# Aladin planetarium control experience, lessons learnt

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# Outline

Context: Aladin & Planetarium

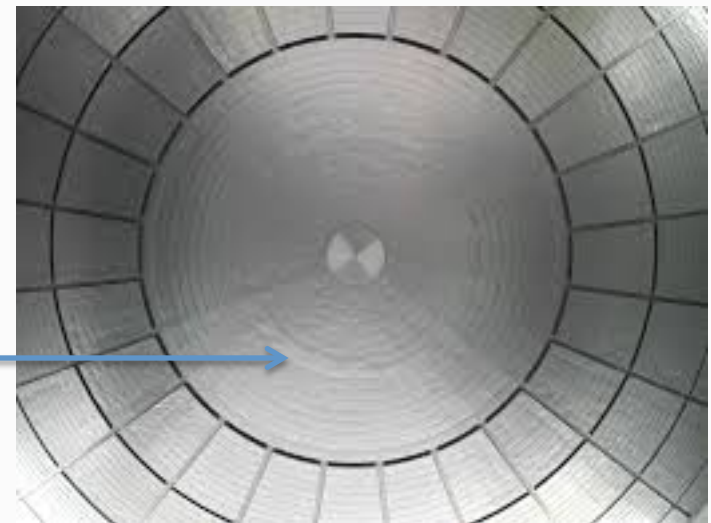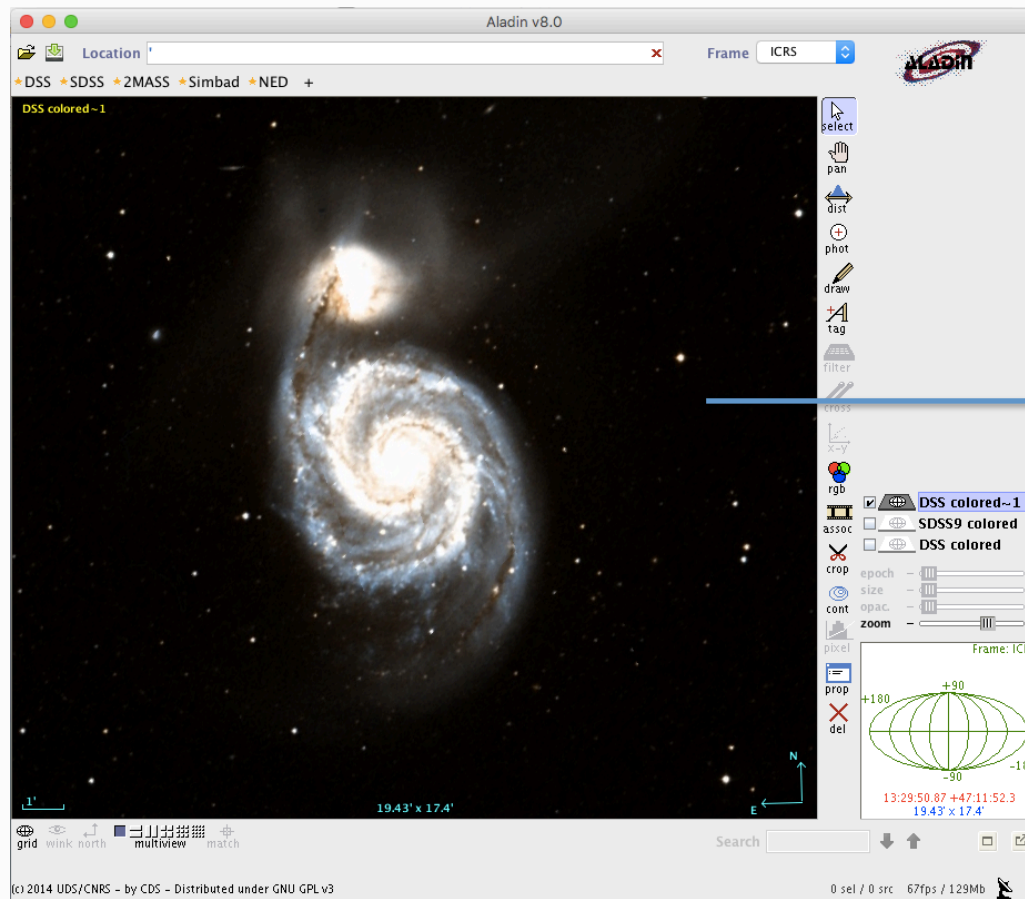From the screen to the dome

Experiments / lessons learnt

Planetarium plugin

Melting-pot of illustrations

Perspectives

# Aladin



Experiments processed with
a standard laptop

# ☐ Planetarium

- Diameter of the dome (half sphere): 8.20m
- Barco F50 2560*1600 pixels
- Immersive adventure **fisheye**

# From the screen to the dome

- How to display Aladin HiPS surveys on the dome ?
  - The "fisheye" projection we use is actually the ARC (zenithal equidistant) projection.
  - In this projection angular distances to the zenith are conserved.
  - Well adapted to projection on the sphere for this.

# ☐ Experiments

- Not easy to manipulate in the dark…
- Aladin was displayed on the dome, we encountered problems to manipulate it easily (no display and control capability on the laptop side).
- The result was not too bad but the projection was not perfect.
- Motion was not smooth.

# Lessons learnt

- Control
  - Remote device (tablet, smartphone, …) ?
  - **Through a Plugin displayed on the laptop ?**
- Improvement of the projection
- Zoom in
  - The projection is working for the half sphere visualization but a "zoom in" provides a distortion of the display which involves to change the projection on the fly.
  - An appropriate scale (=zoom) factor has to be applied to the angular distance instead of rectangular zoom.

# ☐ Lessons learnt (2)

- Aladin side
  - Script command "goto <target>" (e.g. goto M31)
    - Zoom out, smooth motion to the target, zoom in to focus on the target
  - Decreasing, during the motion, of the time between 2 views (average of 40ms, better with 20ms but the size of the projection implies a jerky motion)
  - "cinema" mode to switch to the fisheye view (without menus and widgets)
  - "function" script to create and save scenarios

# ☐ Planetarium plugin

# ☐ Planetarium plugin (2)
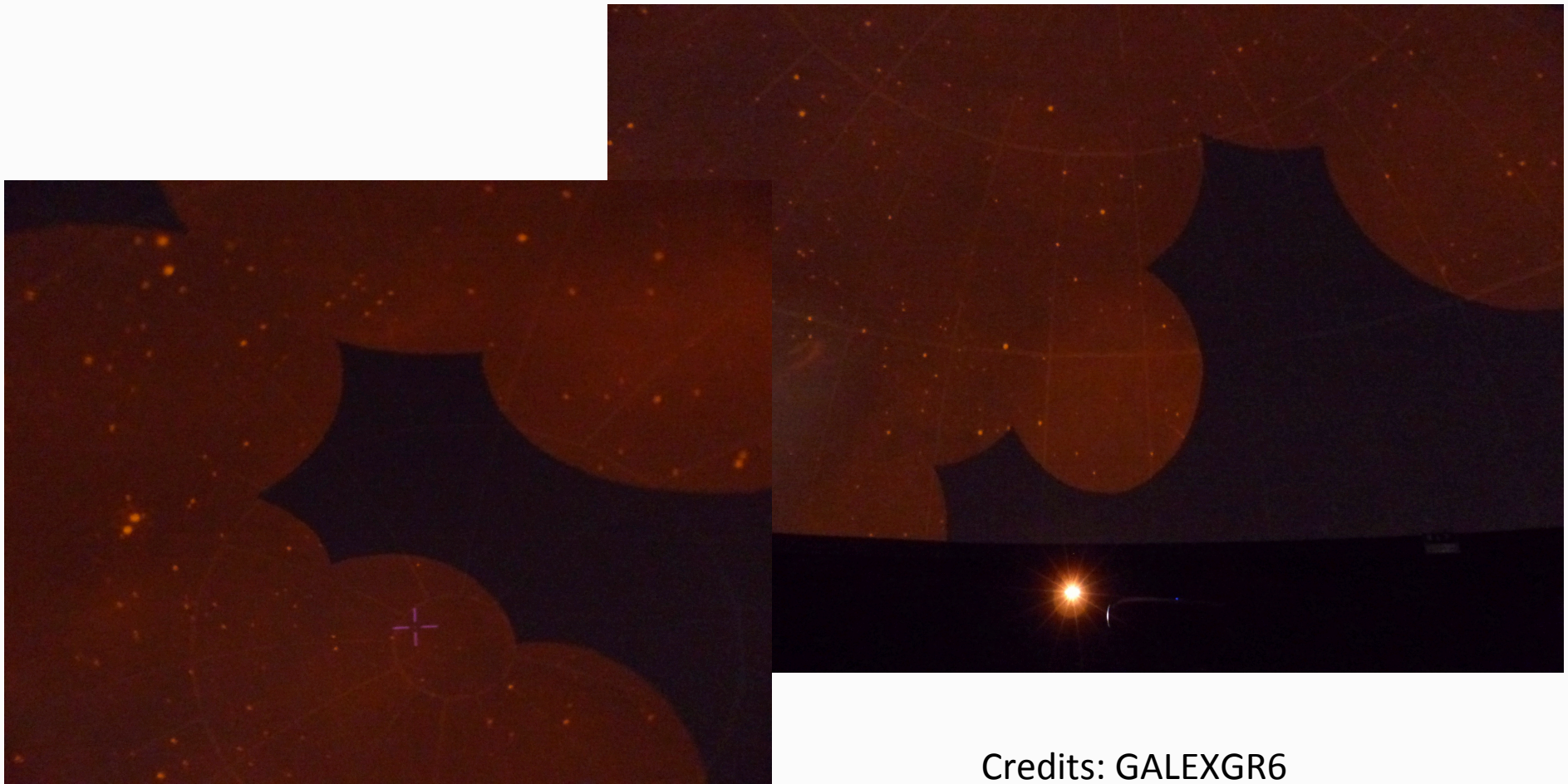
# Melting-pot of illustrations
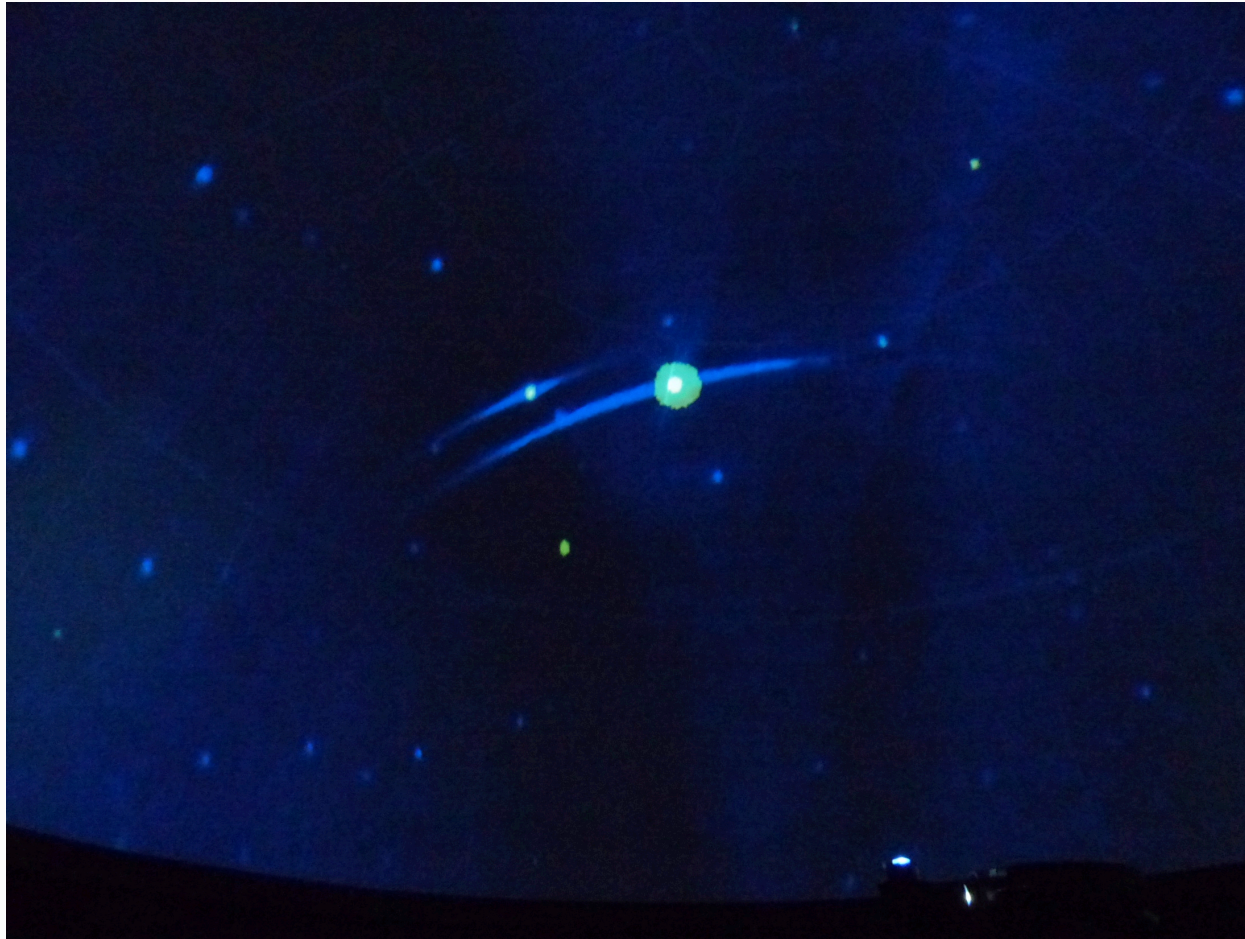


Credits: IRIS
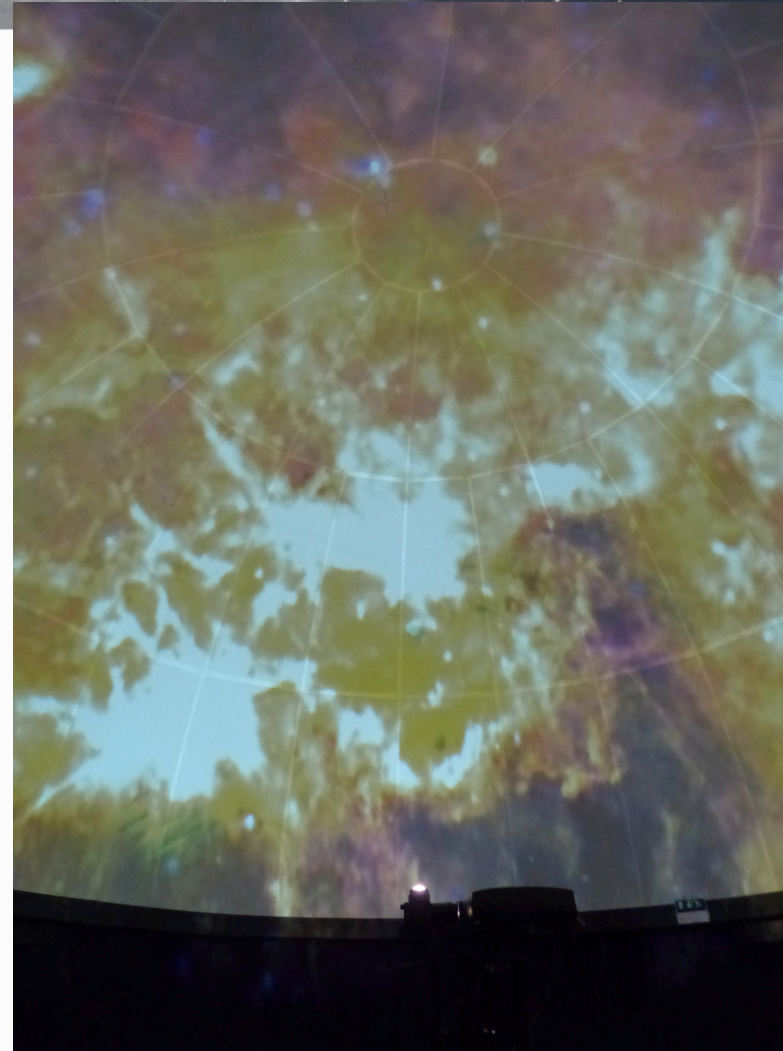
# Melting-pot of illustrations (2)

Credits: GALEXGR6

# Melting-pot of illustrations (3)



Credits: IRIS

# Melting-pot of illustrations (4)



Credits: allWISE

# ☐ Perspectives

- Smoother motion.

- Adaptative projection when zooming in (and out).

- Set of scenarios.

- Remark: Strasbourg Planetarium will move to a new building in around 2 years.