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Interpretative Products

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The philosophy behind the Reference section of the portal comes from a former tech, Vee()Ann Atnipp (Cross), who introduced the LK (Little Known) Facts notebook to our laboratory: a place to collect key reference material which is absolutely essential, but and too often little known. Please contribute your LK facts to this section....



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Most data collected at the vent field scale in the Endeavour area have been referenced to the UW local ALVIN grid. As navigational precision (through use of "in-hull" data) and accuracy (by referencing to p-code GPS) has improved, there have been problems with registration of features within the vent field. To maintain registration of historical maps within the UW local ALVIN grid with p-code GPS based transponder surveys, the best location for the origin of the UW local ALVIN grid is 47°53.634'N 129°09.871'W.

Some check values for points in the vicinity of Main Endeavour Field:

```
bromide 396> !393
```

```
xy2ll.kf < coord > coord.ll
```

```
bromide 397> !394
```

```
cat coord.ll
```

```
4900 6000 47.94786 -129.09899
```

```
5100 6200 47.94966 -129.09631
```

```
bromide 398> !392
```

```
awk '{print $3,$4}' < coord.ll | proj +proj=utm +ellps=WGS84 +zone=9 -r
```

```
492608.35 5310509.85
```

```
492808.72 5310709.66
```

The conversion to lat long has been made with Ken Feldman's xy2ll.kf rather than the WHOI DSL xy2ll.dsl. The utm conversion is made with the USGS projection software 'proj' using the WGS84 ellipse which is consistent with most commercial GPS units and with the WHOI DSL ll2utm conversion routine.

The origin of the LBL net is:

```
bromide 414> printenv ORIGIN
```

```
47.8939 -129.16451667
```

```
bromide 415> printenv ORIGIN | proj +proj=utm +ellps=WGS84 +zone=9 -r
```

```
487702.66 5304520.86
```

```
bromide 416>
```



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[PED](#) > [Reference](#) > Temporal

We have adopted the [Modified Julian Day](#) (MJD) as our temporal reference frame. MJD was developed in the astronomical and geophysical community. It provides a convenient means of tagging data from many years where day-of-year approaches fail. In addition, robust algorithms are available to convert to and from MDY format, accounting for the oddities of the calendar (e.g. leap years). All MJD times are UTC. (Local Time on (most?) ships operating in the area is Pacific Time, -0800 PST, -0700 PDT). Conversion codes are available under [Tools](#).



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[PED](#) > [Reference](#) > Spatial Reference--Transponder Locations

Transponder Locations

H 47 54.8864N 129 06.2068W 9.0 11.5 1977.01

I 47 57.7530N 129 05.9637W 9.0 7.5 2000.40

J 47 57.2209N 129 05.9132W 9.0 11.0 1997.20

K 47 56.0183N 129 05.7321W 9.0 10.5 1920.62

New 2000 Xponders

Transponder Locations: Origin = 47 53.634N, 129 09.870W Zone 9

(note origin off by .001 from 09.871; this is a 1.5m difference)

Xponder Reply/Xmit Latitude Longitude UTM-X UTM-Y Depth

L-2000 9.0/10.0 4757.36433N 12905.00449W 493772.85 5311421.22 1881.1

M-2000 9.0/8.5 4756.22351N 12907.01043W 491273.62 5309311.18 1865.4

N-2000 9.0/7.5 4757.65460N 12906.20849W 492275.42 5311960.72 1866.2

O-2000 9.0/9.5 4755.99211N 12905.64396W 492974.05 5308880.22 1894.5

Other Reserved Frequencies

8.0, 9.0, 13.0 and 14.0 kHz are used by vehicles commonly operated in the area.



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