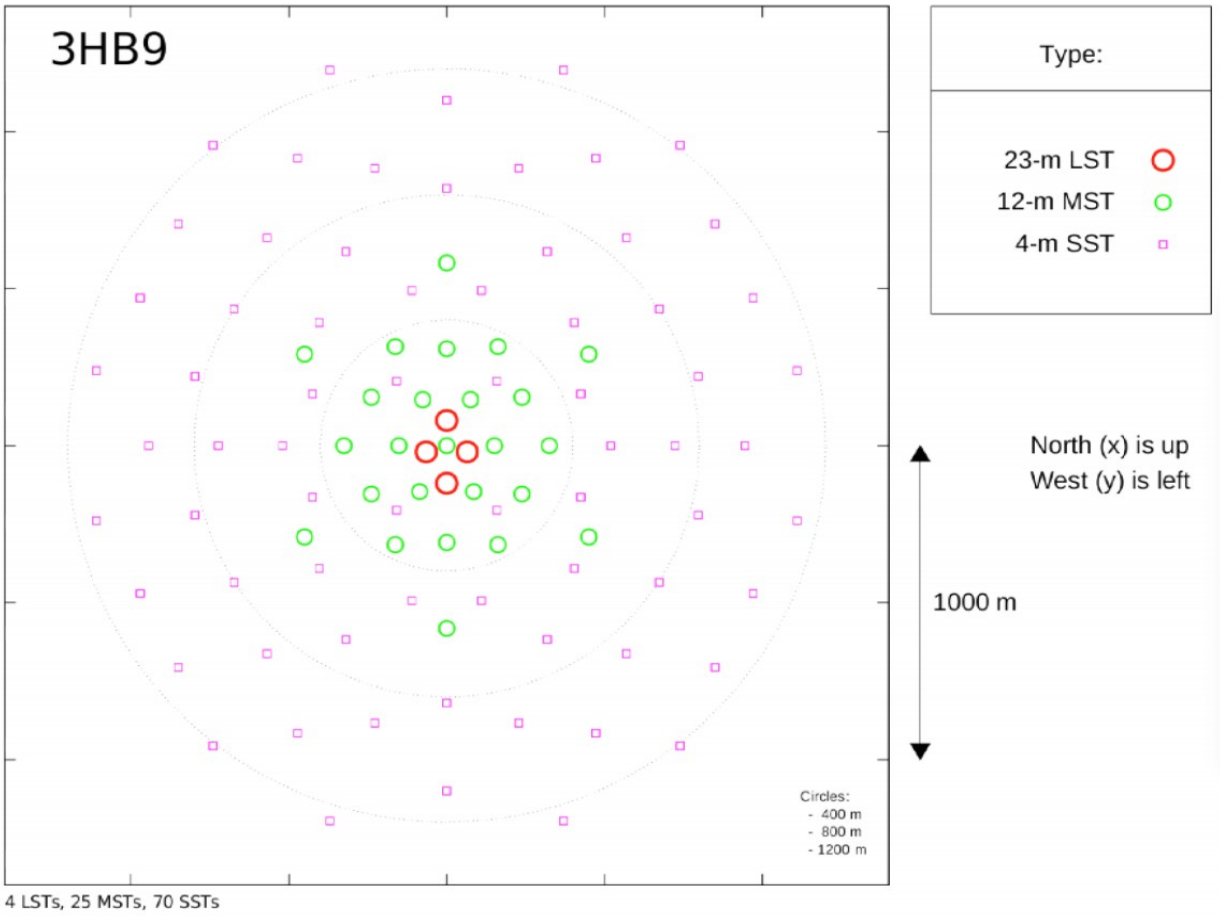
Tentative configurations for CTA-South pre-production arrays

A.Giuliani, S.Lombardi,
C. Bigongiari, G.Bonnoli, I.Donnarumma

on behalf of the ASTRI coll.

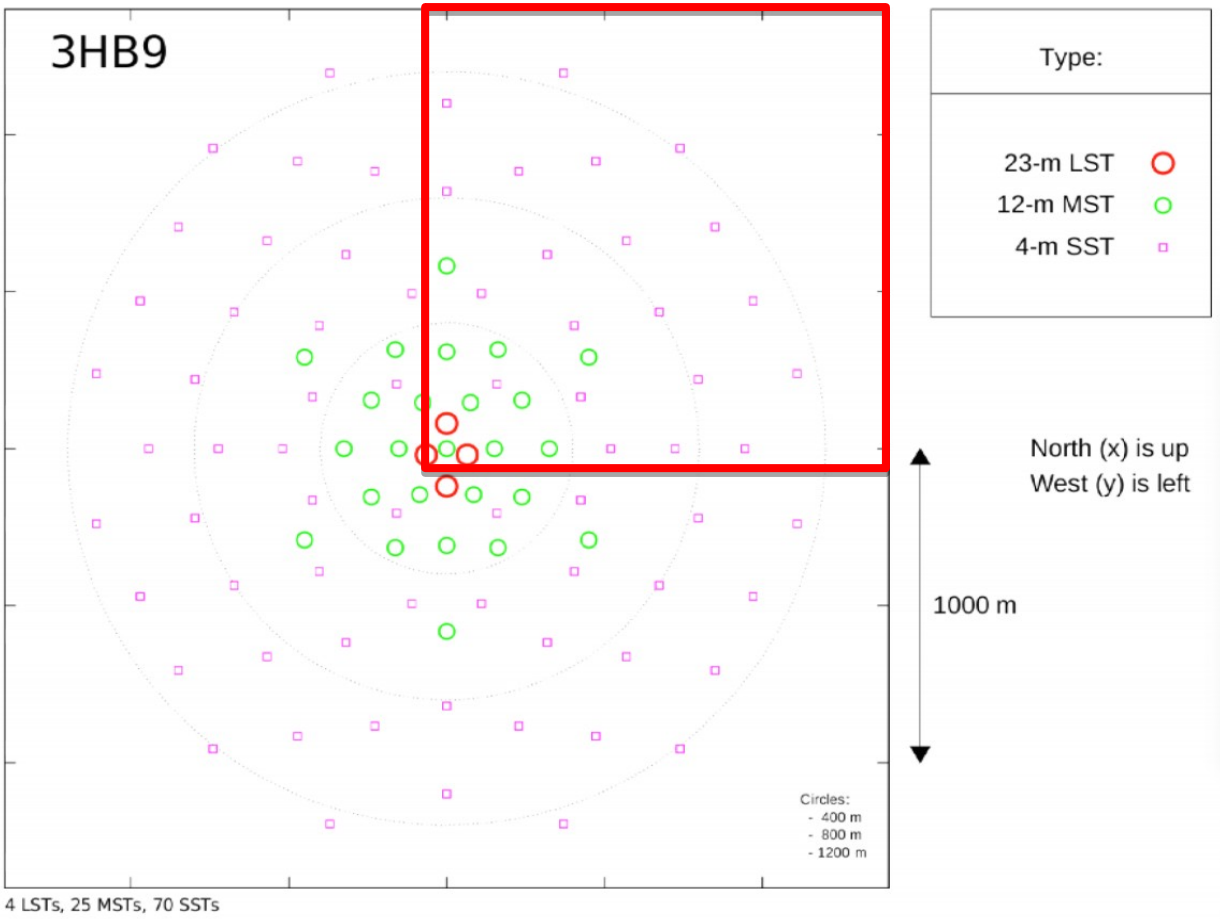
Basic assumptions:

- 3HB9 CTA-S configuration



Basic assumptions:

- 3HB9 CTA-S configuration
- Specific quadrant assigned



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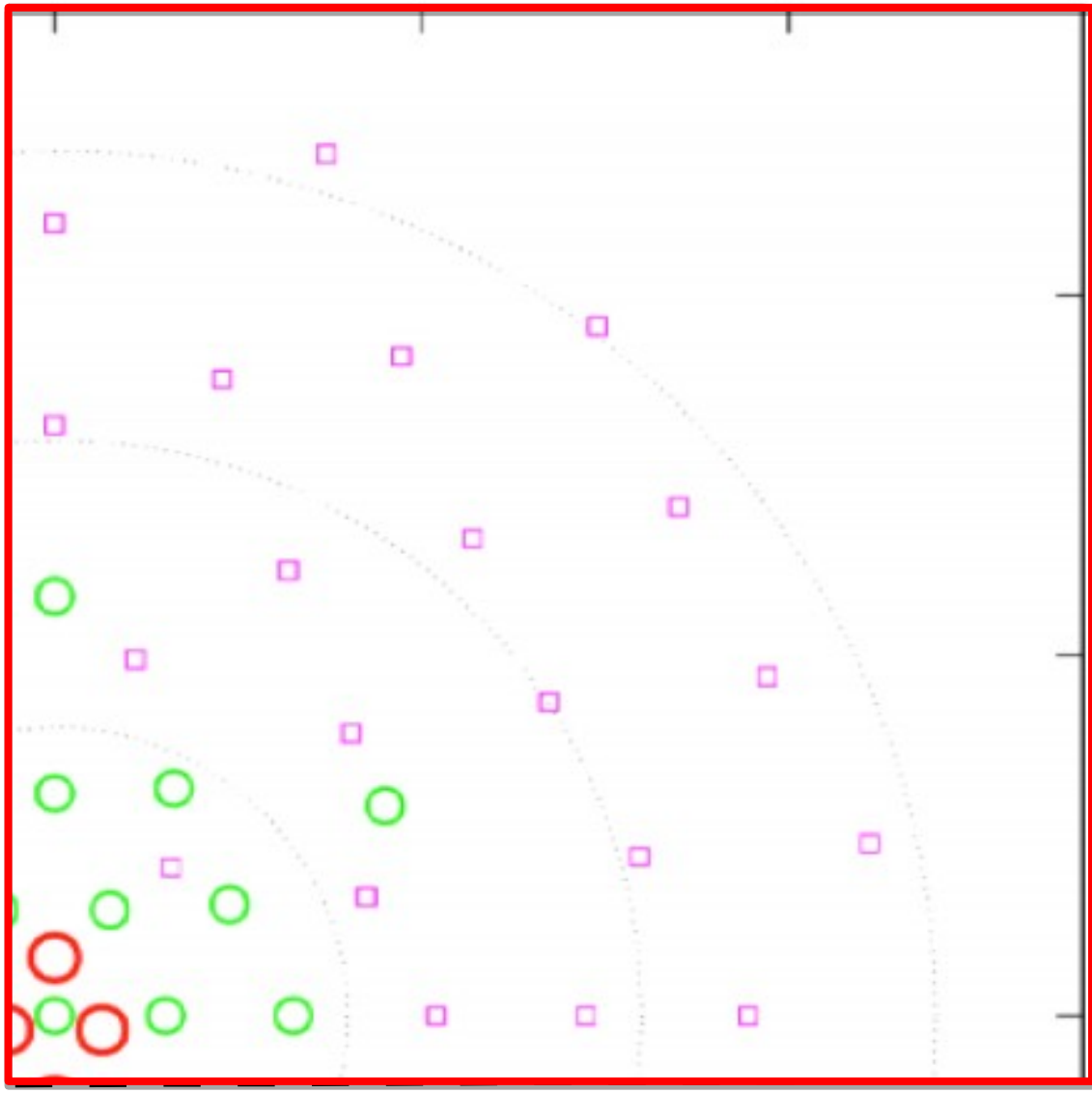
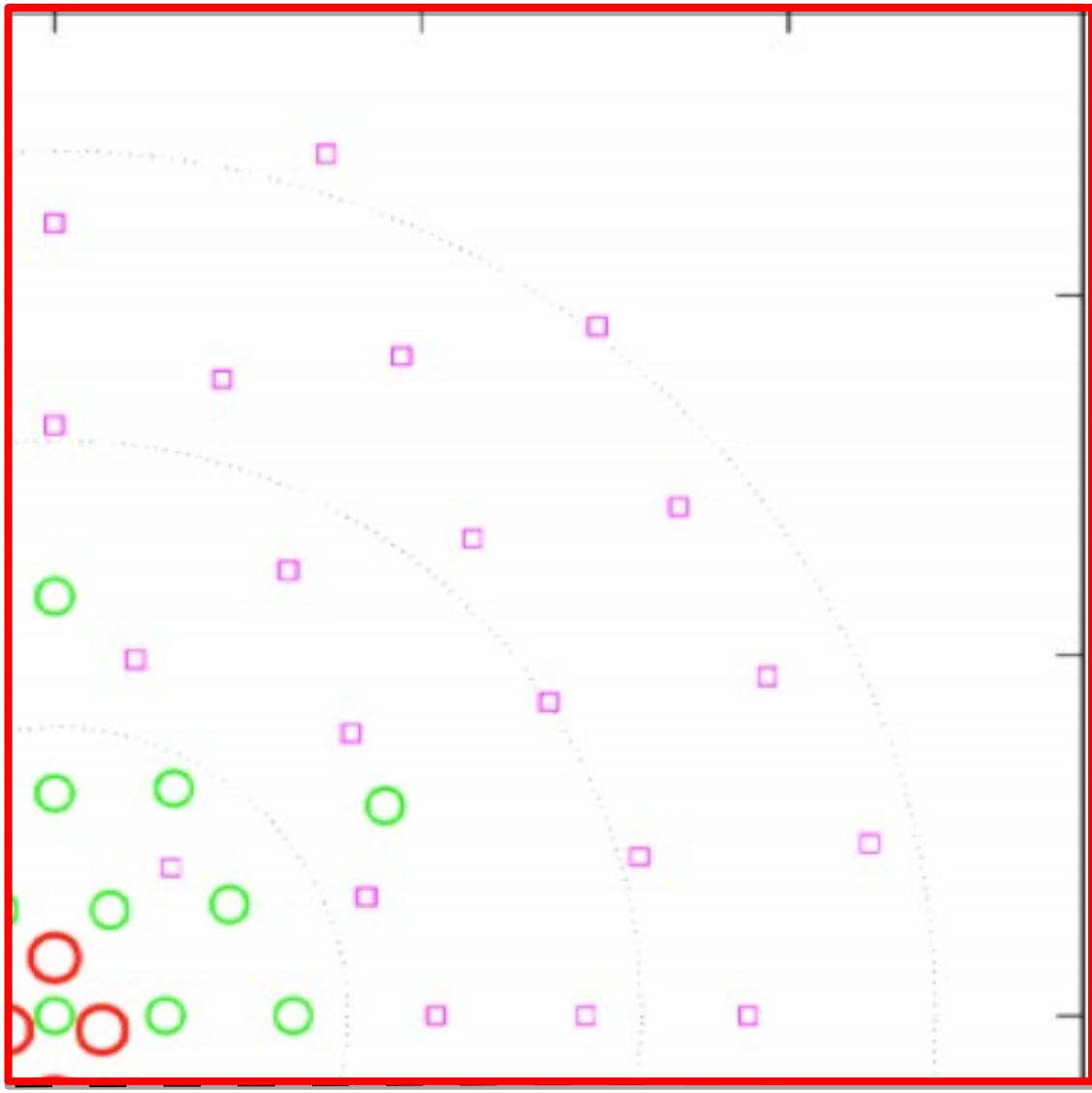


Basic assumptions:

- 3HB9 CTA-S configuration
- Specific quadrant assigned

- 9 (possibly 15) ASTRI tel.

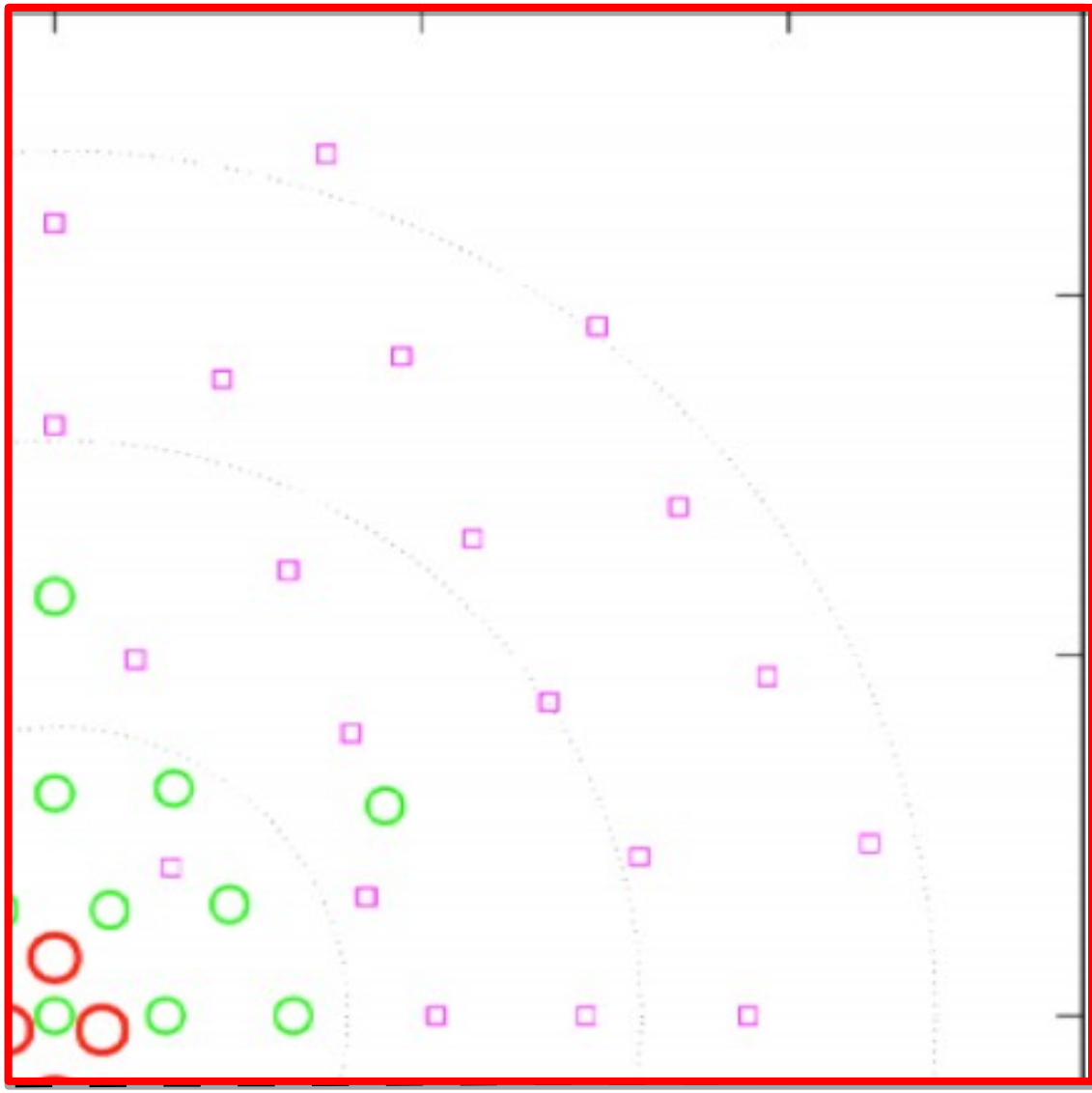


Basic assumptions:

- 3HB9 CTA-S configuration
- Specific quadrant assigned

- 9 (possibly 15) ASTRI tel.

- 1 (possibly 2) MSTs



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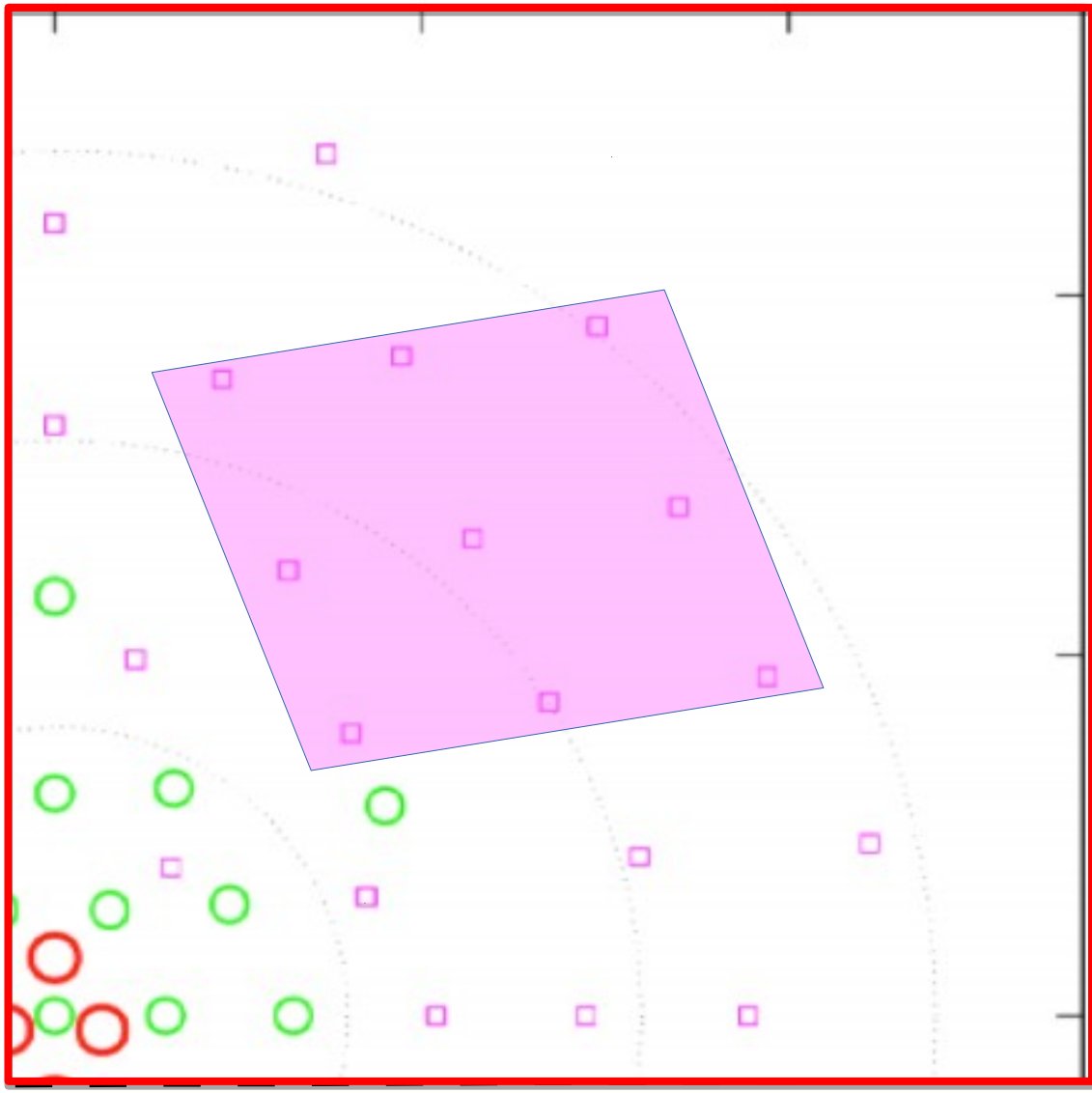
Basic considerations:

- The ASTRI arrays should be as much as possible symmetric and not-too-scattered



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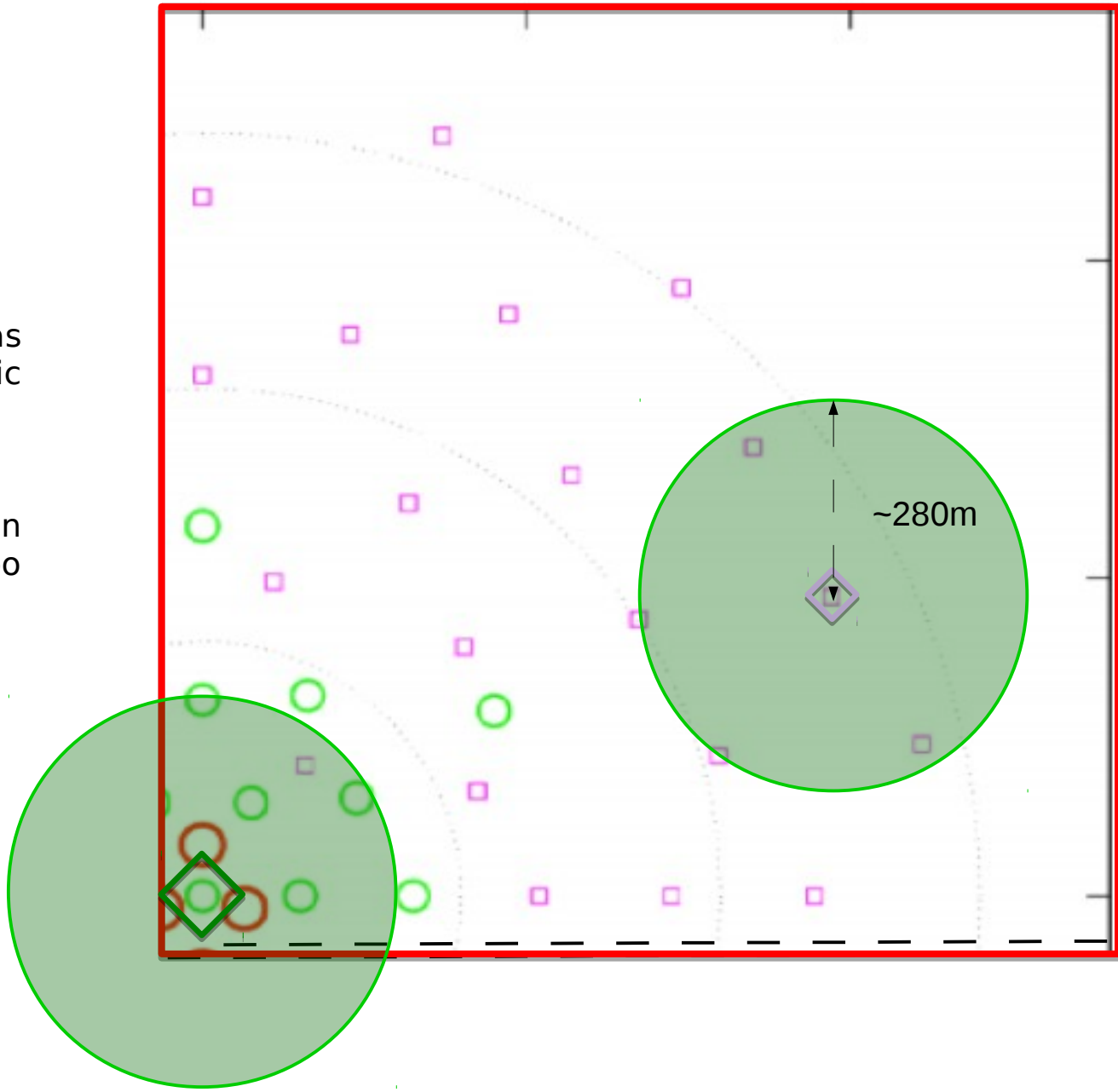
BUT :

- SSTs and MSTs can work as an array if their distance is not too large (roughly ~280 m)



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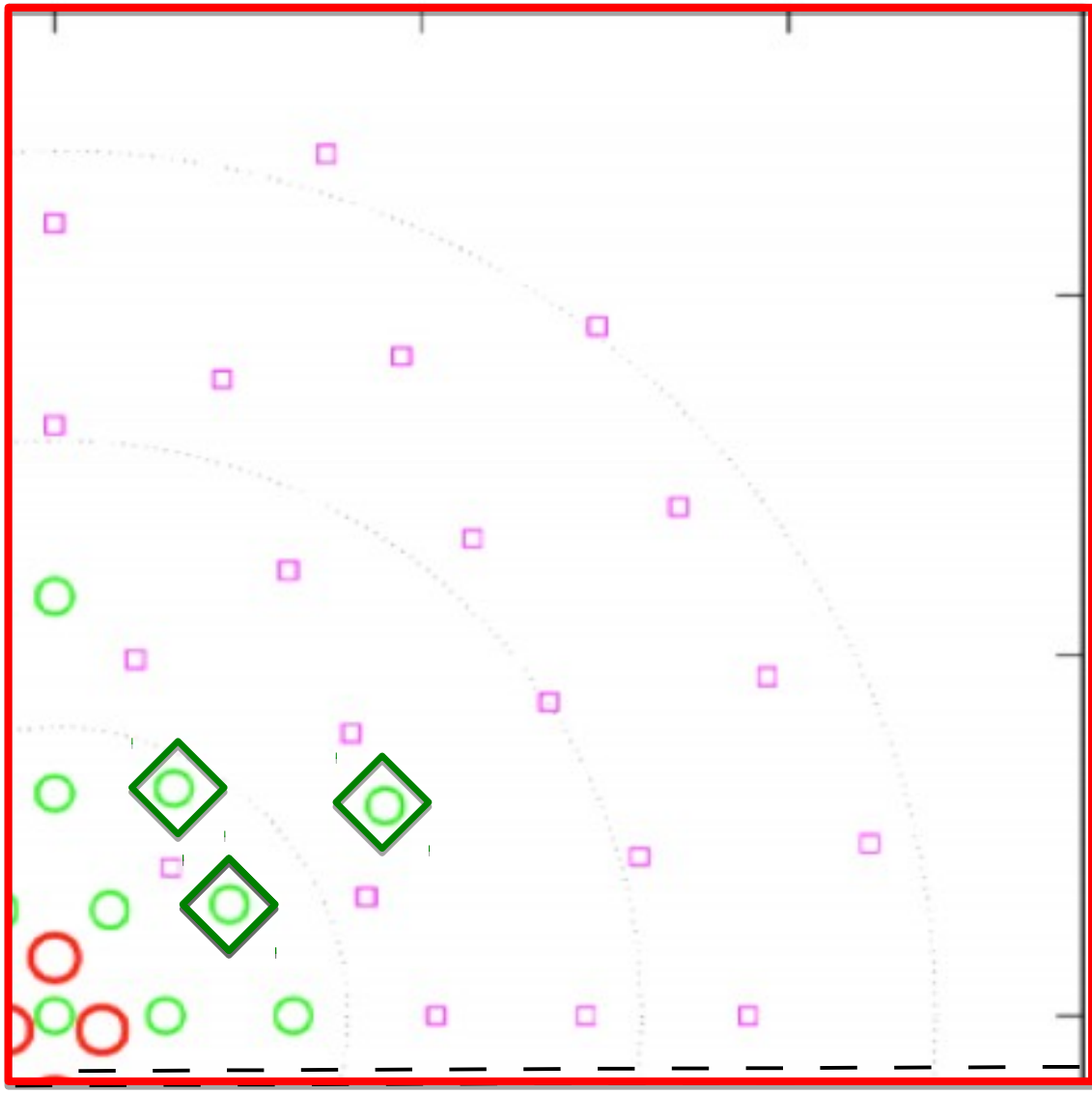
Basic considerations:

- The ASTRI arrays should be as much as possible symmetric and not-too-scattered

- SSTs and MSTs scan work as an array if their distance is not too large (~280 m)

- *We assume* 3 possible positions for the first MST



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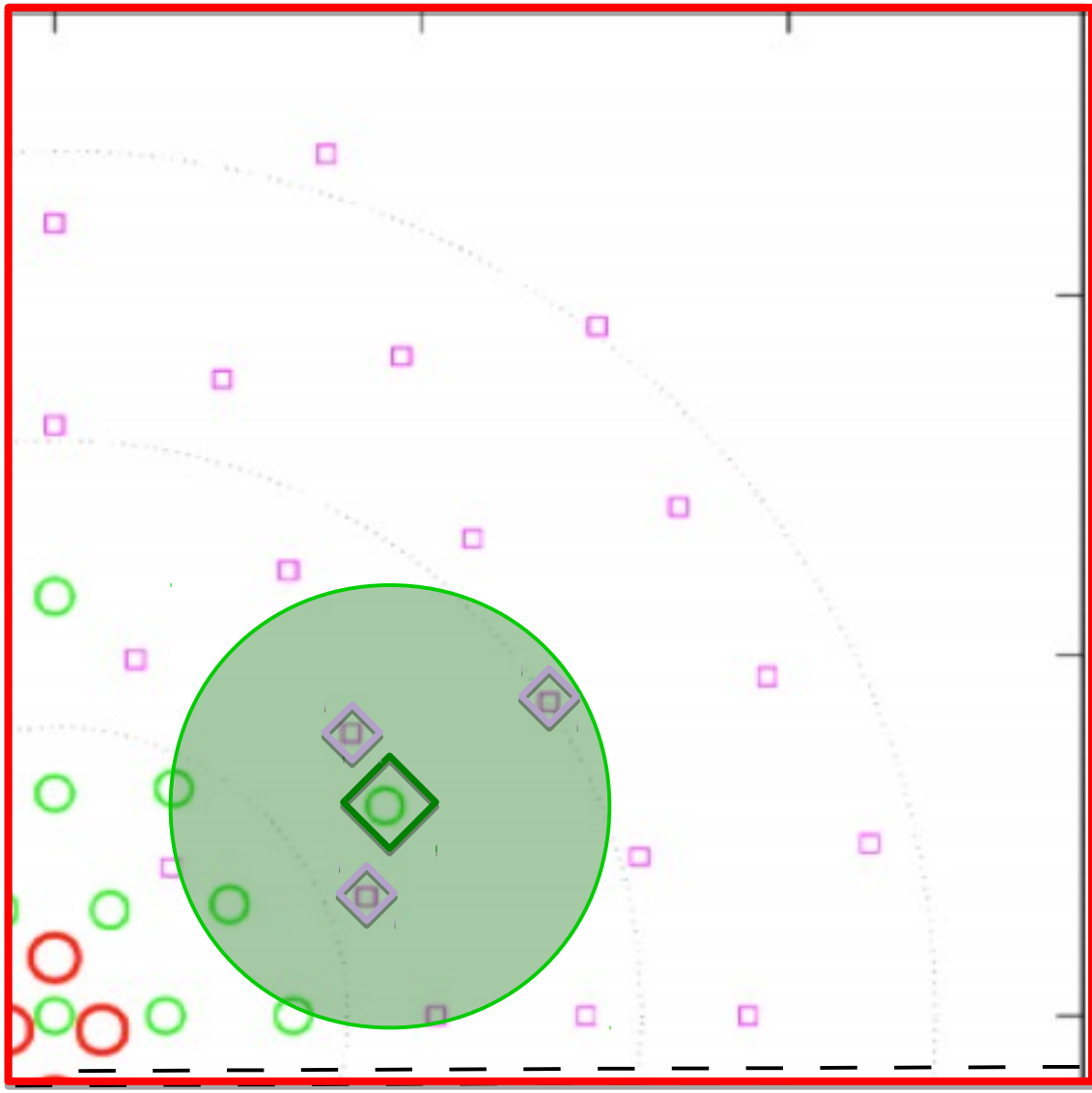
- 3 possible positions for the first MST

- The position of the first 3 ASTRI SSTs depends on the position of the first MST



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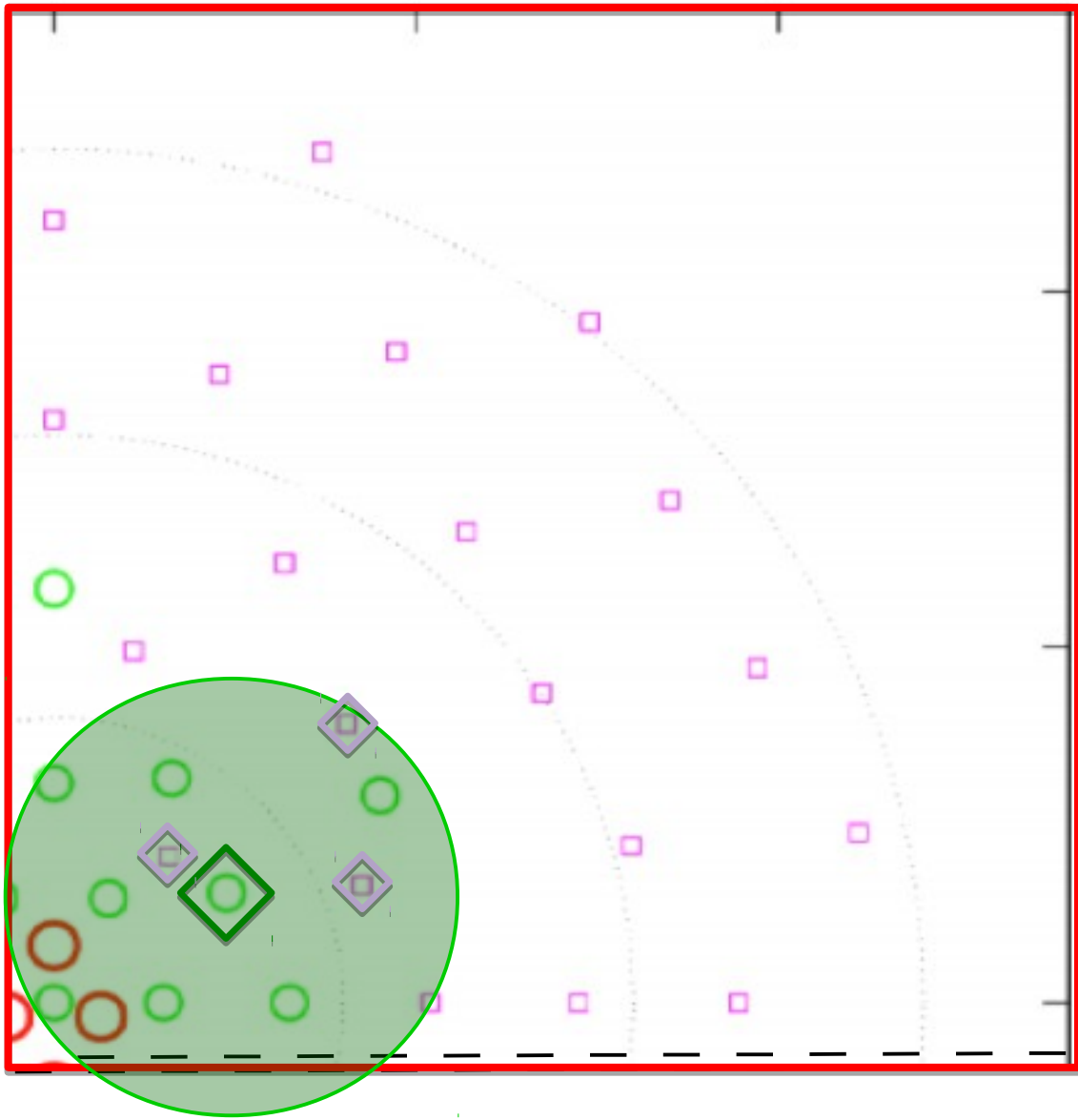

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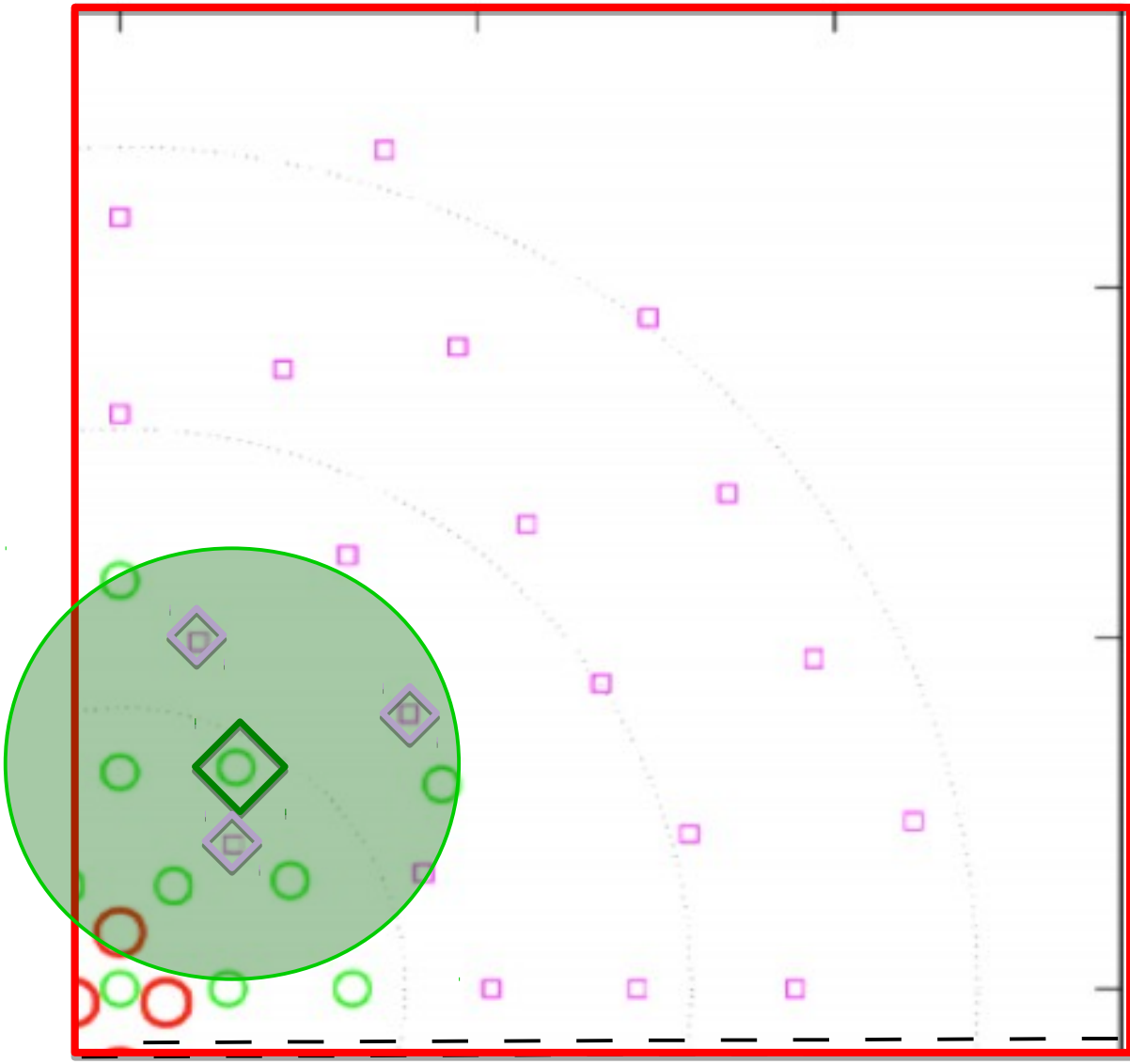

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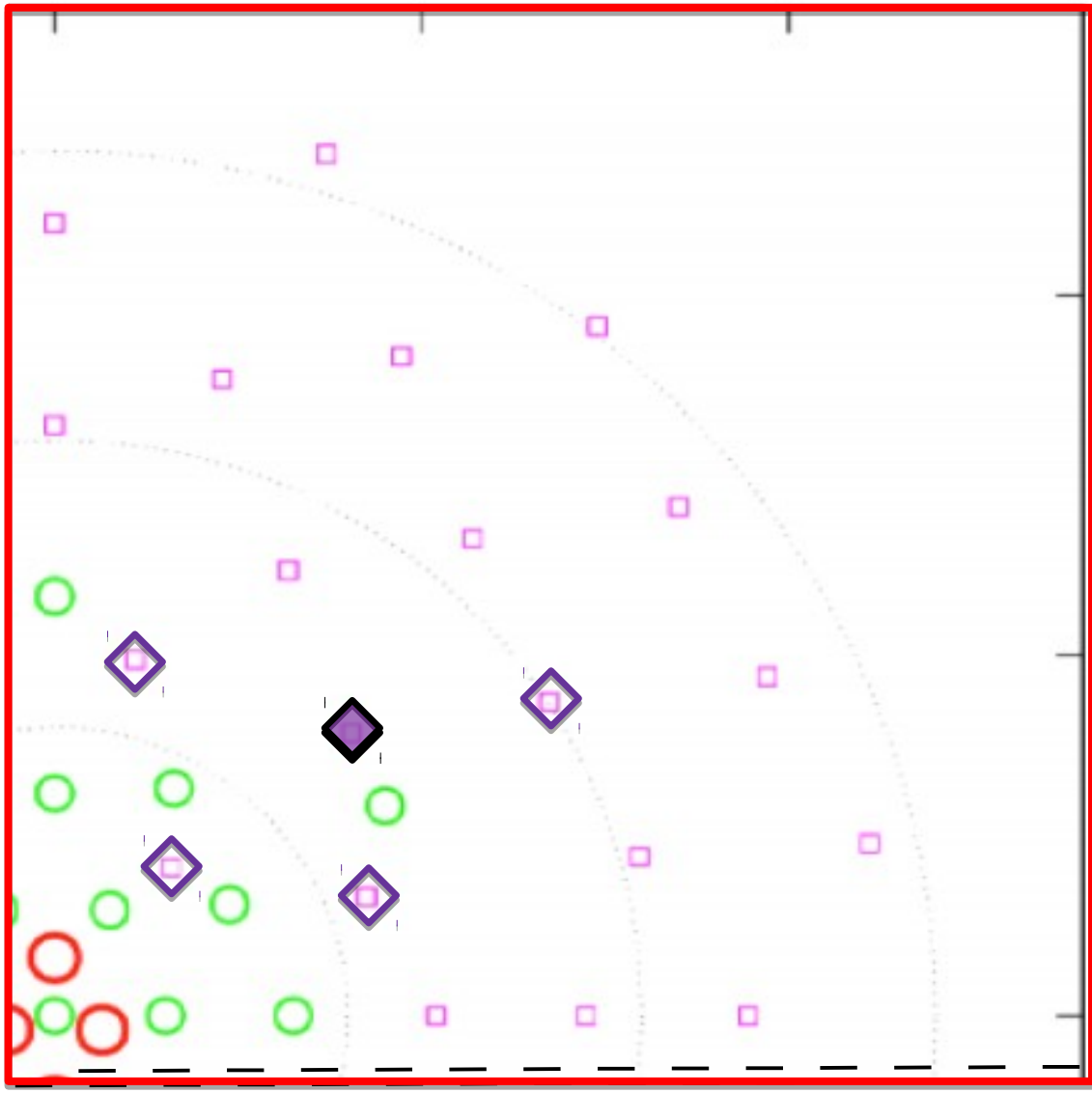
- 3 possible positions for the first MST

- One place is independent on the MSTs position



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- The ASTRI arrays should be as much as possible symmetric and not-too-scattered

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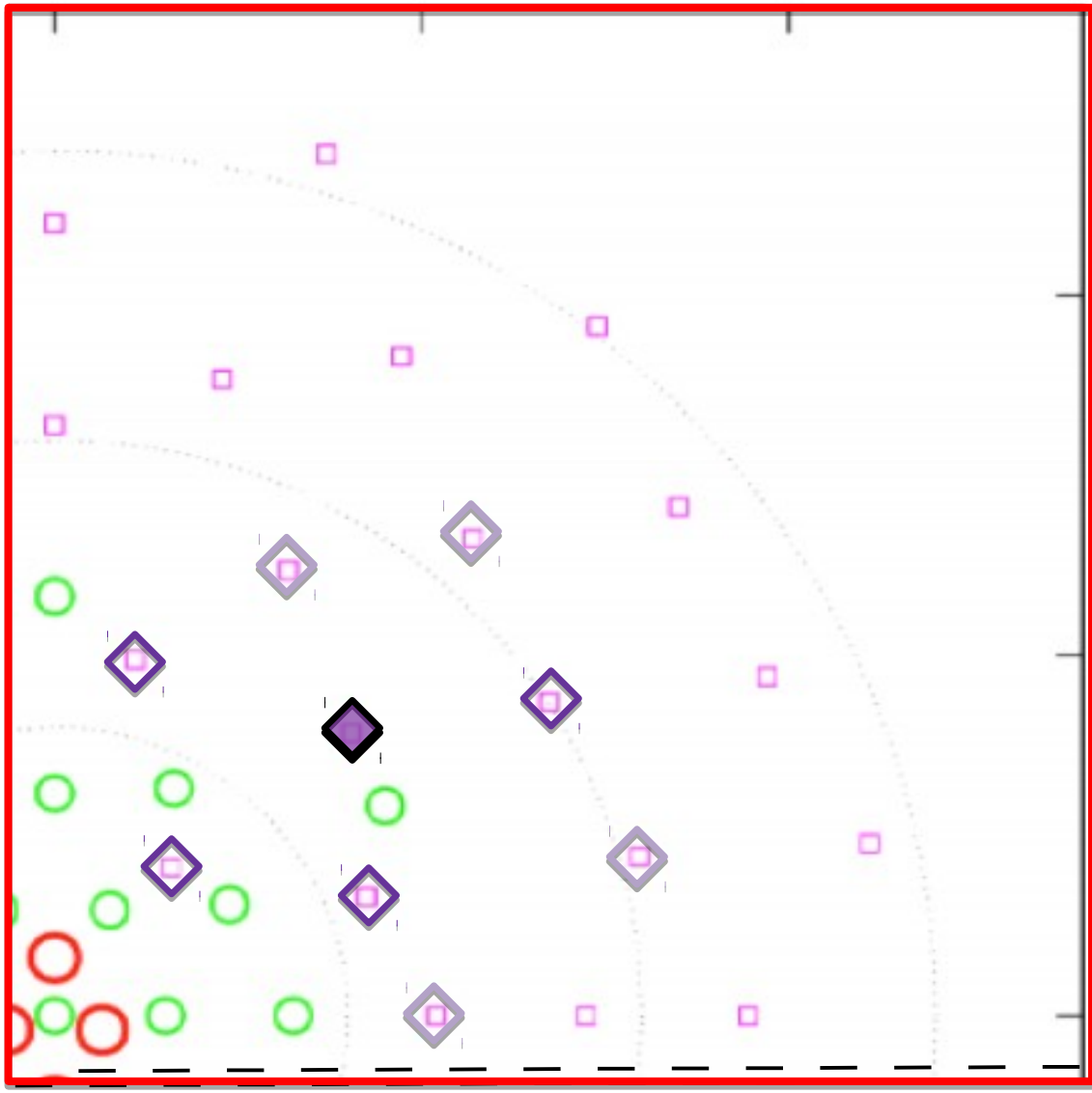
- 3 possible positions for the first MST

- The overall ASTRI mini-array deployment (9 or 15 telescopes) is independent on the MSTs position



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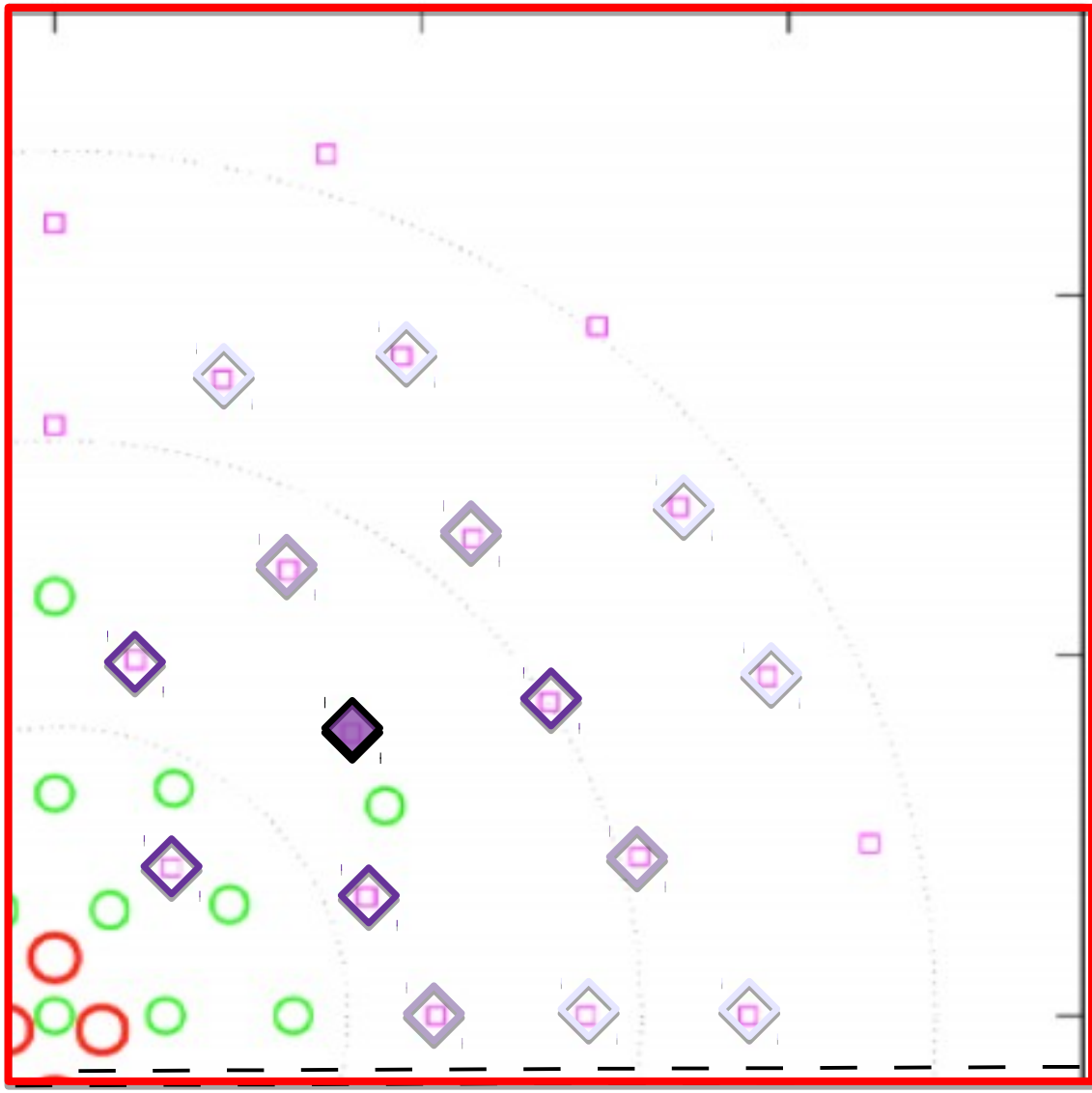

Conclusions

- In order to have interaction between SST and MST telescopes, the ASTRI mini-array deployment should start from the center, moving outside (viceversa for MSTs)
- The position of the first 2 - 5 ASTRI telescopes depends on the position of the first MSTs
- The overall ASTRI mini-array deployment (9 or 15 telescopes) is independent on the MSTs positions