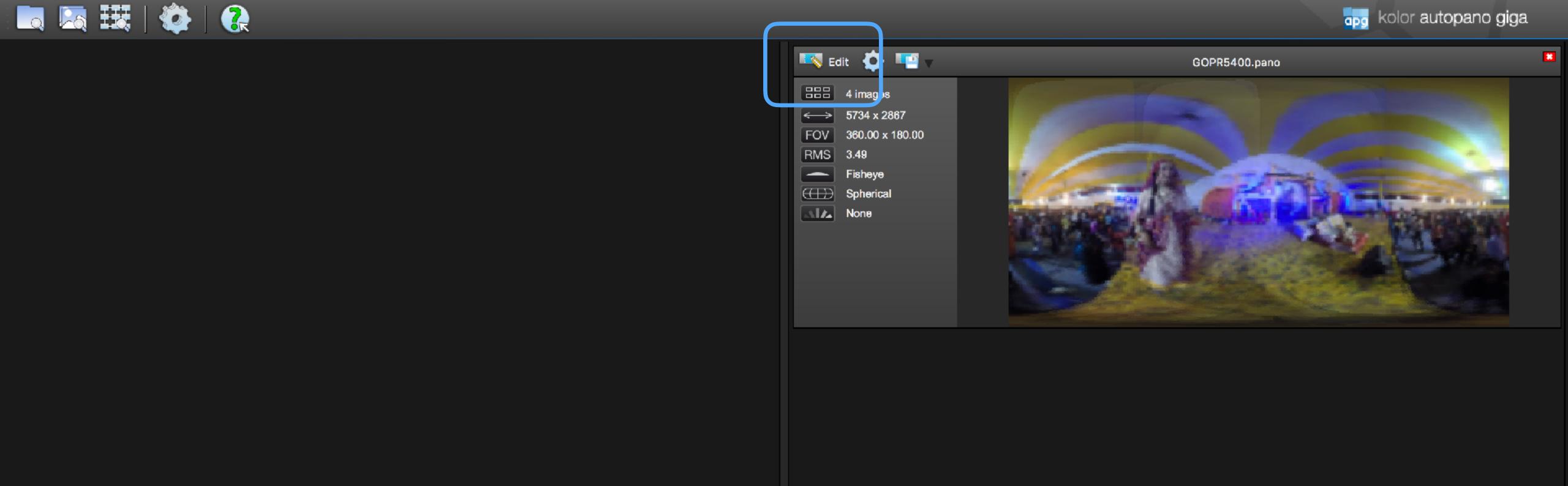




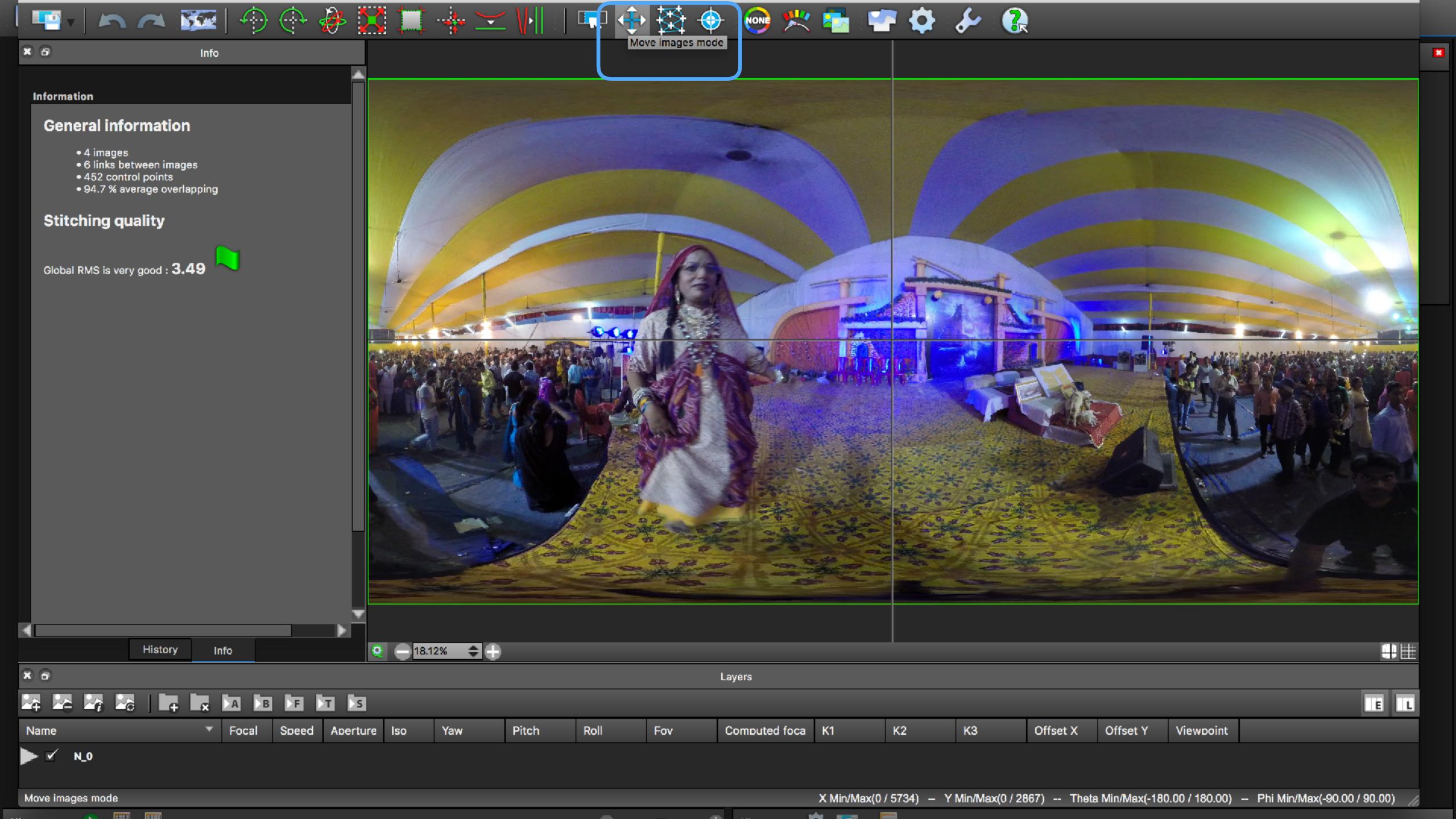


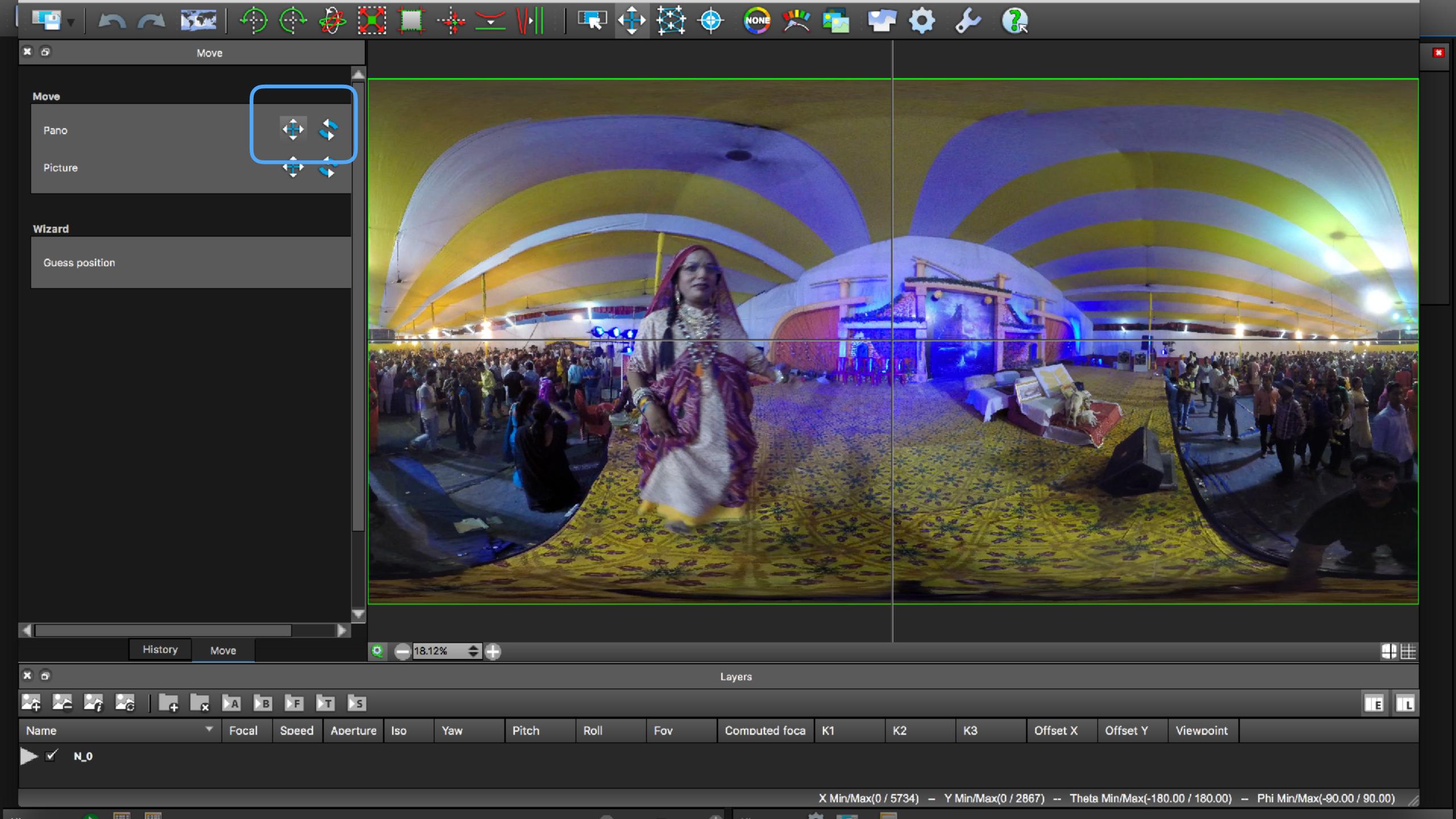






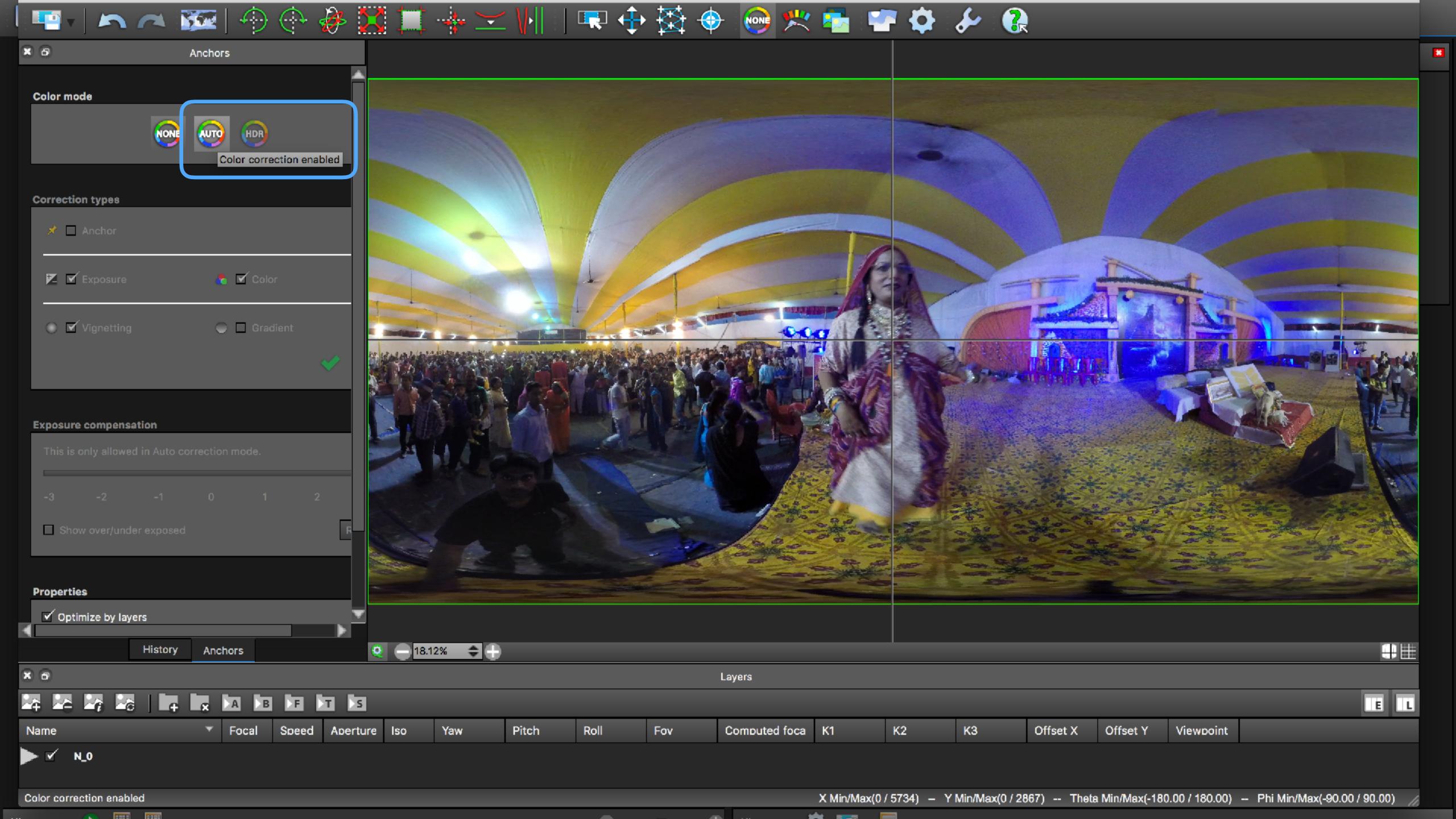




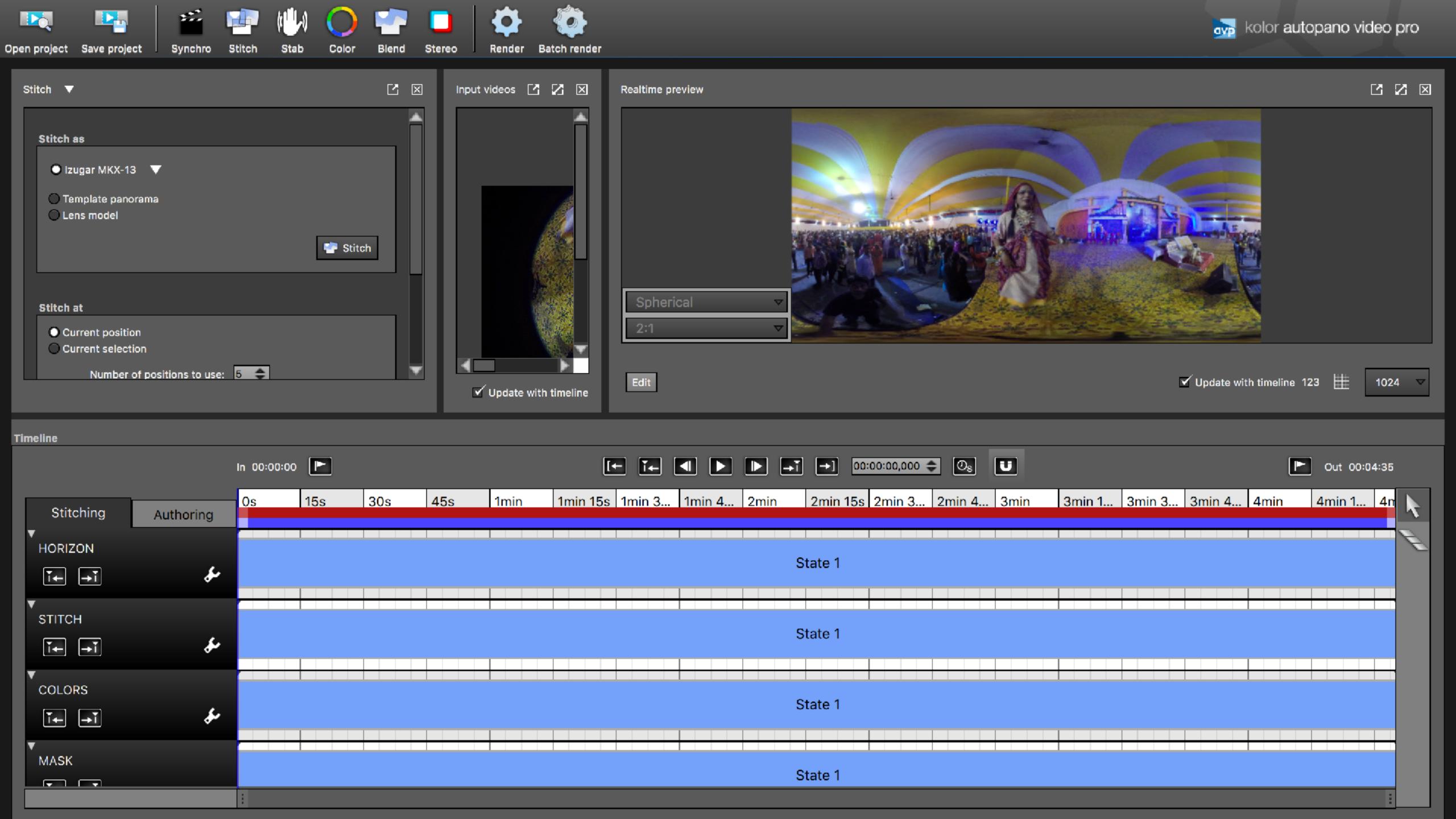


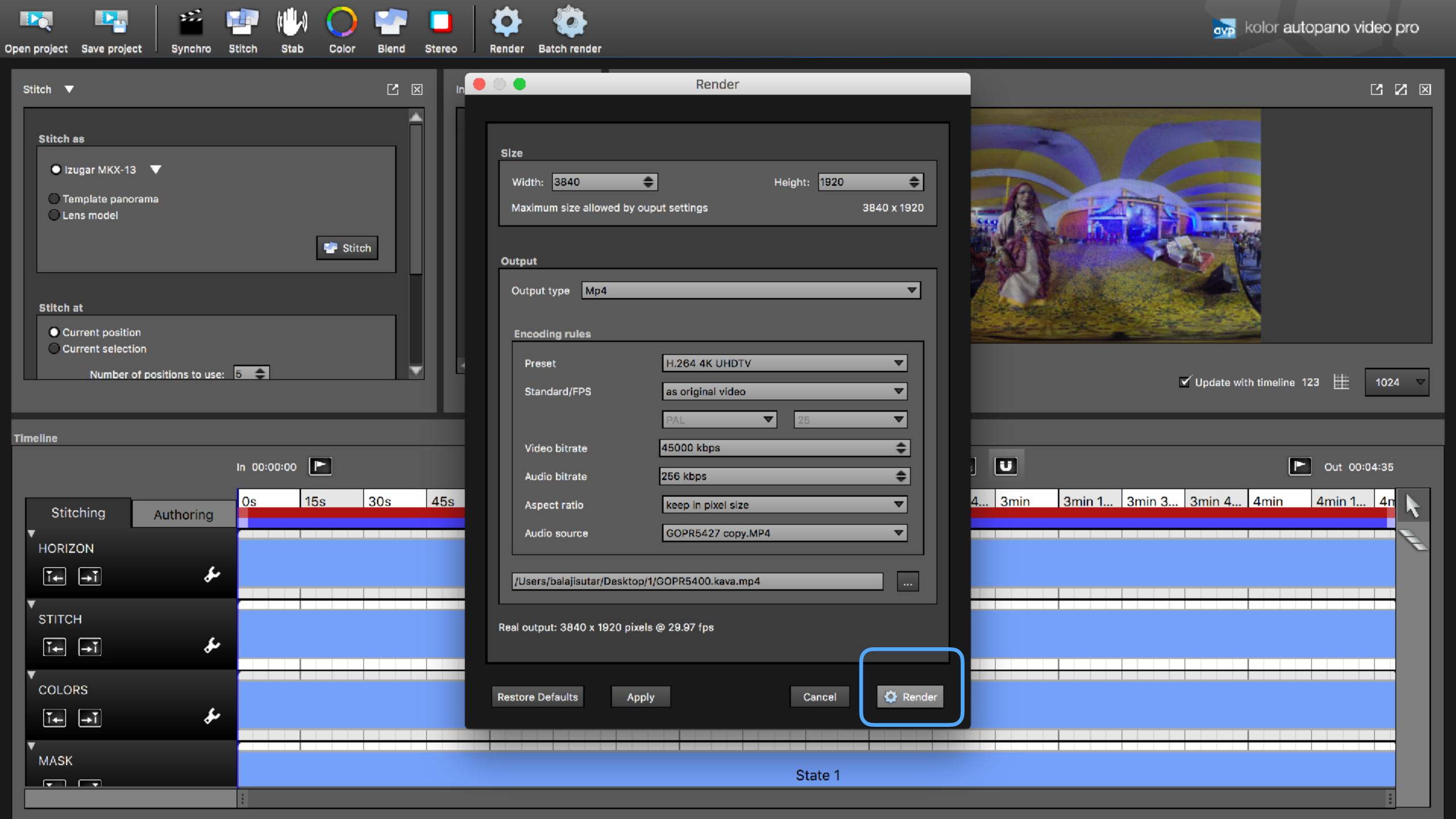


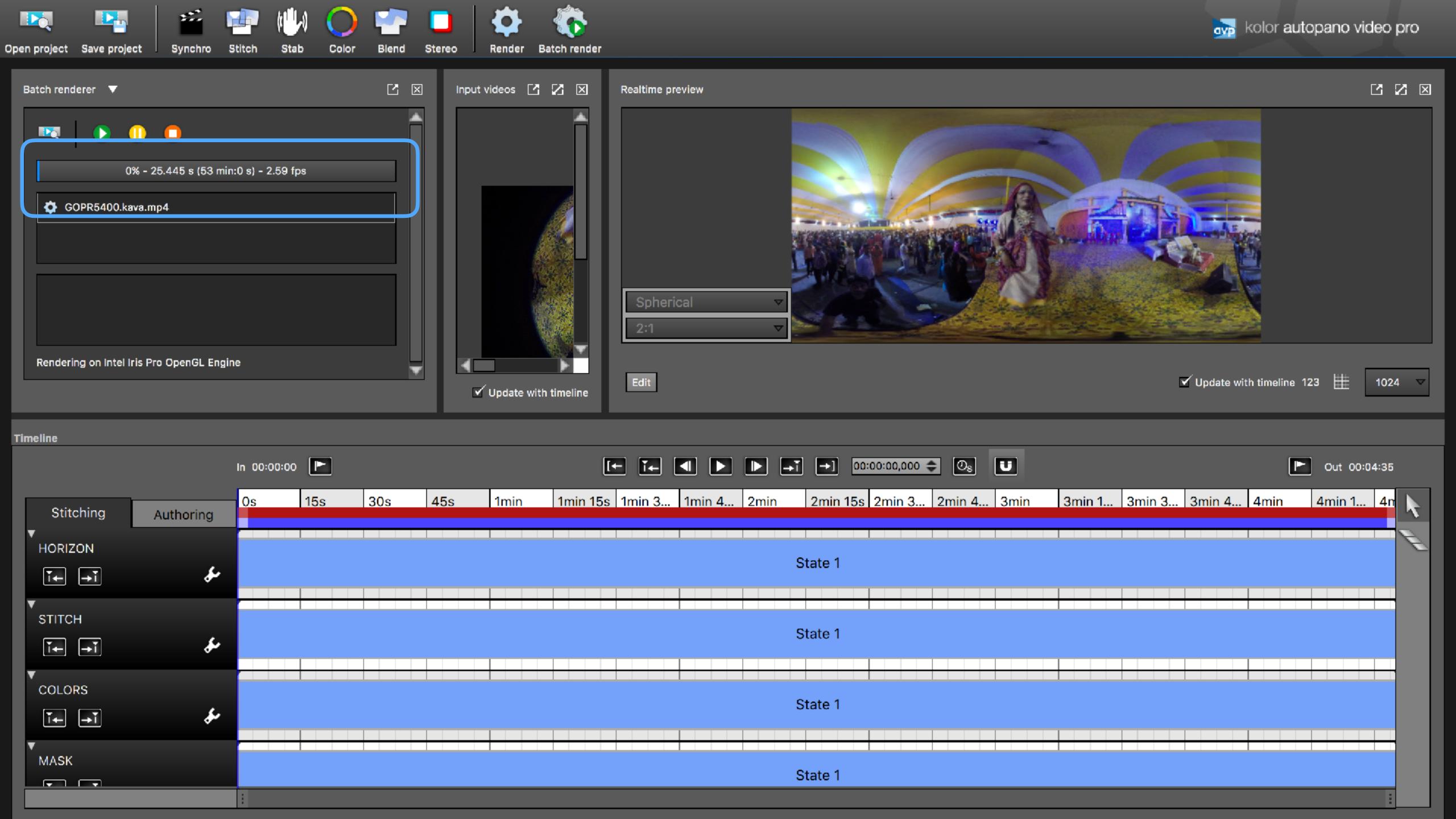












Experience?

- What is the experience we want you to have?
- How would it occur?
- What's unique about it?
- Culture Shock?
- Experience of a fair, world, journey, life
- Exciting Exhaustive Overwhelming -Purposeful - Challenging and Rewarding -Empty and Meaningless
- All of it?

Experience(s)

Objective: Closed contexts

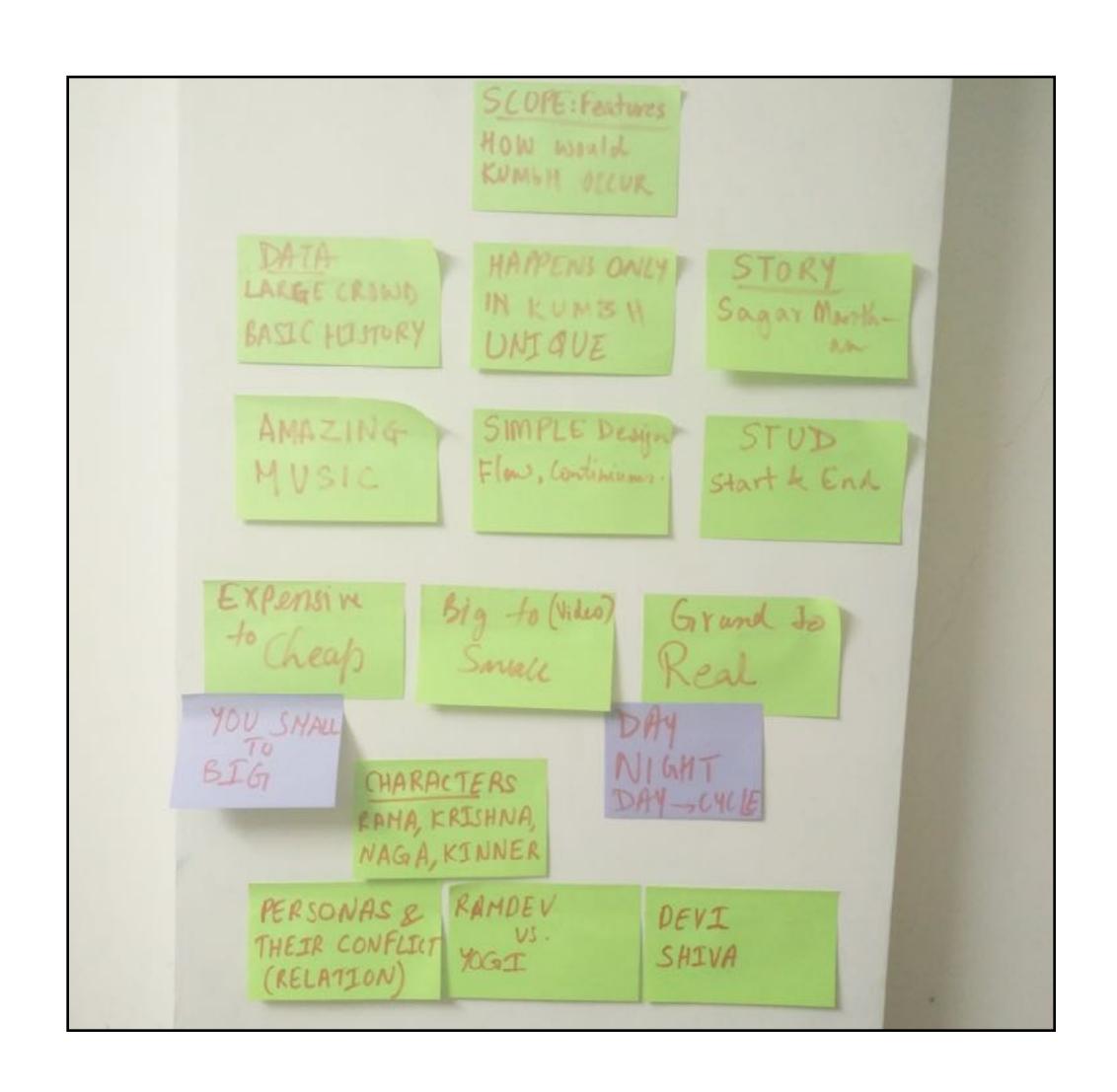
- A lost child
- A friend in a group
- TV news report
- Normative judgements

Subjective: Open to experience

- You and that which is not you
- Sādhu(s) and his transformation
- People and their nature
- You, people and the Sādhu
- It's your experience
- Take what you get, don't take what you don't get

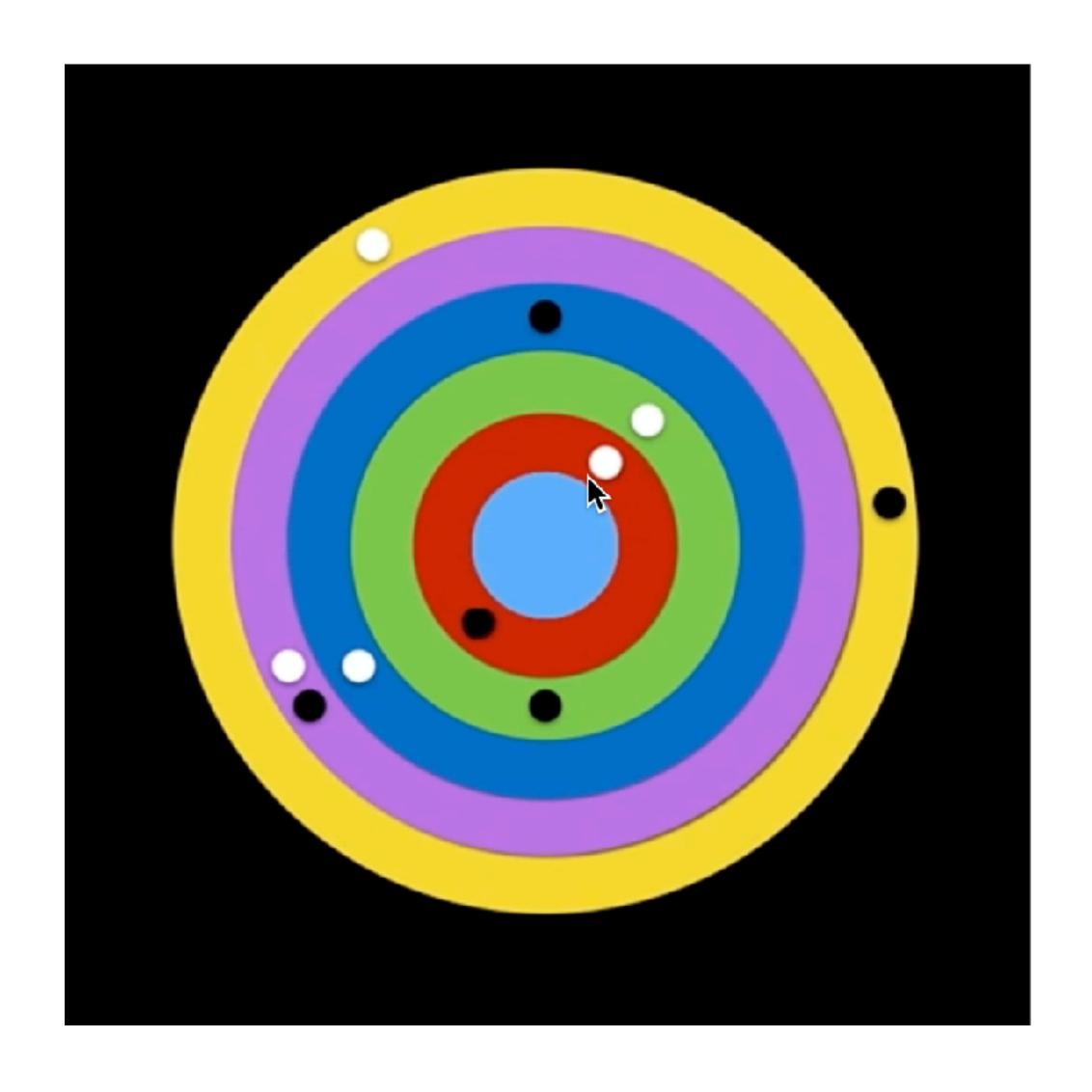
Your Journey

- Dawn Morning Day Evening Night
- Visitor: Small to Large
- Space: Big to small, Grand to real, confused to clear
- Arrange in events and Chunk hard
- Develop characters: Sadhus, Ravana, Krishna, Rama, Kinnar and You
- Breath Metaphor
- Multiple paths in a one long experience



Structure

- Structure levels of worlds (sequence spheres)
- Creating series of one event after another to let you make stories
- Reach white in minimum distance; Black went and stopped at white
- Making black follow white; Make user move around
- Levels of information in a single scene, everything happens everywhere at the same time (physical reality)

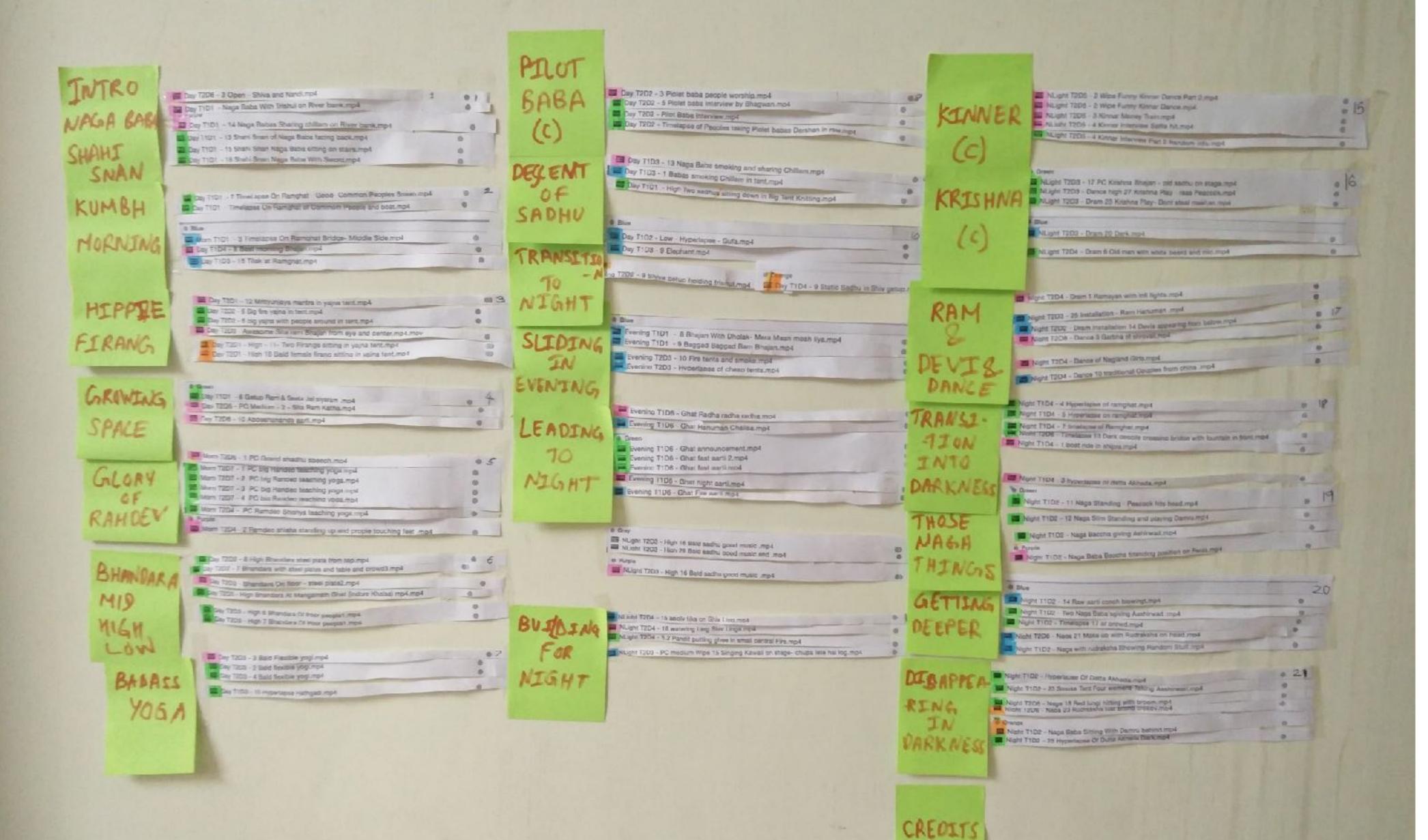


Sequencing: Before



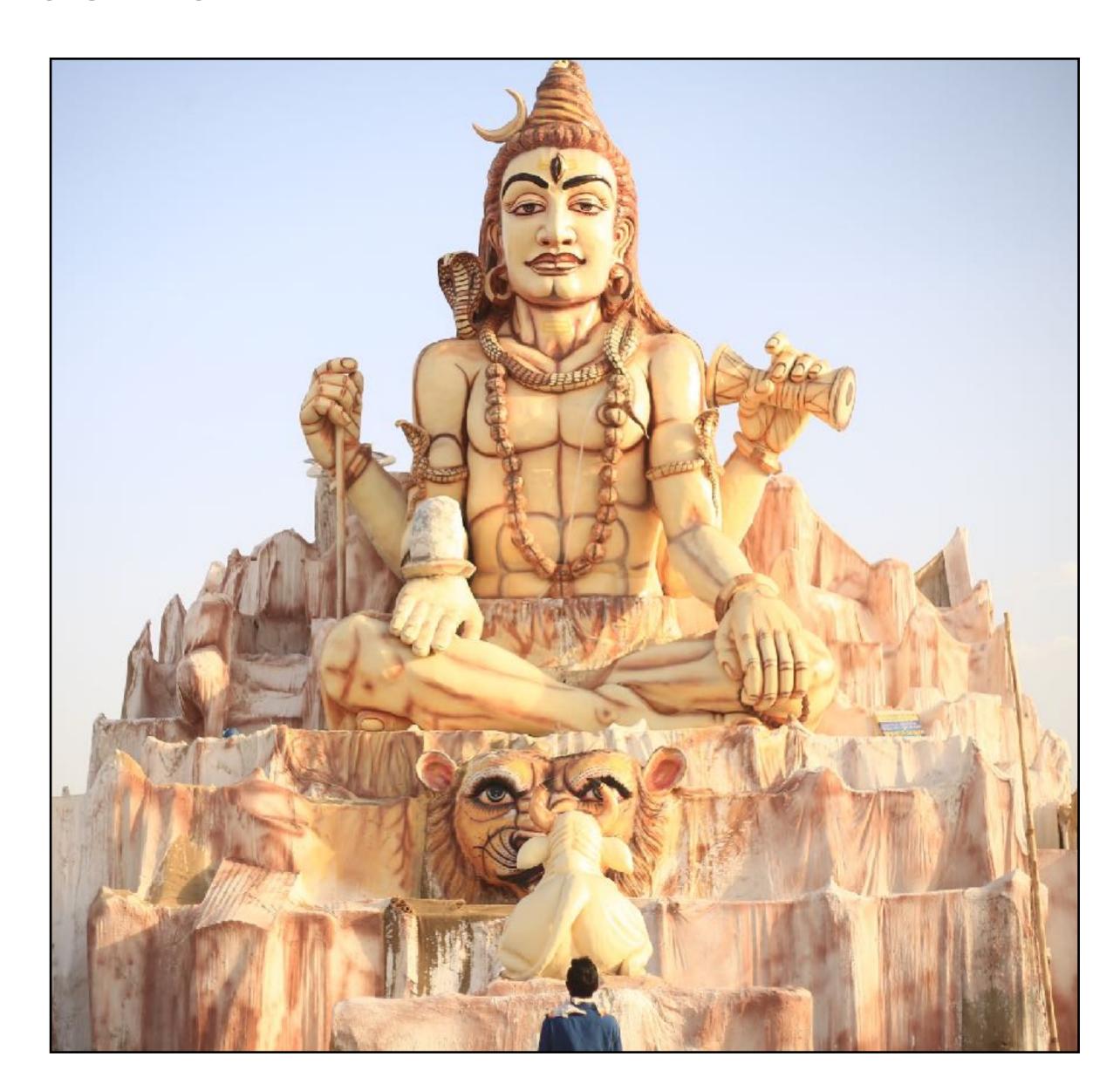
STRUCTURE HOW PIECES FIT TOGETHER

After



Context

- Art project of clips arranged one after the other
- For us to make sense of it, a context is required
- Video Essay on Kumbh Mela
- Context: Journey of a Seeker (Sādhu)
- Inspired by the legend of a Journey
- Added with subtitles



Edit

- Match attention points (Point of interest -POI)
- Transitions: On Colour, Speed and Movement etc.
- Time-lapse for passage of time and Hyper-lapse for change in location
- Dance of Sequence Spheres and Discovering things
- Give time to look around and locate POI's and Develop the situation



Experience

- Introduction
- You come here and there is chaos (culture shock)
- Are you a seeker?
- You meet the Gurus
- You learn what they have to teach

- You go further
- You see what others are doing
- Roles
- That, what's not true
- It's your journey, you are on your own

Conclusion



Courses

- Semantics, Communication Theory and Visual Design
- User Studies and Usability Evaluation
- Designing for Children
- Story and narrative
- Information design
- Art, Design and Society (Ofcourse)
- Typography

Learnings

- Experience and Understand the domain of Experience
- Measure smaller unit of success
- Can get messy so take simple projects, explore and learn
- If given time and attention, it will evolve into something good
- Self-expression and enthusiasm brings out good
- Creating distinction is an act in the domain of context

What next?

- Sound Design and Spatial Audio
- Color Correction
- User Tests and Evaluation

Distribution

YouTube 360: For reach and Cardboard

- Pros
 - Easy to upload and Free
 - Anyone with YouTube app can view
 - Google cardboard integrated
 - Will support stereoscopic 3D
- Cons
 - No support for ambisonic audio
 - No other headsets supported yet

Kolor Eyes: For Developers

- Pros
 - Free 360 3D Hosting
 - Resolution upto 4K
 - Multi-Platform
 - SDK for integration with own apps
- Cons
 - No support for ambisonic audio
 - Only cardboard and oculus supported
 - SDK is expensive

Samsung VR: For Gear VR

- Pros
 - Free 360 3D Hosting
 - Minimum upload resolution 4K
 - Supports 5.1 surround + Head Tracking
- Cons
 - Only for samsung Gear VR
 - One video upload limit
 - Limited reach

VRIDEO: Multi-Platform

- Free 360 3D Hosting
- Resolution upto 4K
- Supports Oculus
- Support for other headsets is coming

No Best Way

Platform Limitations

- No spatial audio & not for all headsets
- No Interactivity
- Not Brand-able
- Not Customisable

After words

- Still in Infancy
- No perfect platform yet
- Distribution choice depends on Goals
- No best way

Showcase at Film Festivals

Presentation

- Complete experience runs for 27mins
- To be viewed in a HMD, sitting on a rotating chair
- For today, a 3min clip, which might give you an idea about the visuals

Thank you for your attention



References

- https://www.youtube.com/watch?v=t3xDgONMdlM
- https://www.udemy.com/cinematic-vr-crash-course-produce-virtual-reality-films/