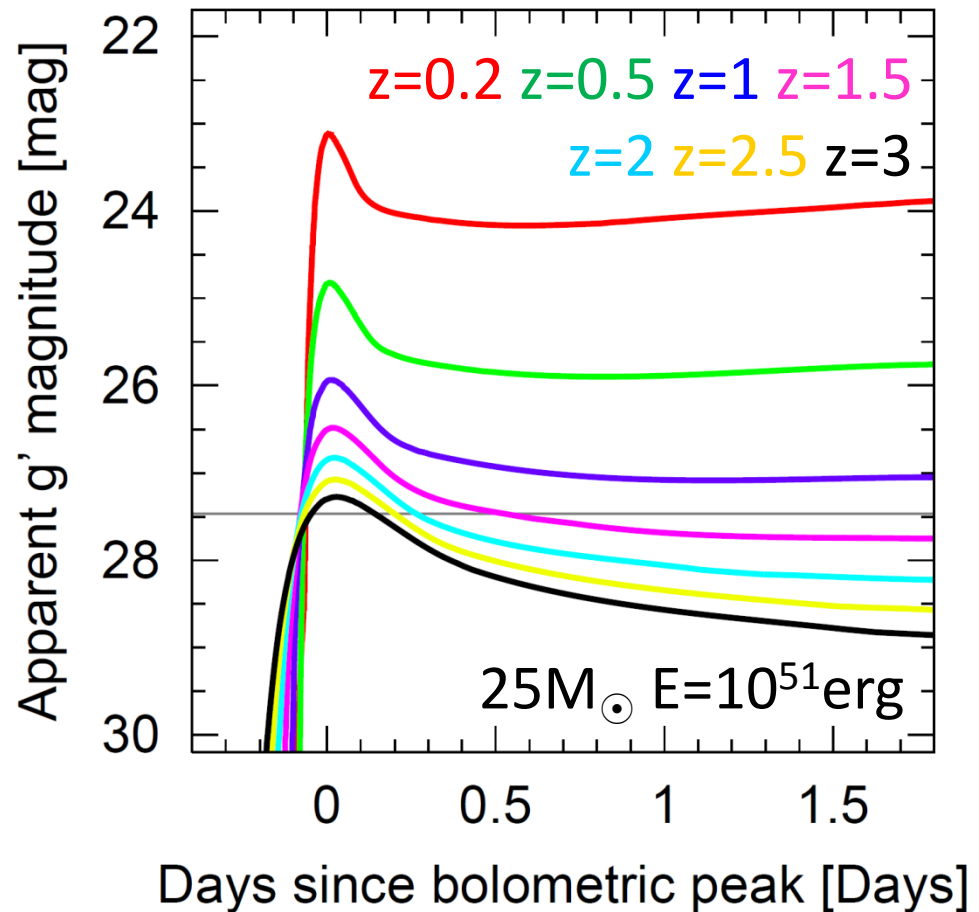
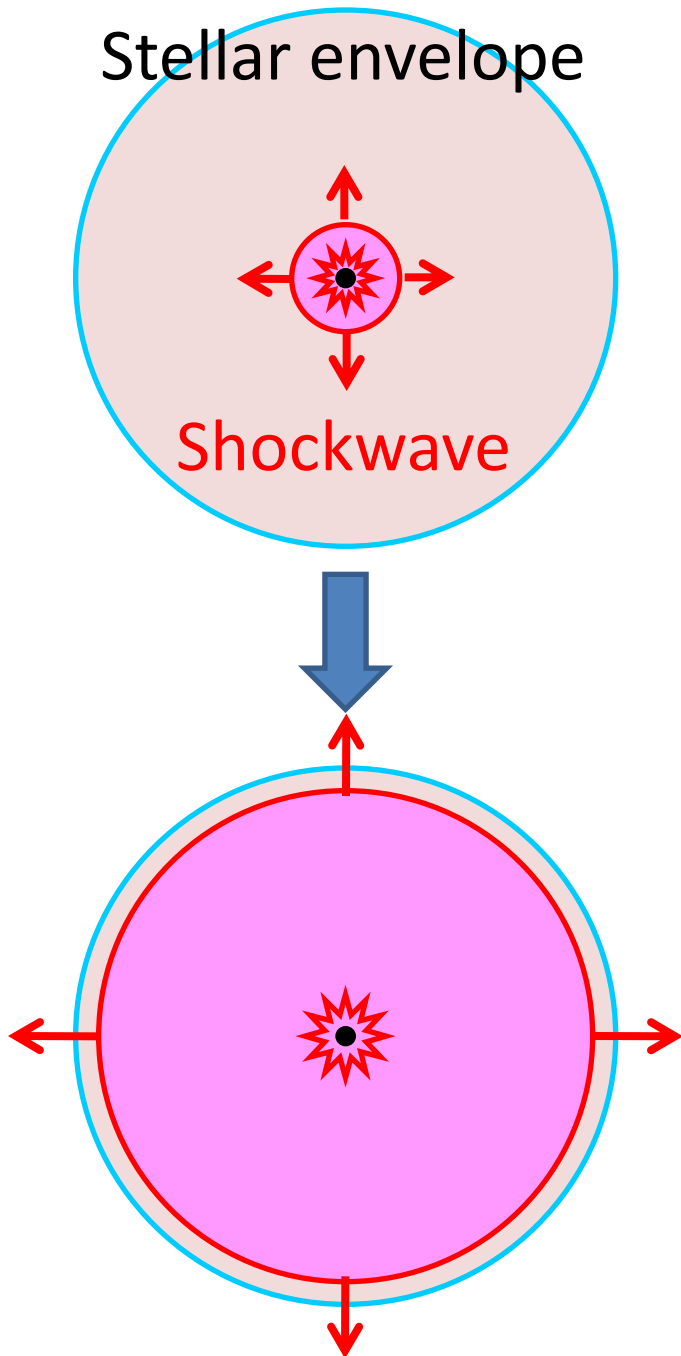


Development of quick data analysis system for detection of shock breakouts

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Shock breakout

Shock breakout is the **brightest phenomenon** in a supernova with **short time scale (~ 1 day)**. Shock breakout attains the first direct detection of normal core-collapse supernovae at **$z > 1$** .



HSC onsite system & Transient system

HSC onsite system:

Raw image -> Standard reduced image

Transient system:

Standard reduced image -> Warped image

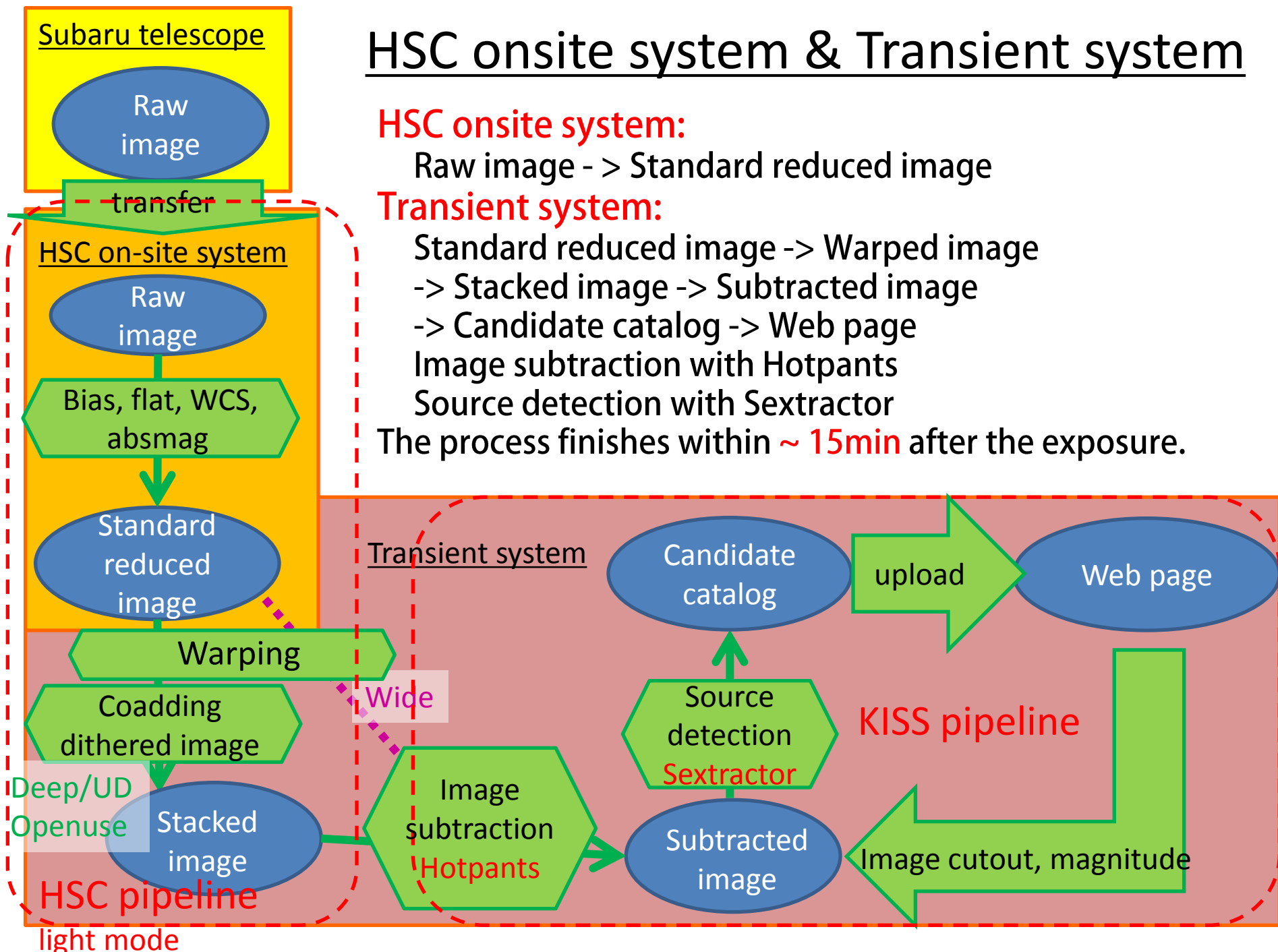
-> Stacked image -> Subtracted image

-> Candidate catalog -> Web page

Image subtraction with Hotpants

Source detection with Sextractor

The process finishes within ~ 15min after the exposure.

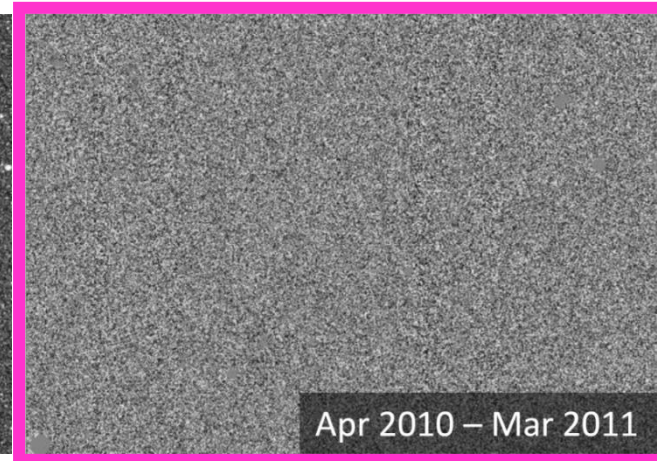


light mode

Image subtraction

Stacked - stacked

S14A Jul 2014
HSC



1 shot - 1 shot

