



The LLAMA Software Why ALMA Common Software?

- 10+ years of development
- 8+ years of field testing
- 6+ years of commissioning and operations
- Big potential for code reuse shortening LLAMA development
- Opportunity for mutually beneficial collaborations with other projects (ALMA, CTA, universities, ...)
- Potential to learn from other experiences



The LLAMA Software

Challenges of using ALMA Common Software

- It is a framework, not just libraries
 - Learning curve unavoidable
- Reuse may be difficult in some areas
 - Learning from other projects using ACS may help to make the right choices
- Using the framework requires discipline (and monitoring to reinforce it)
 - May be perceived as less flexibility



The LLAMA Software

Who will do it?

- Core LLAMA Computing Team
- Collaborations
- Synergies (with other projects)



The LLAMA Software

Getting to know each other

- What are the main expertise areas in this team?...
 - And which are missing?
- What is your experience developing software?
 - How do you do it?
 - How do you test your code?
 - Are you familiar with coding standards? If so, which ones?
- Which is largest/smallest project you have worked on?
 - Code size?
 - Team size?
- What have you learned from mistakes (yours or others')?



The LLAMA Software

What needs to be done

- Antenna control
- Instrument control
- Observations preparation and execution
- Data flow
- Data processing
- ...



The LLAMA Software

how will it get done

- Development workflow
- Software engineering practices
- Software engineering tools
- Roles and responsibilities