Solar-B EIS
CCD Windowing

CCD-1

Window-1   Window-2   Window-3   128 pixels

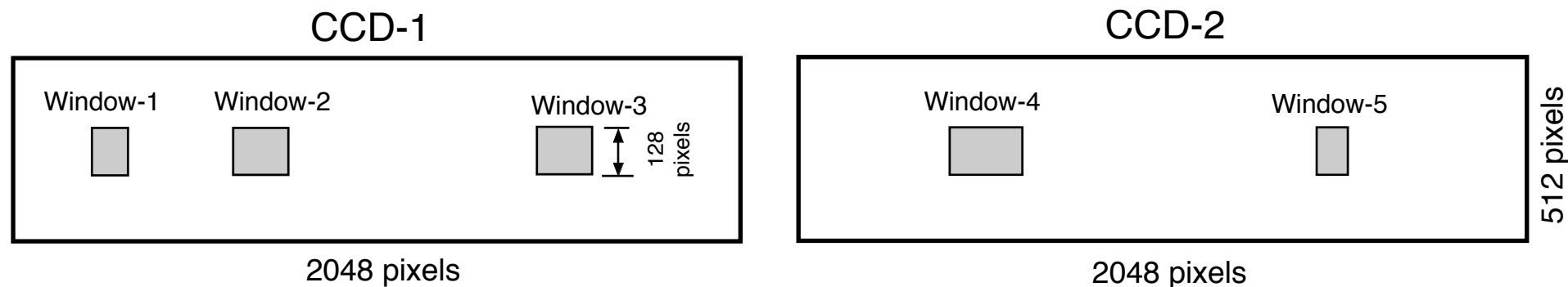### CCD-2

Window-4   Window-5   512 pixels

2048 pixels   2048 pixels

Concepts:
- Windows for an exposure must all be <u>same height</u> and have <u>same veritical position</u> on CCD.
- Windows for an exposure can have different widths.
- Up to 16 windows (TBC) can be specified for each exposure.
- It is expected that common operations will use a window height of ~128 pixels.

Example: Shows 5 windows defined for an exposure, each 128 pixels high and of varying widlth.
- EIS 'nominal' telemetry allocation of 64kbps would allow 1 window (128 pixels high and 32 pixels wide) per second.
- 5 such windows could be achieved by e.g. lossless CR=2, data packing, 'log' compression to 8 bits, and reduced data cadence.
- Greatest benefit would be use of higher telemetry allocaton -> less collected data to be lost (more lines collected over higher spatial region), higher cadence rates, and less data compression losses.
- Other data compression options include lossy general schemes, reduced height/width windows, reduced data spatial or wavelength resolution by e.g. data integration.

R.A.Gowen,MSSL,11-Jun-99