

Resource	IMPACT	PLASTIC	SECCHI	SWAVES	Total	Allocation	Difference
On during side-lobe operations?	Yes	Yes	Yes	Yes			
On during superior conjunction?	No	No	No	Yes			
Recorder usage (Gbits)	1.253	1.253	0	1.645	4.151	4.294	0.143
R/T on side-lobe 1 (kbps)	0.6424	0.6673	5.41	0.072533	6.792233	7.22	0.427767
R/T on side-lobe 2 (kbps)	0.1607	0.087	0.75	0.072533	1.070233	1.658	0.587767
<b>Side-lobe 1 options</b>							
IMPACT proposal 1A (317 bps)							
R/T on side-lobe 1 (kbps)	0.96	0.6673	5.41	0.072533	7.109833	7.22	0.110167
<b>IMPACT proposal 1B (with SWAVES)</b>							
R/T on side-lobe 1 (kbps)	0.679	0.6673	5.41	0.460586	7.216886	7.22	0.003114
<b>IMPACT proposal 1C (w/o SWAVES)</b>							
R/T on side-lobe 1 (kbps)	1.064	0.6673	5.41	0.072533	7.213833	7.22	0.006167
<b>SWAVES proposal (360-400 bps)</b>							
R/T on side-lobe 1 (kbps)	0.6424	0.6673	5.41	0.432533	7.152233	7.22	0.067767
R/T on side-lobe 1 (kbps)	0.6424	0.6673	5.41	0.472533	7.192233	7.22	0.027767
<b>Side-lobe 2 options</b>							
IMPACT proposal 2A (100 bps)							
R/T on side-lobe 2 (kbps)	0.261	0.087	0.75	0.072533	1.170533	1.658	0.487467
IMPACT proposal 2B (168 bps)							
R/T on side-lobe 2 (kbps)	0.329	0.087	0.75	0.072533	1.238533	1.658	0.419467
IMPACT proposal 2C (270 bps)							
R/T on side-lobe 2 (kbps)	0.431	0.087	0.75	0.072533	1.340533	1.658	0.317467
IMPACT proposal 2D (482 bps)							
R/T on side-lobe 2 (kbps)	0.643	0.087	0.75	0.072533	1.552533	1.658	0.105467
<b>IMPACT proposal 2E (with SECCHI)</b>							
R/T on side-lobe 2 (kbps)	0.328	0.184	1.075	0.072533	1.659533	1.658	-0.001533
<b>IMPACT proposal 2F (with SECCHI)</b>							
R/T on side-lobe 2 (kbps)	0.322	0.184	1.075	0.072533	1.653533	1.658	0.004467

PLASTIC proposal to add ApID 0x317 for 1 min proton parameters (290 bps)

R/T on side-lobe 2 (kbps)	0.1607	0.377	0.75	0.072533	1.360233	1.658	0.297767
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SECCHI proposal to improve compression of HI images (325 bps)

R/T on side-lobe 2 (kbps)	0.1607	0.087	1.075	0.072533	1.395233	1.658	0.262767
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SWAVES

On during side-lobe operations? Yes

On during superior conjunction? Yes

Recorder space usage:

One beacon packet per minute for 525 days = 1.645 Gbits

One partition

ApID 0x571

Realtime usage:

One beacon packet per minute

One housekeeping packet per minute

Total rate = 72.533 bps

ApIDs 0x501, 0x571

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IMPACT

On during side-lobe operations? Yes

On during superior conjunction? No

Recorder space usage:

One beacon packet per minute for 400 days = 1.253 Gbits

One partition

ApID 0x270

Realtime usage

Side Lobe 1:

Beacon once a minute: 36.3 bps

IMPACT+SEP HKP once a minute: 72.5 bps

Selected SEP science, undecimated, once a minute: 326.4 bps

MAG at 4 samples per second: 207.2 bps  
Total: 642.4 bps  
All ApIDs, including beacon

Side Lobe 2:

Beacon once a minute: 36.3 bps  
IMPACT+SEP HKP every 3 minutes: 24.2 bps  
MAG at 1 sample per second: 51.8 bps  
Selected SEP science, decimated every 5-10 seconds: 48.4 bps  
Total: 160.7 bps  
All ApIDs, including beacon

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PLASTIC

On during side-lobe operations? Yes  
On during superior conjunction? No

Recorder space usage:

One beacon packet per minute for 400 days = 1.253 Gbits  
One partition  
ApID 0x370

Realtime usage

Side Lobe 1:

ApID 0x313 Digital HK, 36.3 bps  
ApID 0x370 BEACON data, 36.3 bps  
ApID 0x316 Monitor Rates (Norm), 232.1 bps  
ApID 0x317 Monitor Rates (Hi), 290.1 bps  
ApID 0x321 SW Priorities (increased accumulation time), 58.0 bps  
ApID 0x322 WAP Priority, 7.25 bps  
ApID 0x323 WAP Priority, 7.25 bps  
Total: 667.3 bps

Side Lobe 2:

ApID 0x313 Digital HK, 36.3 bps  
ApID 0x370 BEACON data, 36.3 bps  
ApID 0x322 WAP Priority, 7.25 bps  
ApID 0x323 WAP Priority, 7.25 bps  
Total: 87 bps

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SECCHI

On during side-lobe operations? Yes

On during superior conjunction? No

Recorder space usage: None

Realtime usage:

Side Lobe 1:

5400 bps, of which 60 bps is periodic HK.

We might want to add 10 bps more for intermittent non-periodic HK.

This includes every 2 hours:

euvi 4 wl (2 icer10, 6 icer7, 2 icer6, 4 icer4)

cor1 (3 icer11)

cor2 (8 icer9)

hi-1 (2 512x512 Rice)

hi-2 (1 512x512 Rice)

Side Lobe 2:

750 bps, of which 60 bps is periodic HK.

This includes every 2 hours:

euvi 4 wl (8 icer10, 4 icer7)

cor1 (3 icer11)

cor2 (2 icer9)

hi-1 (1 icer10)

hi-2 (1 128x256 Rice)

Note that the breakdown of images is a proposal only, based on discussions within the SECCHI team to date.

Anticipated ApIDs for both side lobes:

Realtime: ApID 0x0400 - 0x043f

Spaceweather: ApID 0x470 - 0x47f

Bit bucket (neither stream): 0x440 - 0x46f

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