Mauna Loa Solar Observatory Observer's Log

Thu Feb 2 17:12:07 GMT 1995
Year: 95 Doy: 033
Observer: yasukawa

WEATHER COMMENT: Thu Feb 2 17:12:25 GMT 1995
Cool, clear, southwest wind. Temp=39F

Thu Feb 2 17:19:57 GMT 1995: Patrol Start

MKIII COMMENT: Thu Feb 2 17:20:14 GMT 1995
MKIII will get a late start, need to wait for extinction to slow,
then do correction before taking data.

MKIII COMMENT: Thu Feb 2 17:33:11 GMT 1995
Comments about yesterday's alignmment adventures:

Sky cleared in the latter afternoon so KVS and EAY fired up the
MKIII and started alignment work on both channels 1, then 0.
First, we put in slot mask and opal to document the starting
pixel heights.
Next we applied the use of a polarizer ahead oof the beam splitter
in channel 1 (optical chan 3) to determine the polarization axis that
gives the best amplitude, then attempted focus of the S detector
using the focus adjustment ahead of the filter/lens/beam-splitter/
detector assemblies. A slight adjustment of about a 45-degree CW turn
was made to sharpen the middle-slot peak was made. The polarizer was
removed, and alignment adjusting the up/down and rotation was
done with the goal of flattening the middle and outer slot P-S
signatures at the expense of the inner slot signature to optimize
chan 1's outer corona coverage since we are still not able to
flatten all of the P-S peaks. After we were satisfied that we were
at the best alignment, we documented the slot mask with opal to
tape.
We next checked focus on channel 0 (optical chan 2) and it looked good.
We then moved both P and S detectors inward the same amount in order
to eliminate the 10-outer pixel loss that we got after the last (1/19)
alignment. We moved the detectors lower in the corona until the lower
slot in the mask became visible. Then we adjusted the detectors with
the goal of reducing the sawtooth P-S signatures, compromising the outer
signature in favor of the inner and middle slot signatures. When we
were satisfied (burned-out, actually), we documented the mask with opal
to tape.

Since the day's data tape was already removed, we started another
tape for the alignment documentation. Used H00956.

Scan-log for that tape:
DOY 32(33) START TAPE H00956:   00:24:24

FILES:

Before alignment: 0:27   0:30   0:34

After chan 1 alignment: 2:19   2:22

After chan 0 alignment: 3:28   3:31

We did not perform corrections as mentioned earlier because the
sun was about to set by the time we finished the last steps.
Corrections will be performed today in a little while after
the sun climbs out of the rapidly changing airmass before
starting MKIII data acquisition.

Thu Feb 2 18:01:58 GMT 1995: Calibration

MKIII COMMENT: Thu Feb 2 18:23:04 GMT 1995
Corrections pau. Beginning scans. Loaf-of-bread and P-S profiles
look a bit ugly.

MKIII COMMENT: Thu Feb 2 18:25:19 GMT 1995
Oops, just took opal out.

MKIII COMMENT: Thu Feb 2 18:47:29 GMT 1995
Stopping to re attempt alignment.

Thu Feb 2 19:02:01 GMT 1995: Calibration
Thu Feb 2 20:02:01 GMT 1995: Calibration
Thu Feb 2 21:02:03 GMT 1995: Calibration
Thu Feb 2 22:02:06 GMT 1995: Calibration
Thu Feb 2 23:01:56 GMT 1995: Calibration

MKIII COMMENT: Thu Feb 2 23:43:27 GMT 1995
Attempt to get alignment back and possibly better finished.
Running CORRECT on both channels.

Fri Feb 3 00:01:56 GMT 1995: Calibration

MKIII COMMENT: Fri Feb 3 00:10:04 GMT 1995
I think we:
1. aligned chan 0 fairly well, enough to convince ourselves
that we are seeing corona in a rather noisy sky.

2. Vdiff looks brighter when comparing latest scan so we think
we are looking closer in again.
3. Channel 1 still needs work. We think it is focused. This will
help when we experiment by taking the compensator plates out and
need to refocus. we tried adjusting the rotation and up/down but
probably fell into the trap of being fooled with using just the
mask to align.

We learned that:
1. We need to look at the slit without the mask and adjust the
rotation of the detectors to optimize the P+S ramp.
2.adjust P or S to get three single peaks on P+S, maximizing the
amplitude OR optimize the phasing of the sawtooth on P-S, closing in
to where the phase changes if one can't flatten the profile out
completely (have never gotten to that point).
3. Adjust P and
S together (both inward or outward) together or use the prism
adjustment to change the height of the detector pair.

Since scans were so noisy and previous scans were badly misaligned,
we decided to call today a GREEN DOT, maintenence day and recycle
the tape.

The plan is to get coronal data with the present alignment over the
weekend (Eric will be on vacation) and on Wednesday, weather permitting,
Eric will document the pixel heights using the slot mask. Eric will
upload the corrector tables to Boulder at that time also.
Then as time permits Eric will fine tune the alignment of ch0 and
work on re-aligning ch1.

COMMENT: Fri Feb 3 00:46:04 GMT 1995
Activity Report:
QP: 221;
No coronal data

Tapes: DPMON: P00273
        LOWL: L00175

Fri Feb 3 00:47:27 GMT 1995: Filemark