

Contributing factors to success

- Scientists talk to engineers
- Heritage and flexibility
- Additional good ingredients
- Result
- Salute

Albert Zaglauer
SWARM prime project manager
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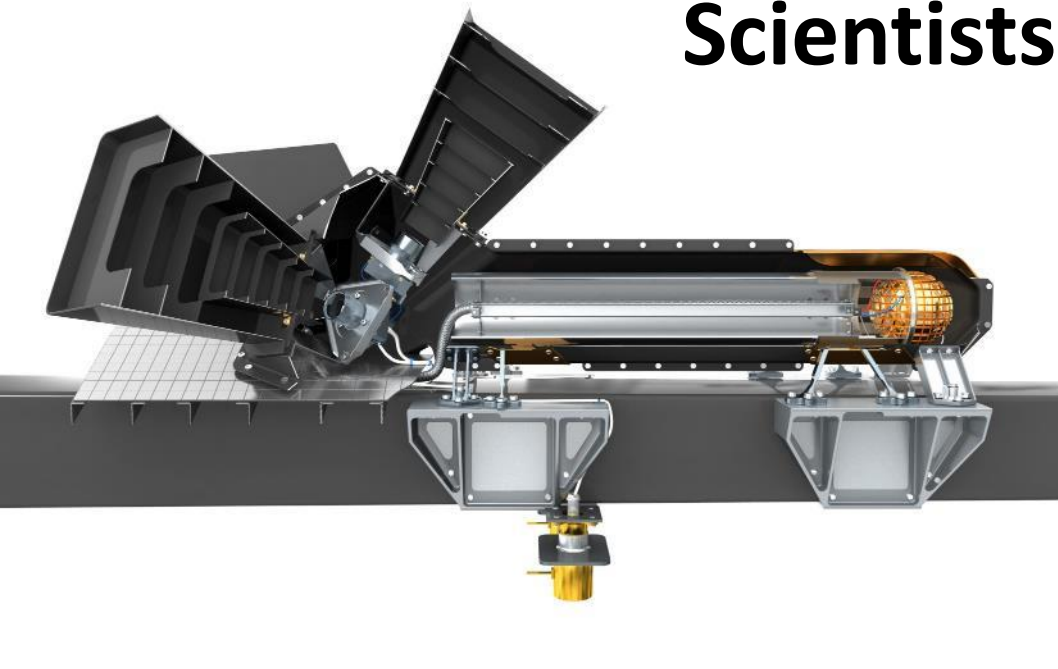
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HAPPY BIRTHDAY SWARM !



- Picture taken at the system PDR co-location

Scientists talk to Engineers



- Learn to understand each other and agree on the do-able
- Requirements drive the design, the cost and the schedule !
- Give room in early phases to define, discuss , re-iterate and adjust needs
- Identify expensive but less value needs and challenge those
- Be flexible in adjusting needs till PDR
- Accept economic and schedule boundaries

Industrial design heritage and flexibility

- Champ mission heritage as a design guideline
- Cryosat, GRACE, GOCE as flight proven platform architectures
- Conservative design approach wrt to allowed single point failure cases, redundancy and cross strapping
- Modern, table based, flexible software architecture
- Mission specific articulation concept
- Innovative launch adapter & separation concept
- Earth oriented radiator and safe mode
- Excellent thermal/mechanical stability
- High ballistic coefficient

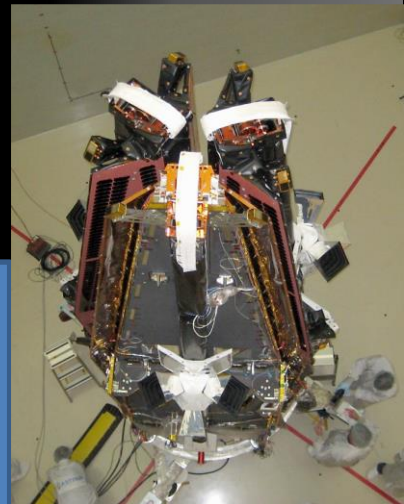
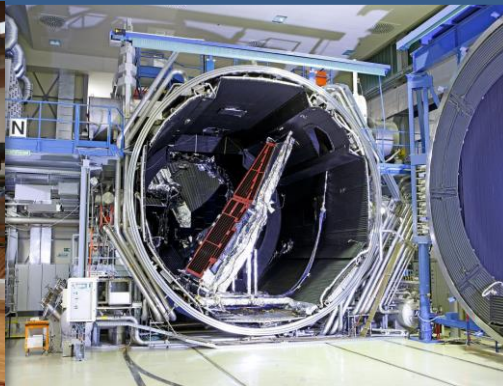


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Additional necessary ingredients

- Experienced PI/ Co-PI making and selling the case
- Alignment of all stake holders under ESA lead
- Experienced system architects on all sides
- Dedicated people on all sides
- Extensive “test as you fly” verification on ground
- Some luck



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Result: „A lot of bang for the money“

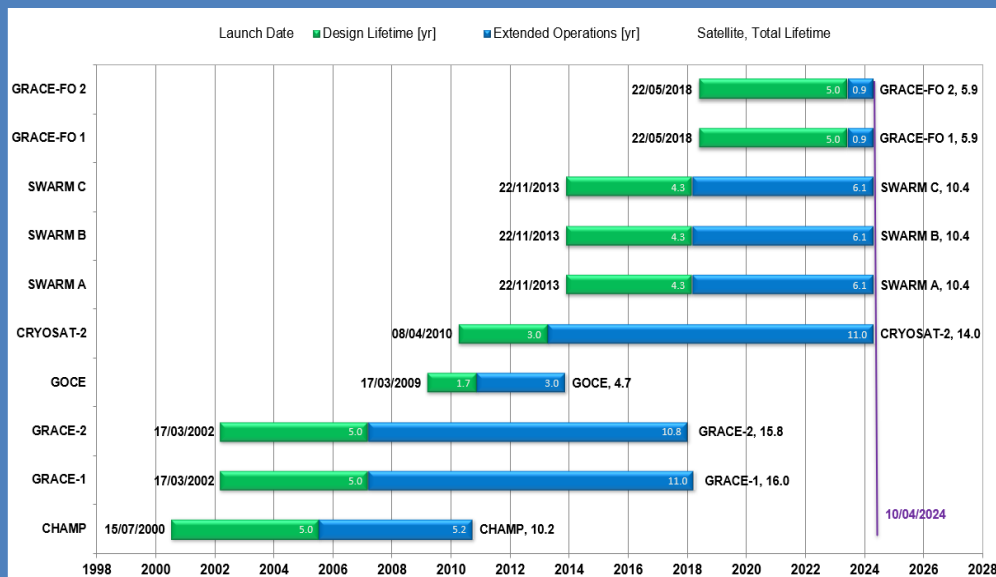
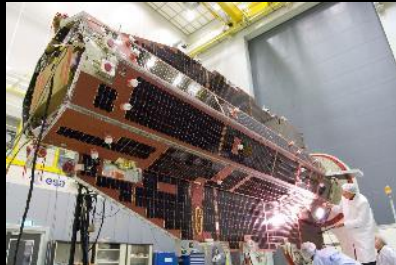


- Contract executed within program budgetary restrictions
- Final launch date driven by launcher availability
- Space segment cost only ca. 50% of total mission cost
- Nominal design lifetime well exceeded
- Very modest need on in orbit operational efforts
- Smart implementation of on ground data corrections
- Vast amount of scientific output and publications



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Live long and prosper, friends ! 🙌



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**Thank you for attention,
hope to see you all in 2034 !**

