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The utilization of pulsars as SETI beacons

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Abstract: This paper proposes that pulsars can serve as beacons for the discovery of and communication with extraterrestrials. The motivation for the communication strategy proposed is discussed in detail, along with relevant astrophysical considerations. It is shown that millisecond pulsars have characteristics and a distribution in space that make it possible to envisage communication being targeted towards and away from habstars (as defined by Turnbull & Tarter) aligned with pulsars in a specified way. Lists of candidate habstars and their pulsar alignments are included for those wishing to conduct searches using the strategy described.

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Introduction

SETI paradigms apparently fall into simple categories:
(1) general surveys versus directed searches and
(2) those motivated by zero, weak or strong communicative intention.

It is possible to discuss options within such a schematic framework in terms of a focus which is either primarily on the properties and characteristics of signals that might be employed, or on the strategy of the enterprise, as presumed to be adopted by both Earthlings and extraterrestrial intelligences (ETIs). Our stance is to focus on the strategic issues for discovery, and work toward commentary on signalling characteristics. This stance contrasts with an alternative approach sometimes found in the SETI community, where it is assumed that discovery is bound up with signalling characteristics and content, so that discovery might depend upon successfully working out what an ETI might try to communicate, and how (cf. Cordes & Sullivan 1995). Consequently we do not concern ourselves with message design and content.

Various assumptions underpin the current strategies that differ in terms of resource implications and the interpretations placed upon null results. This paper does not attempt a comprehensive review or evaluation of the various assumptions and plausibilities of these approaches, or of the searches actually being done, although we do locate some existing efforts within the scheme outlined above. Rather, our concern is to propose and justify a new paradigm. The proposal here takes further the ideas proposed earlier by one of us (Edmondson 2003).

Within the scheme outlined above the new proposal can be classified as a directed search with strong communicative intent. The novelty of the proposal is the use of pulsars as beacons in relation to communicative intent. We first consider the motivation for the proposal, then the relevant astrophysical factors and finally we look at the merits.

It should be noted that the proposal given here is not the same as that discussed by Heidmann (1988), who was not concerned with the use of pulsars as directional beacons. Corbet (1999) has proposed that gamma-ray bursts should be used as both directional and time markers in SETI strategies. Some of the issues noted by Corbet are relevant to our proposal and these are touched on below.

Communicative intent

The motivation for the new proposal arises out of consideration of communicative intent. In humans communicative intent is as important as content. For SETI to be successful, we argue, it is necessary to develop an approach to this particular communication situation that reflects understanding of the cognitive and intentional context within which communication operates generally. In relation to the SETI enterprise we consider that communicative intent can be zero, weak or strong.

Zero intent

This term applies to the situation where we Earthlings have very little communicative intent (but enough to conduct a search). Furthermore, we assume that the ETIs we look for do not have communicative intent. The only mechanism for search that is open to us in this situation is to try to eavesdrop on ETIs, on the assumption that the ETIs concerned do not intend their interplanetary radar, or local TV transmissions, or whatever, to be of interest to another intelligence. This approach is problematic because (1) the radio frequencies at which to search are difficult to determine and (2) the power levels at the transmitter may be relatively low. Plausibly the

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most promising signal to listen for here would be the use of radar for interplanetary science, but the problem of identifying candidate frequencies will be compounded by the fact that such transmissions will be unpredictably infrequent and intermittent. It is widely assumed in the SETI community that low transmitter power levels do not present an insurmountable obstacle to discovery (trade-offs are possible in relation to signal processing, antenna gain, frequency, and so forth, and receiver technology is good). For our purposes here it is not relevant to explore these issues further as the zero-intent model is undirected and unintentional and thus antithetical to the new paradigm.

Weak intent

Current terrestrial SETI activity has weak communicative intent. Attempts to transmit signals[1] express weak intent because they are little more than shots in the dark. General survey searches for signals (perhaps continuous wave transmission at 1420 MHz – see http://seti1.setileague.org/articles/protectd.htm for a list of possible frequencies, and Blair (1995) for a discussion of possible frequencies) from ETIs are not directed and presume only some eventual communicative intent on our part. Discussions of different signalling paradigms (see Shostak 1995) do not really address the issue of intentionality.

Considerable efforts are being made in this style of SETI activity. For example, the resource implications of the SETI enterprise based in Berkeley are impressive. For several decades a professional academic resource has been devoted to devising and implementing techniques for ETI signal acquisition (including use of Arecibo facilities) and processing (the SETI@Home software is a significant demonstration of the power of grid computing). Indeed, it is arguable that this sustained level of work is what currently motivates popular interest in the topic as well as professional concerns to find new paradigms.

Note, however, that all this work should not mask assumptions about our intent or that of the putative ETIs. It is not the case that we Earthlings are spending much time analysing the approaches we should take to begin transmissions ourselves (this is distinct from message design). We assume that ETIs will not have complex strategies, or that if they do then we will be in the pool of those likely to be recipients of messages. On this basis the currently null result can be interpreted variously as bad luck, inadequate technology, insufficient time, lack of inventiveness in relation to signalling options, etc. Additionally, the recent production of a list of 17 129 nearby stars with characteristics appropriate for habitable planets (habstars, see Turnbull & Tarter 2003a) provides only another opportunity to direct the search at possible/likely sources without altering assumptions concerning what to search for or why any ETI is transmitting anything anyway. The assumption is that ETIs are trying to get in touch with other ETIs – somehow – and that we can benefit from this without actually making the effort to join in.

Strong intent

To consider strong communicative intent we need to look at some challenging questions. For example, what does it mean to attribute communicative intent to an ETI? How might we recognize such an intent? What must we say about our intention and its expression? How do these issues inform or motivate a search for ETIs? These questions might be summarized as follows: if Earthlings established a designed and systematic programme to begin long-term continuous transmissions in an effort to establish contact with an ETI, what would this look like?

With regard to strong intentionality we can say the following.

(1) Any system needs to be based on the assumption that we, as much as an ETI, want to be successful in establishing contact.
(2) We know that both an ETI and ourselves share the *same* problems.
(3) We must presume that both an ETI and ourselves share the *same* solutions.
(4) We and ETIs should expect to target transmissions according to a predictable and thus shared procedure.
(5) We need to be close to the point of pressing the send button if we are to be confident of our search strategy.
(6) We want to be sure of a clear positive or negative outcome.

Consider that on the part of an ETI, weak intentionality amounts to little more than 'shouting' in the hope that somewhere someone will 'hear'. This is communicative of little more than existence, in a certain direction (and perhaps only within a certain volume of the galaxy if a habstar is not identified). As the basis for the start of an interaction it is woefully inadequate, not least because it ignores the possibility that more can be done to establish the initial contact in ways that might subsequently be useful. The concern here is not about message composition; the issue rather is that the presumed intent of an ETI could be a useful basis for constraining a search and thus improving the chances of success. However, the ETI has to make the right decisions. Even in the case of a targeted search directed at habstars, intentionality could remain weak if an ETI was relatively thoughtless about the problems facing those seeking to establish contact.

Strong intentionality can be assumed of an ETI who goes about the business of transmitting a signal with an intent to maximize the chances of discovery and the utility of that discovery in relation to subsequent activity. Work in cognitive science, on distributed cognition (see Hutchins 1996), encourages us to assume that both an ETI and ourselves have the same problem to solve and that we will both be concerned to find a recoverably shared solution to a known shared problem. One way to understand this is to assume that we Earthlings should ask ourselves 'how would we maximize our discoverability by an ETI?' One answer, we propose, is that we should direct continuous transmissions in specified

[1] See, e.g., http://www.reuters.com/newsArticle.jhtml?type=scienceNews&storyID=3039848&fromEmail=true

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directions, and with signals specified in such a way as to be readily recoverable. Correspondingly, our search should be targeted in terms of both direction and signal characteristics – *using the same specifications*. The assumption that the specification of the transmission/search paradigm can be shared, and that this enhances the prospects for success and subsequent communication, is what distinguishes the proposal here from those that have been made before.

Corbet (1999) assumed a similar line of reasoning as that above, although not explicitly formulated in relation to intent and distributed cognition. Corbet's concern was to maximize efficiency by means of brief directed transmissions (contrasted with continuous omni-directional transmissions), although he recognized the need for transmitter and receiver to share understanding of the technique he proposed. The problematic nature of his proposal is that it is opportunistically dependent on cosmological events, and that the signal characteristics are not specified. The proposal here is to use pulsars as beacons, thus providing the basis for continuous signalling. Additionally, pulsars offer a specification of the signal characteristic being sent/sought. Both proposals are concerned to specify direction of transmission, and in a similar way, but the additional detail of our proposal is that transmissions are targeted at candidate stars selected as putative habitable systems (Turnbull & Tarter 2003a).

Beacons

The specifications we propose are simple.

(1) The hydrogen line frequency is likely to be ubiquitously recognized (it is not parochially salient) and so can form the basis for any signal (this is uncontentious in the sense that many searches are conducted on this assumption already).
(2) Signal characteristics can be specified in detail by the pulsar characteristics chosen for beacons, i.e. the signal can be pulsed at the repetition rates of the pulsars concerned.
(3) No correction is needed for pulse rate or base frequency modulation caused by the orbital motion of the ETI (this is richly informative and must be known by any ETI to be so).
(4) Directions can be specified in relation to pulsars acting as beacons – both transmissions and searches are aligned with the beacons.
(5) Transmissions can be targeted at identified habstars, and potential habstar sources can be identified (Turnbull & Tarter 2003a).

The core concept underlying the scheme is that an ETI will align their transmission in relation to a pulsar as a beacon. This alignment was originally envisaged as being, in a general sense, 'anti-pulsar' so that an ETI broadcasting a signal will do so 'toward the pulsar' used to determine its property – that is, 'toward the beacon' (see, e.g., Corbet 1999; cf. Edmondson 2003). Terrestrial scientists, sharing and thus knowing ETI's strategy, need only look 'away from' pulsars for specifiable signals at the pulse rate of the specified pulsar. Such a signal is maximally artefactual in an astrophysical sense (i.e. very unlikely to be considered a natural phenomenon), and this signals recoverable intent.

Directional beacons

The details of the scheme need a little fine tuning – the sense of 'toward the beacon' needs to be refined to cover habstars within a reasonable (arbitrary) angular distance of the beacon. Rather than inject huge energies into a transmission antenna with low gain (large beam width) it makes sense to pick the identifiable habstars within a specified angular range and to target those with high-gain antennae. That is what we Earthlings would do if we were concerned to maximize our discoverability. So, in reciprocal fashion, we should look in 'anti-pulsar' directions (similarly refined in definition) for signals at 1420 MHz and with pulse rates specified by the pulsars 'behind us' when we turn our antennae towards the identified habstars. The assumption is that ETIs will have/share a concept of habstars (otherwise why would they bother transmitting anything at all?) and will have identified a list closely aligned to ours. The assumptions in relation to identifying habstars are addressed later.

The original supposition was that the search in anti-pulsar directions is preferentially motivated over all other directions because any signal found will be maximally artefactual. This strengthens the sense of shared solution – shared between ourselves and an ETI – and thus flags the search as being highly motivated because the underlying assumption is that the communicative intent of the ETI is strong and unambiguous. This line of reasoning has an intuitive appeal to it; the proposal is rather 'obvious'. However, we need to recall that the resolution of the antennae involved is such that searching will not be generally 'anti-pulsar' but will be directed to specific habstars within any given angular notion of 'anti-pulsar'. Likewise, we must assume that ETIs will be directing their signals at habstars (such as our own) sufficiently closely aligned with the 'toward pulsar' direction – as explained above – but precisely specified in terms of direction so as to be aligned with the pulsars but not directed exactly towards them. This observation allows us to generalize the notion of demonstrating artefactuality by basing the paradigm on directional alignment with pulsar beacons rather than on one specific direction. It follows from this that we could also be directing our search in the 'toward pulsar' direction (refined as above), and our attempts at transmission in the 'anti-pulsar' direction (refined as above). Jean Schneider (personal communication) made the suggestion that searching could be 'toward pulsar' as much as 'anti-pulsar' and we acknowledge that elaboration.

Identifying beacons

The issue of which pulsars to use as beacons is interesting. Consideration of pulsar properties (Lorimer 2001; Hobbs & Manchester 2003; Manchester *et al*. 2003) shows that a small sub-group of pulsars, commonly referred to as 'millisecond' pulsars, have pulse periods of $\sim$1–20 ms and that these pulsars are remarkably stable. Fast pulsars are attractive because

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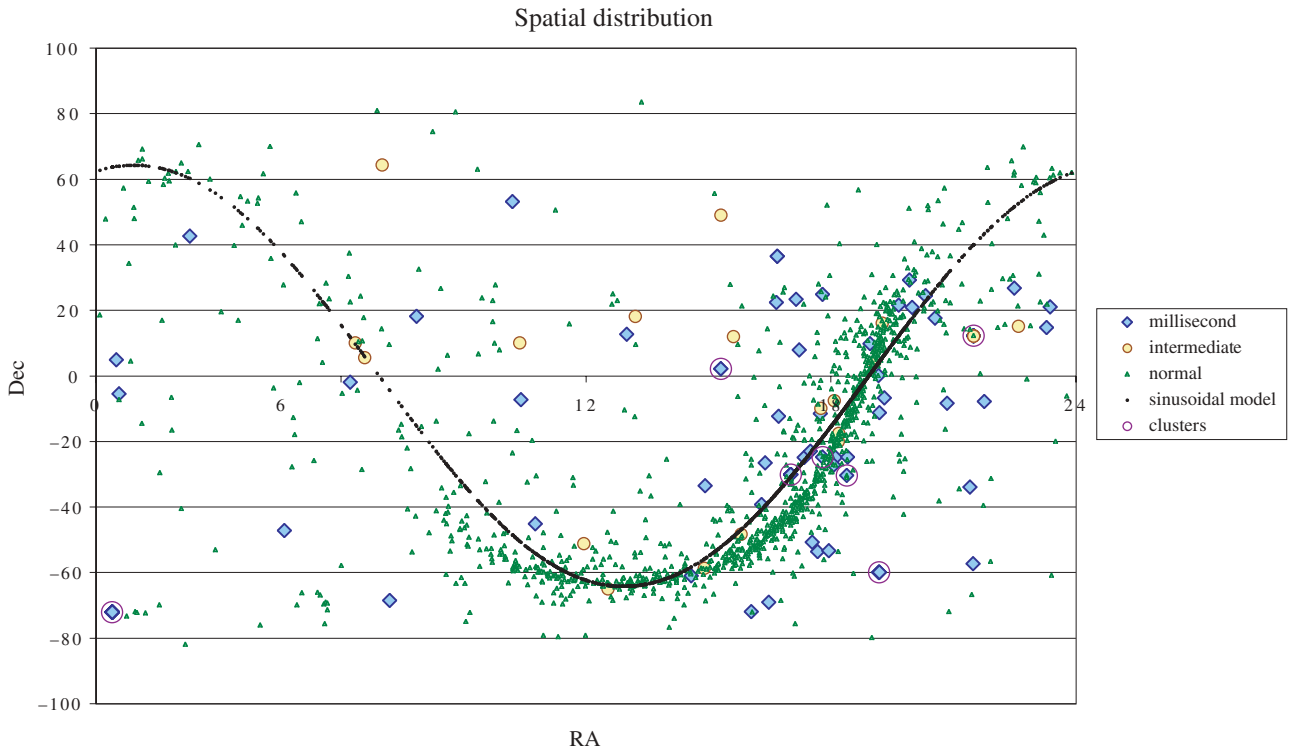


Fig. 1. This shows the spatial distribution of pulsars from the catalogue produced by Hobbs & Manchester (2003). A simple density modulated sinusoidal model is imposed on the data to guide the reader regarding the galactic distribution of objects. The locations of star clusters associated with pulsars are also shown. Pulsars for which no value is given for pulse period derivative are not shown (the data plotted here are those used in the Fig. 2, which requires a value for the derivative).

if the pulse rate is to form the basis of any coding system then the bit rate will be correspondingly fast (in comparison to the much more numerous 'normal' pulsars with pulse periods of a second or more). The fact that some of these pulsars are found in globular star clusters, and thus overlap when deployed as directional beacons, is unfortunate in that it diminishes the spread of coverage of the sky. However, the millisecond pulsars are more isotropically distributed in the sky than normal pulsars (Lorimer 2001), which means that alignment with habstars is likely to be more readily found. This is illustrated in Fig. 1.

Habstars

The Turnbull & Tarter (2003a) habstar catalogue (HabCat) is used here to identify targets appropriately aligned with pulsars. This is discussed below. We should note first, however, that the habstar list is produced with a bias toward terrestrial life-forms. Such stars are considered potential suns for 'habitable' planets that are likely to be sufficiently like Earth to have life-forms sufficiently like our own. Note, however, that a life-form based on radically different biophysics and biochemistry may have evolved to the point of producing its own habstar catalogue covering a rather different set of stars. This is perhaps far-fetched, but the point here is simply that if we can develop a habstar list, and an ETI somewhere produces a similar list, then shared biophysics and biochemistry are much more probable.

Our paradigm requires a list of habstars aligned with pulsars. Working with the original preference we focus first here on the list of habstars that are 'anti-pulsar' in direction. We then extend the scheme to cover those aligned in the direction of pulsars. In both cases the notion of alignment needs an angular definition, which we consider below, but further than this there are some technical issues to be clarified in terms of possibilities and problems, and it is to these we turn next.

Astrophysical considerations

The properties and distributions of pulsars are helpfully summarized in the database available online from the Australian Telescope National Facility (ATNF) (Hobbs & Manchester 2003; see also Manchester *et al.* 2003). The habstar list (Turnbull & Tarter 2003a) is also available online. Lorimer (2001) provides a comprehensive summary of pulsar physics. Fig. 2 shows the distribution of pulsars from Hobbs & Manchester's list of 1300 pulsars; the plot is of log pulsar period against log pulsar period derivative, adjusted to bring the zero on the y axis into alignment with the millisecond group to highlight the differences between these pulsars and the normal group. Visual inspection leads to identification of an intermediate group which may be closely aligned with the so-called 'intermediate-mass binary pulsars' (see Lorimer 2001) and which lies between the millisecond pulsars and

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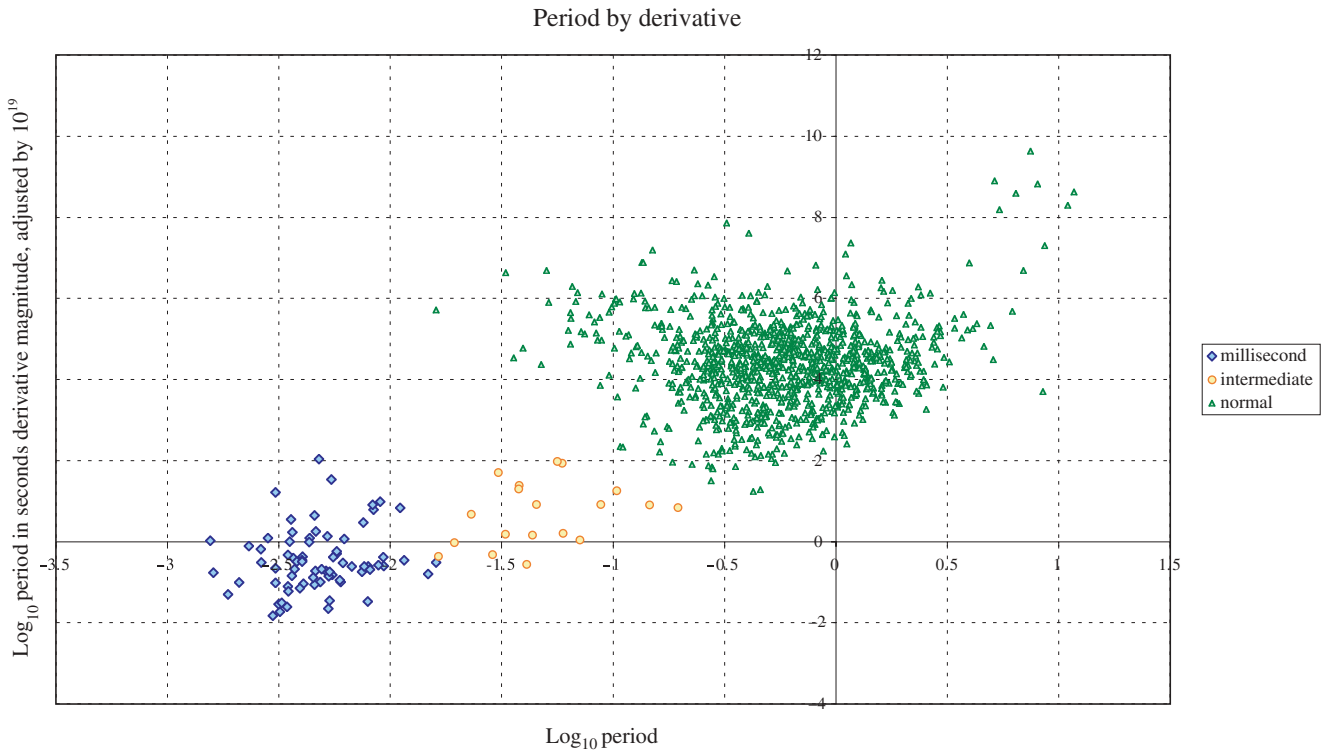


Fig. 2. This shows the distribution of pulsars organized by period and stability. The axes are logarithmic, and the *X*-axis shows period with the *Y*-axis showing stability (magnitude of the derivative of the period). Three groups of pulsars are identified – millisecond, intermediate, normal, with the groupings being determined visually. The boundary between the millisecond and the intermediate groups is at that period above which a normal pulsar might be found (where normal is independently identified by the rate of change of period associated with the normal group in the literature). On the graph above this point is identifiable by the fastest outlier of the normal group. The distinction between intermediate and normal is made subjectively.

those that are normal. The boundaries between the three classes are not clear.

Pulsars and habstars

The discoverability of pulsars appears to be determined by the effort made to find them, but in relation to presuppositions made about any ETI's knowledge of pulsars this issue needs to be considered in detail. From a terrestrial perspective there seems to be an entirely unremarkable drift to find pulsars that are a bit weaker, further or faster, but nonetheless there are no dramatic trends in the data concerning either pulse period or location or power, as a function of discovery date (see Fig. 3 – data from Hobbs & Manchester 2003). It does appear from the depiction of the data that faster pulsars have been discovered more recently, but the trend is not disconcerting. It could be argued that discovery of pulsars, especially the fast ones, is so recent in astronomical terms that we are not able to assume much of an ETI's knowledge of this class of objects. Against this must be set the argument that if our set of known pulsars is technology limited (and an ETI has better technology) then increased receiver sensitivity will be known by the ETI to be an issue and they will preferentially select the more powerful pulsars for use as beacons. Additionally, of course, greater receiver sensitivity is probably more likely to increase the distance at which known pulsars are located than it is to increase the number of known pulsars at currently common distances. The implication is that the pulsar density is in fact already known fairly well, and that better technology will simple sample more of the galaxy. However, this increase in the pulsar inventory would be aligned more with the galactic plane and this would not greatly enhance the sampling of the HabCat.

We might reasonably assume, therefore, that if an ETI orbiting a habstar knows about pulsars then they know about a set of objects in space that matches more or less the set we know about, without systematic differences from our set. Note that the SETI paradigm proposed here is not limited to any specific pulsar population – as they are discovered so they can be included in the SETI strategy discussed here. Clearly, the larger the set the more likely that this set matches well the set known by an ETI, and that the beacon selection and alignment will be suited for our detection of that ETI. This factor contributes to the complexity of the sampling which is inherent in the proposed paradigm (see below).

Pulsar pulse rates are curiously distributed – as shown in Fig. 2 – and Lorimer discusses the evolutionary model that accounts for this. It should be noted that the comparable figure in Lorimer's paper is based on fewer data. We have chosen, somewhat arbitrarily, to limit the list for initial use to those with periods of 16 ms or less. As discussed above, faster

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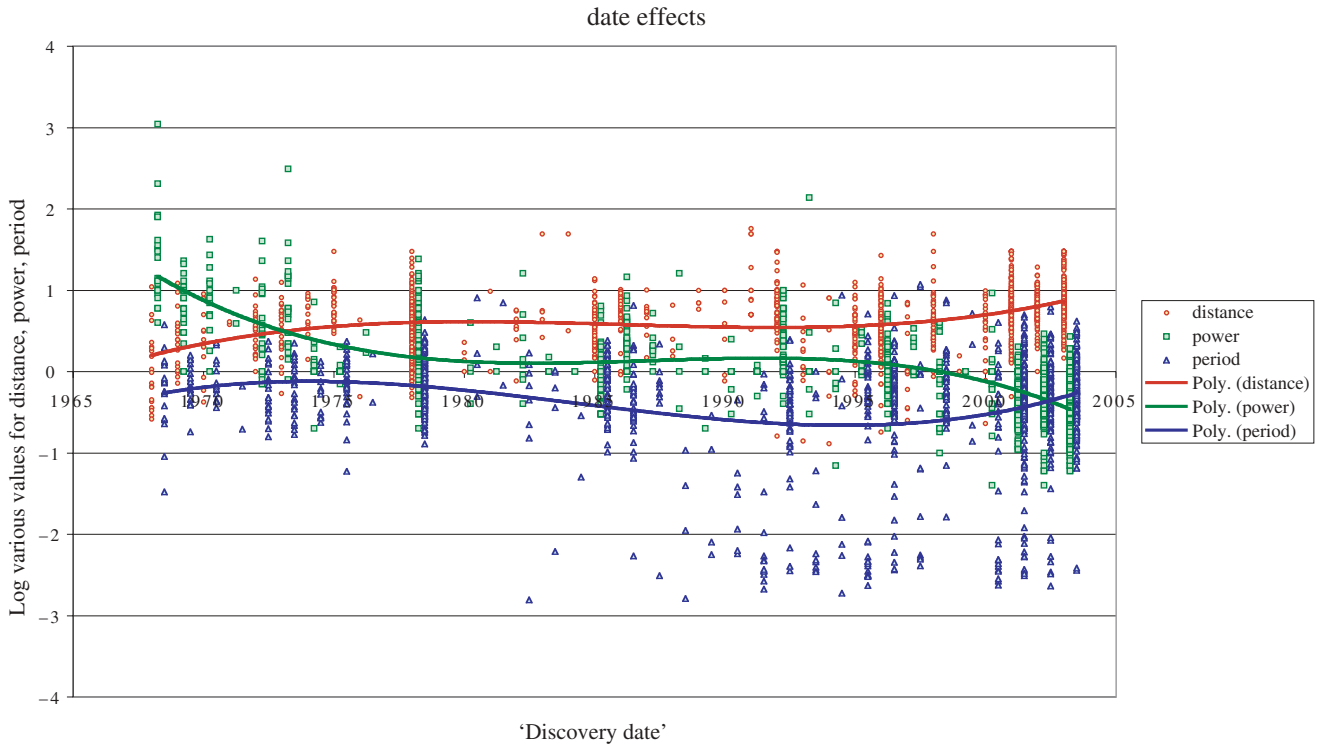


Fig. 3. This sketch shows the discovery date effects listing in Hobbs & Manchester (2003) arranged as a function of logarithmic values of distance, power and period, with polynomial loose fits to the data. The trends are unexceptional – indeed they seem intuitively predictable. The notable feature is the discovery of faster pulsars since the early 1980s, but there is no indication that we are moving to a phase of discovery of markedly different stellar objects. The date values are adjusted for the data sets to avoid overlapping of symbols in the sketch.

pulsars are to be preferred. It is assumed that any such distribution mapped by an ETI will look similar and that they will make similar decisions about inclusion in the population of beacons. Note, it makes sense for both parties to start work with the shortest period pulsars, and to prefer to work with short periods whenever possible.

Pulsars are noted for having significant proper motion in space. Inspection of the figures shows that they are sufficiently distant from us (in comparison with the much closer habstars) that the directions specified as beacons do not move significantly in relation to the identification of habstars as targets. Fast pulsars have slower proper motion (Lorimer 2001 quotes figures of $\sim$450 km s^{-1} for normal pulsars and $\sim$80–140 km s^{-1} for millisecond pulsars). Because of finite light travel time and stellar proper motions, the level of alignment between habstars and pulsars will alter with time.

For the purposes of this paper the relevant timescale is the light travel time from the Earth to a potential habstar (and back). If in this timescale the pulsars or habstars were to move a significant distance on the sky then this would degrade the use of a beacon. As noted by Turnbull & Tarter (2003a) the typical habstar is $\sim$100 pc distant from us and thus the travel timescale (return trip) will be of the order of 650 yr. If we assume that the proper motion of the habstars with respect to the Sun is of the order of 50 km s^{-1} (Turnbull & Tarter 2003a), then this motion corresponds to an apparent motion on the sky of much less than 1° (for an assumed distance of 100 pc). Indeed for a habstar to move an apparent distance of 1° on the sky in 650 yr and at a distance of 100 pc would correspond to a velocity in the plane of the sky much greater than the escape velocity of the Galaxy. Although normal pulsars typically have a larger proper motion due to the kick resulting from the originating supernova, because they are typically further away once again the apparent motion on the sky will be small.

The millisecond pulsars and habstars have similar apparent distributions on the sky (but note that the normal pulsars are more concentrated in the galactic plane, cf. Fig. 1). For the habstars, the peak in the distribution of distances is at around 100 pc (Turnbull & Tarter 2003a). The largest distance included in the catalogue is 300 pc. This distance range and limit means that the habstars are distributed roughly isotropically on the sky, the scale height of main sequence stars in the Galaxy being of the order of 300 pc (Gilmore & Reid 1983). An issue with the distribution of pulsars is the concentration of them in globular clusters (see also Fig. 1) such as M15 and 47 Tucanae, where in the latter case there are at least 20 ms pulsars alone (Freire *et al.* 2003). These concentrations of millisecond pulsars all within a degree of each other will naturally lead to multiple tie-ups between habstars, where one habstar is within the corresponding cone of a number of pulsars (it was noted earlier that such multiple tie-ups were unfortunate; the upside is that this distribution

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may serve usefully as the basis for multichannel communication sharing, to a significant extent, a direction).

Identification of target beacons and habstars

The current catalogue populations of habstars (17 129) and pulsars (1300) are significantly different. The subset of fast pulsars to be considered for use as beacons is rather small. The list of habstars has to be processed to find alignments with the selected pulsars – and in this regard Schneider's elaboration is useful because it will effectively double the set of potential target habstars.

It is worth commenting on the projected density of the habstars on the sky. Isotropic distribution on the sky would correspond to 0.4 habstar $\deg^{-2}$. A consequence of this is that choosing a random point on the sky and searching with a radius of 1° will result in typically around one habstar being detected within this region. Although arbitrary this seems to us a sensible initial value to use in computing pulsar–habstar alignments.

In order to focus the search for beacons (defined by pulsar–habstar alignment) we concentrate on 'millisecond' pulsars. These are shown in Fig. 2 as the lower left-hand group. The group is roughly defined by the limits $P_{\rm spin} < 16$ ms and $|{\rm d}P/{\rm d}t| < 2 \times 10^{-19}$ (there is a millisecond pulsar with $P_{\rm spin} = 16.052$ (J2145−0750), and another with $|{\rm d}P/{\rm d}t| = 2.03 \times 10^{-19}$). This obviously reduces very substantially the number of pulsars – from 1300 in the basic pulsar catalogue down to 73 (75 including the two just outside the limits). As mentioned above, choosing a search radius of 1° around the positions and anti-positions of these pulsars will mean that on average there will be around one habstar in this zone. It should be noted that several pulsars do not have a measured value listed for ${\rm d}P/{\rm d}t$ and these are not included in the calculations here (they are included in the full listing in the Appendix, with the ${\rm d}P/{\rm d}t$ value set to 1).

In order to search for useful positional correspondence between pulsars and habstars, so as to define a useful set of beacons, we adopt the following criteria. Based on the position of each pulsar, we calculate the pulsar anti-position on the sky and then define a search cone of radius 1° around this pulsar anti-position (defined as the location on the sky that is diametrically opposite the position of the pulsar). We then determine whether there is a habstar within this search radius. We repeat the procedure for the pulsar position. The first procedure is based on the proposed ETI beaming a signal towards the pulsar beacons and the second on the ETI beaming a signal directly away from any such pulsar beacon.

Tables 1 and 2 present lists of habstars that are aligned 'anti-pulsar' and 'toward pulsar', in relation to the millisecond pulsars identified above. In connection with Table 1 we note that the total number of correlations is 53; the number of different pulsars in this sample is 30; the number of different habstars is 52. There are three habstars with two pulsars in this sample, and a few pulsars with more than one habstar. (If J2145−0750 is included the numbers increase to 56, 31, 55, because it anti-aligns with three habstars.)

In connection with Table 2 we note that the total number of correlations is 60; the number of different pulsars in this sample is 44; the number of different habstars is 45. In this sample there is one habstar (index number 2186) that is in the same direction as 15 pulsars. The star is called HD2466 and it just happens to be near to the 47 Tucanae globular cluster (and so has lots of pulsars within 1°). It is not in the cluster (which is much further away), there is just a chance superposition.

The data in Tables 1 and 2 show that pulsar alignments do sample the habstar population with sufficient density to yield useful lists – 97 habstars aligned with 55 fast pulsars is a good starting point for experimental work to explore the possibility that pulsars can serve as beacons (note that there are 19 pulsars common to Tables 1 and 2).

It is sensible here to recall that the identification of groupings in the pulsar population is rather subjective. It turns out, for example, that the fast outlier normal pulsar (see Fig. 2), J0537−6910, could easily serve as a beacon (well off the galactic plane, reasonably fast with $P_{\rm spin} = 16.115$ ms). It happens not to match any habstars with our alignment criteria so does not appear in the listings. This point is taken up later.

Signal characteristics

The assumption that an ETI will transmit at the period specified by the pulsar to which the transmission is aligned facilitates discovery and could provide a rich source of data about an ETI's planetary system. The known periodicity makes signal recovery from noise easier because summation of data over the suspected period can be used (cf. the use of this technique to recover details of pulsar pulse shape, Lorimer 2001). Additionally, the use of a single transmission frequency (say 1420 MHz) dispenses with the need to consider dispersion corrections. Certainly, there are other aspects of signalling design that need to be resolved (e.g. to combat fading/scintillation) but these can be tackled after discovery, not as part of refinement of discovery procedures. It can be assumed that an ETI will maintain a constant pulse period (derivable even when the pulsar is part of a binary system) with sufficient accuracy that their own motion will be recoverable from perturbations in period. Indeed, it may be possible to disentangle several details of an ETI's environment: spin about the axis of their own planet, orbital details, planetary system details (and thus these characteristics do not have to be encoded in the message – cf. Sullivan & Cordes 1995).

As noted by Corbet (1999) the energy required to transmit a continuous signal can be used to produce a more powerful (detectable) signal if the transmission is pulsed – 'providing the recipient knows where and when a signal is coming from'. In our scheme the pulse rate determines much of what the recipient needs to know for signal detection, and the mark/space ratio will also help if short, perhaps 1:10 (roughly typical of pulsars; although there is no need to mimic the beacon's pulse characteristics). The directional aspect of the search is sorted out by the alignments as discussed

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Table 1. *A list of potential beacons for ETI searches. Listed are positional coincidences (within 1°) between pulsar anti-positions on the sky and stars in the habstar list of Turnbull & Tarter (2003a). Shown in this table are the pulsar name, pulsar period and period derivative, pulsar position (in J2000 coordinates), and for the corresponding habstar, the Hipparcos ID number and the position are shown (in J2000 coordinates)*

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J0034−0534	0.00188	0.496E−20	8.5908	−5.5768	61 261	188.3188	5.7815	0.3405
J0034−0534	0.00188	0.496E−20	8.5908	−5.5768	61 341	188.5329	4.9616	0.6180
J0218+4232	0.00232	0.774E−19	34.5262	42.5382	69 795	214.2679	−42.8625	0.4146
J0437−4715	0.00576	0.573E−19	69.3154	−47.2523	81 101	248.4792	47.2716	0.8365
J0437−4715	0.00576	0.573E−19	69.3154	−47.2523	81 242	248.8888	47.6831	0.6063
J0613−0200	0.00306	0.957E−20	93.4329	−2.0131	89 207	273.0754	1.8975	0.3757
J0613−0200	0.00306	0.957E−20	93.4329	−2.0131	89 412	273.6892	1.7584	0.3613
J0751+1807	0.00348	0.778E−20	117.7879	18.1274	97 596	297.5579	−17.9539	0.2881
J1012+5307	0.00526	0.171E−19	153.1392	53.1174	109 333	332.2475	−52.7688	0.9574
J1012+5307	0.00526	0.171E−19	153.1392	53.1174	109 787	333.5763	−53.2999	0.4737
J1012+5307	0.00526	0.171E−19	153.1392	53.1174	109 956	334.0387	−53.5529	0.9995
J1024−0719	0.00516	0.185E−19	156.1612	−7.3219	110 760	336.5812	7.9036	0.7174
J1024−0719	0.00516	0.185E−19	156.1612	−7.3219	110 782	336.6504	6.5504	0.9135
J1045−4509	0.00747	0.177E−19	161.4588	−45.1650	112 379	341.4146	45.3897	0.2290
B1257+12	0.00622	0.114E−18	195.0125	12.6824	4699	15.0942	−13.5992	0.9204
B1516+02B	0.00795	−0.333E−20	229.6308	2.0876	15 256	49.1958	−2.5839	0.6600
B1516+02B	0.00795	−0.333E−20	229.6308	2.0876	15 500	49.9346	−2.0715	0.3042
B1516+02A	0.00555	0.412E−19	229.6387	2.0910	15 256	49.1958	−2.5839	0.6627
B1516+02A	0.00555	0.412E−19	229.6387	2.0910	15 500	49.9346	−2.0715	0.2965
J1643−1224	0.00462	0.185E−19	250.9088	−12.4163	21 918	70.7029	12.2103	0.2912
J1643−1224	0.00462	0.185E−19	250.9088	−12.4163	22 012	70.9729	12.6858	0.2770
J1643−1224	0.00462	0.185E−19	250.9088	−12.4163	22 021	71.0154	12.9912	0.5847
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	23 291	75.1533	29.4729	0.6526
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	23 302	75.1750	30.8972	0.7990
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	23 438	75.5733	29.9950	0.2940
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	23 291	75.1533	29.4729	0.6609
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	23 302	75.1750	30.8972	0.7911
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	23 438	75.5733	29.9950	0.2961
J1713+0747	0.00457	0.854E−20	258.4563	7.7937	24 353	78.3862	−7.3299	0.4691
J1713+0747	0.00457	0.854E−20	258.4563	7.7937	24 472	78.7825	−7.3458	0.5542
J1730−2304	0.00812	0.202E−19	262.5900	−23.0754	25 586	82.0250	22.9307	0.5832
J1730−2304	0.00812	0.202E−19	262.5900	−23.0754	25 652	82.1992	23.9581	0.9653
J1732−5049	0.00531	0.138E−19	263.1988	−50.8167	26 113	83.5362	51.2162	0.5230
J1740−5340	0.00365	0.168E−18	265.1854	−53.6780	26 871	85.5804	53.5156	0.4271
J1740−5340	0.00365	0.168E−18	265.1854	−53.6780	26 933	85.7446	54.2576	0.8054
B1744−24A	0.01156	−0.340E−19	267.0092	−24.7769	27 236	86.5846	25.4764	0.8183
B1744−24A	0.01156	−0.340E−19	267.0092	−24.7769	27 640	87.7604	25.2288	0.8767
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	28 528	90.3258	27.2816	0.7622
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	29 074	91.9958	27.4284	0.9181
B1855+09	0.00536	0.178E−19	284.4013	9.7215	33 109	103.4367	−9.5154	0.9864
J1910−5959A	0.00327	0.307E−20	287.9279	−59.9741	34 804	108.0712	59.2652	0.7233
J1910−5959C	0.00528	0.220E−20	287.7729	−60.0166	34 804	108.0712	59.2652	0.8085
J1911−1114	0.00363	0.142E−19	287.9550	−11.2395	34 767	107.9629	10.5122	0.7274
B1937+21	0.00156	0.105E−18	294.9104	21.5831	37 217	114.6692	−21.2234	0.4331
J2033+17	0.00595	0.110E−19	308.3375	17.6000	42 281	129.3150	−17.4948	0.9832
J2051−0827	0.00451	0.127E−19	312.7812	−8.4605	43 618	133.2563	9.1858	0.8670
J2051−0827	0.00451	0.127E−19	312.7812	−8.4605	43 692	133.4908	8.4215	0.7106
J2124−3358	0.00493	0.205E−19	321.1825	−33.9789	46 022	140.7904	33.9056	0.3989
J2124−3358	0.00493	0.205E−19	321.1825	−33.9789	46 098	141.0100	34.7969	0.8359
J2229+2643	0.00298	0.146E−20	337.4617	26.7327	51 297	157.1775	−27.3654	0.6936
J2229+2643	0.00298	0.146E−20	337.4617	26.7327	51 494	157.7537	−26.8675	0.3217
J2229+2643	0.00298	0.146E−20	337.4617	26.7327	51 657	158.3067	−26.8142	0.8489
J2317+1439	0.00344	0.242E−20	349.2883	14.6587	55 066	169.0925	−14.6931	0.1988

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Table 2. *A list of potential beacons for ETI searches. Listed are positional coincidences (within 1°) between pulsar positions on the sky and stars in the habstar list of Turnbull & Tarter (2003a). Shown in this table are the pulsar name, pulsar period and period derivative, pulsar position (in J2000 coordinates), and for the corresponding habstar, the Hipparcos ID number and the position are shown (in J2000 coordinates)*

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B0021−72C	0.00576	−0.499E−19	5.9596	−72.0754	2186	6.9092	−71.8826	0.9689
B0021−72D	0.00536	−0.343E−20	6.0575	−72.0788	2186	6.9092	−71.8826	0.8740
B0021−72E	0.00354	0.985E−19	6.0462	−72.0889	2186	6.9092	−71.8826	0.8872
B0021−72F	0.00262	0.645E−19	6.0158	−72.0786	2186	6.9092	−71.8826	0.9146
B0021−72G	0.00404	−0.421E−19	6.0329	−72.0777	2186	6.9092	−71.8826	0.8977
B0021−72H	0.00321	−0.184E−20	6.0279	−72.0685	2186	6.9092	−71.8826	0.9006
B0021−72I	0.00348	−0.459E−19	6.0329	−72.0777	2186	6.9092	−71.8826	0.8977
B0021−72J	0.00210	−0.979E−20	5.9975	−72.0663	2186	6.9092	−71.8826	0.9300
B0021−72L	0.00435	−0.122E−18	6.0154	−72.0825	2186	6.9092	−71.8826	0.9158
B0021−72M	0.00368	−0.384E−19	5.9767	−72.0919	1779	5.6446	−73.0323	0.9973
B0021−72M	0.00368	−0.384E−19	5.9767	−72.0919	2186	6.9092	−71.8826	0.9557
B0021−72N	0.00305	−0.219E−19	6.0379	−72.0747	2186	6.9092	−71.8826	0.8922
J0024−7204O	0.00264	0.304E−19	6.0192	−72.0816	2186	6.9092	−71.8826	0.9120
J0024−7204Q	0.00403	0.340E−19	6.0683	−72.0736	2186	6.9092	−71.8826	0.8623
J0024−7204S	0.00283	−0.121E−18	6.0163	−72.0784	2186	6.9092	−71.8826	0.9141
J0024−7204U	0.00434	0.952E−19	6.0408	−72.0666	2186	6.9092	−71.8826	0.8876
J0030+0451	0.00487	0.100E−19	7.6142	4.8610	2659	8.4200	4.9478	0.8105
J0034−0534	0.00188	0.496E−20	8.5908	−5.5768	2980	9.4867	−5.9979	0.9899
J0218+4232	0.00232	0.774E−19	34.5262	42.5382	10 753	34.5808	41.9297	0.6109
J0437−4715	0.00576	0.573E−19	69.3154	−47.2523	21 425	69.0008	−47.6551	0.5111
J0437−4715	0.00576	0.573E−19	69.3154	−47.2523	21 458	69.1108	−46.4855	0.7937
J0711−6830	0.00549	0.149E−19	107.9758	−68.5132	34 805	108.0721	−67.7823	0.7372
J0711−6830	0.00549	0.149E−19	107.9758	−68.5132	35 052	108.7346	−68.0708	0.8783
J1045−4509	0.00747	0.177E−19	161.4588	−45.1650	52 629	161.4388	−45.7589	0.5942
J1045−4509	0.00747	0.177E−19	161.4588	−45.1650	52 666	161.5379	−45.7904	0.6304
B1257+12	0.00622	0.114E−18	195.0125	12.6824	63 577	195.4238	13.1736	0.6406
J1455−3330	0.00799	0.243E−19	223.9496	−33.5129	72 761	223.1212	−33.2672	0.8640
J1455−3330	0.00799	0.243E−19	223.9496	−33.5129	72 991	223.7429	−34.4454	0.9552
J1455−3330	0.00799	0.243E−19	223.9496	−33.5129	73 140	224.2038	−34.2465	0.7764
J1455−3330	0.00799	0.243E−19	223.9496	−33.5129	73 221	224.4650	−33.2740	0.5681
B1516+02B	0.00795	−0.333E−20	229.6308	2.0876	74 907	229.6304	1.7697	0.3179
B1516+02B	0.00795	−0.333E−20	229.6308	2.0876	75 222	230.5779	2.0069	0.9505
B1516+02A	0.00555	0.412E−19	229.6387	2.0910	74 907	229.6304	1.7697	0.3213
B1516+02A	0.00555	0.412E−19	229.6387	2.0910	75 222	230.5779	2.0069	0.9429
J1629−6902	0.00600	0.100E−19	247.2863	−69.0459	80 733	247.2388	−68.4179	0.6297
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	83 241	255.1913	−30.5162	0.4226
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	83 522	256.0404	−30.6593	0.9212
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	83 241	255.1913	−30.5162	0.4151
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	83 522	256.0404	−30.6593	0.9154
J1713+0747	0.00457	0.854E−20	258.4563	7.7937	84 521	259.1713	8.0586	0.7625
J1721−2457	0.00350	0.590E−20	260.2725	−24.9517	84 907	260.2812	−24.6835	0.2683
J1730−2304	0.00812	0.202E−19	262.5900	−23.0754	85 561	262.2779	−23.8359	0.8221
J1730−2304	0.00812	0.202E−19	262.5900	−23.0754	85 642	262.5271	−22.9513	0.1391
J1740−5340	0.00365	0.168E−18	265.1854	−53.6780	86 347	264.6679	−54.4694	0.9455
J1744−1134	0.00408	0.894E−20	266.1221	−11.5818	86 702	265.7284	−10.7948	0.8800
J1757−5322	0.00887	0.263E−19	269.3129	−53.3740	87 793	269.0179	−53.5824	0.3613
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	88 354	270.6383	−27.7796	0.6632
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	88 465	270.9533	−26.8398	0.4718
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	88 683	271.5571	−27.4926	0.5102
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	88 746	271.7567	−27.1020	0.6952
J1910−5959A	0.00327	0.307E−20	287.9279	−59.9741	94 410	288.2263	−59.6888	0.4128
J1910−5959C	0.00528	0.220E−20	287.7729	−60.0166	94 410	288.2263	−59.6888	0.5594
J1911−1114	0.00363	0.142E−19	287.9550	−11.2395	94 017	287.1234	−11.1856	0.8334
B1937+21	0.00156	0.105E−18	294.9104	21.5831	96 912	295.5025	22.2827	0.9166
B1953+29	0.00613	0.297E−19	298.8658	29.1454	98 151	299.2021	29.5309	0.5115
B1953+29	0.00613	0.297E−19	298.8658	29.1454	98 185	299.2938	29.9269	0.8910
J2129−5721	0.00373	0.207E−19	322.3446	−57.3539	105 838	321.5550	−57.9499	0.9894
J2229+2643	0.00298	0.146E−20	337.4617	26.7327	110 946	337.1808	26.7257	0.2809
J2317+1439	0.00344	0.242E−20	349.2883	14.6587	114 739	348.6388	15.2118	0.8531
J2322+2057	0.00481	0.970E−20	350.5929	20.9508	115 417	350.7017	20.5590	0.4066

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earlier and tabulated in Tables 1 and 2. A null, to a given signal strength, is readily determined and can be listed in a catalogue, either for a repeat assessment or for the development of more sophisticated receiver systems if technological limits are thought relevant. A target habstar in this scheme can be investigated with <100 min of data (thousands of pulse periods overlaid for initial scrutiny), permitting straightforward data acquisition and archiving for offline processing. Plausibly, simple summation of signals over the pulse period will suffice for initial assessment as minor deviations in period (due to ETI's orbital motion, or whatever) can be recovered subsequently.

Power levels appropriate for signal detection of an ETI using a directional signal are discussed by Turnbull & Tarter (2003a) in relation to the distribution of distances in their HabCat. They note that 'the farthest star in the HabCat is at $\sim$300 pc, and transmitted powers comparable to the Arecibo planetary radar will be detectable to the ATA [Allen Telescope Array] at this distance'. Habstar motion implies the need to use a transmission beamwidth of several arcmin, such as might be achieved with a 100 m dish at 1420 MHz. Signals are thus likely to be on the borderline of detectability without additional techniques such as summation.

The discussion here is concerned with SETI rather than with the details of what an ETI might be trying to communicate. Additionally, by focusing on SETI we also mean to de-emphasize the more complex issues of designing a systematic communications protocol – the two topics are not the same. Following the discovery of an ETI using a beacon it then becomes possible to consider what solutions might be shared in relation to multiple channels, fading, etc.

Conclusion

The paradigm sketched above is simple to comprehend and exploit, suitable for repeated measures, extremely sensitive and ultimately rather obvious in relation to the desire to establish recognizable artefactuality in the solution to a known shared problem. A null result for any pulsar alignment is probably unequivocal (at the time of assessment) and not technology limited. The main drawback is that the scheme really only samples the sky.

The cynical astronomer might argue that the proposal is rather like looking for one's lost key under the streetlamp – because that is where the light is. The reality is different: the proposal identifies a reason for looking in a specific direction, at specific targets, for specific signals with pulse rates such that data rates for a transmission are usefully high. The use of the HabCat significantly enhances the value of the scheme, but it remains the case that the sample covered is still less than 1% of the habstar population (using millisecond pulsars).

As noted earlier, the pulsar groupings are arbitrary as well as the criteria, and they are really mentioned only in order to provide a convenient way of referring to the faster and more stable subset of the total pulsar population. The initial criteria ($P_{\rm spin}<16$ ms, $|{\rm d}P/{\rm d}t|<2\times10^{-19}$) could be relaxed to include some intermediate pulsars and fast normal pulsars, especially if they do not lie in the galactic plane (J0537$-$6910 provides a good example). This would enlarge the potential for finding pulsar–habstar alignments. Another way of doing this is to retain the criteria and enlarge the habstar listing. We have learned (Maggie Turnbull, personal communication) that a more extensive HabCat is forthcoming (Turnbull & Tarter 2003b), and although many of the objects in the new list lie at considerable distances from us (mean distance of 240 pc) the list will usefully augment the opportunities for finding pulsar–habstar alignments as described here.

The list of candidate alignments could be enlarged markedly by using *all* pulsars, regardless of pulsar stability and pulse rate. The coverage is substantially higher – 1858 habstars, which is approximately 10% of the habstar population (see the Appendix). The disadvantage of doing this, from an ETI's point of view as much as ours, is that the transmission rate could be very slow. The compensation, for any ETI as much as ourselves, is that such a scheme for transmission will not use a huge amount of energy as the transmission pulses will mostly be interleaved. Communications protocols and message content, should we decide to transmit, or should we detect anything, are other issues entirely and will be covered in a separate publication.

One potentially serious objection to the proposed scheme is that ETIs sending pulses might be thought to be detectable as pulsar-like objects. These have not already been detected and surely this 'null result' must make the scheme implausible. In fact the proposal permits manageable energies to be put into signalling for discoverability using the paradigm, without having to broadcast infeasible energies in general mimicry of pulsars (for which the established discovery procedure is different), or more broadly for detection by SETI programmes. In short, the current pulsar discovery techniques are really unlikely to have turned up any ETI transmitting on one or a few frequencies at a specific pulse rate, and SETI searches more generally will fail if they look for sufficiently energetic continuous wave transmissions rather than pulsed transmissions. Signal overlay techniques using data from a known direction, at a presumed frequency, and with predicted pulse rate, permit a possible signal to be dredged out of noise levels that are otherwise likely to be intractable (permitting feasibly low transmitter power for an ETI community to establish and resource a scheme for broadcasting).

One practical way of countering the objection is simply to check the habstars identified in the tables given in the paper and the Appendix. It is to be expected that even the amateur radio astronomy community might have the resources to check the habstars listed. It is our view that the scheme is plausible, worthwhile and practical – null results should be quickly and inexpensively available. Positive results would be interesting.

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Appendix

Tables A1 and A2 provide the full sets of correlations in anti-pulsar (792) and pulsar (1066) alignments as described for the millisecond pulsars in the body of the paper.

Table A1. *792 correlations between pulsar anti-positions and the habstar catalogue*

Pulsar details					Habstar details			
Name	P_{spin}	$\lvert dP/dt \rvert$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J0006+1834	0.69375	0.210E−14	1.5200	18.5831	58 900	181.1883	−17.8510	0.8037
J0006+1834	0.69375	0.210E−14	1.5200	18.5831	59 089	181.7596	−19.5303	0.9771
B0011+47	1.24070	0.564E−15	3.5738	47.7759	59 693	183.6192	−47.6128	0.1694
J0034−0534	0.00188	0.496E−20	8.5908	−5.5768	61 261	188.3188	5.7815	0.3405
J0034−0534	0.00188	0.496E−20	8.5908	−5.5768	61 341	188.5329	4.9616	0.6180
B0031−07	0.94295	0.408E−15	8.5367	−7.3648	61 419	188.7825	7.4429	0.2579
B0031−07	0.94295	0.408E−15	8.5367	−7.3648	61 561	189.2033	7.9332	0.8761
B0037+56	1.11822	0.288E−14	10.1346	57.2736	61 716	189.7550	−56.9106	0.5252
B0037+56	1.11822	0.288E−14	10.1346	57.2736	61 744	189.8154	−57.3235	0.3230
B0037+56	1.11822	0.288E−14	10.1346	57.2736	61 928	190.3708	−56.3046	0.9974
J0051+0423	0.35473	0.700E−17	12.8754	4.3803	62 898	193.3600	−5.0036	0.7896
J0051+0423	0.35473	0.700E−17	12.8754	4.3803	63 070	193.8413	−4.5043	0.9738
B0052+51	2.11517	0.954E−14	13.9388	51.2902	63 224	194.3204	−52.0491	0.8494
B0053+47	0.47204	0.333E−14	14.1063	47.9363	62 903	193.3825	−47.8884	0.7253
B0053+47	0.47204	0.333E−14	14.1063	47.9363	62 955	193.5029	−48.5818	0.8836
B0053+47	0.47204	0.333E−14	14.1063	47.9363	63 229	194.3400	−48.6360	0.7377
J0100−7211	5.43987	0.150E−10	15.1796	−72.1927	63 614	195.5650	72.4852	0.4839
B0059+65	1.67916	0.595E−14	15.6371	65.6204	63 797	196.1292	−65.9217	0.5770
B0105+65	1.28366	0.131E−13	17.0942	66.1428	63 797	196.1292	−65.9217	0.9900
B0105+65	1.28366	0.131E−13	17.0942	66.1428	63 906	196.4442	−66.3509	0.6825
B0105+68	1.07112	0.481E−16	17.1229	69.0979	63 925	196.4983	−68.5717	0.8167
J0108−1431	0.80756	0.770E−16	17.0346	−14.5303	63 923	196.4967	14.8395	0.6204
J0108−1431	0.80756	0.770E−16	17.0346	−14.5303	63 976	196.6496	15.3739	0.9273
J0108−1431	0.80756	0.770E−16	17.0346	−14.5303	64 254	197.5508	15.3383	0.9589
J0108−1431	0.80756	0.770E−16	17.0346	−14.5303	64 344	197.8404	14.3286	0.8307
B0114+58	0.10144	0.585E−14	19.4108	59.2440	65 058	200.0337	−59.4410	0.6533
J0133−6957	0.46347	0.120E−15	23.3850	−69.9582	66 388	204.1742	69.7766	0.8098
J0134−2937	0.13696	0.784E−16	23.5775	−29.6213	65 985	202.9354	29.7987	0.6661
J0134−2937	0.13696	0.784E−16	23.5775	−29.6213	66 244	203.6604	28.8359	0.7898
J0134−2937	0.13696	0.784E−16	23.5775	−29.6213	66 277	203.7592	30.1445	0.5538
J0137+16	0.41477	0.100E+01	24.3792	16.9167	66 203	203.5446	−16.3889	0.9874
J0137+16	0.41477	0.100E+01	24.3792	16.9167	66 231	203.6087	−17.3511	0.8845
J0137+16	0.41477	0.100E+01	24.3792	16.9167	66 319	203.8792	−16.9239	0.5001
B0136+57	0.27245	0.107E−13	24.8321	58.2421	66 632	204.8671	−57.2970	0.9458
B0136+57	0.27245	0.107E−13	24.8321	58.2421	66 793	205.3454	−57.4479	0.9457
B0138+59	1.22295	0.391E−15	25.4163	60.1590	66 557	204.6517	−59.8422	0.8276
B0138+59	1.22295	0.391E−15	25.4163	60.1590	66 676	205.0317	−60.5567	0.5533
B0138+59	1.22295	0.391E−15	25.4163	60.1590	66 693	205.0700	−60.2660	0.3624
B0138+59	1.22295	0.391E−15	25.4163	60.1590	66 752	205.2271	−60.5988	0.4788
B0149−16	0.83274	0.130E−14	28.0450	−16.6314	67 580	207.7146	16.2546	0.5012
J0205+6449	0.06569	0.194E−12	31.4079	64.8286	68 804	211.2925	−64.3528	0.4895
J0205+6449	0.06569	0.194E−12	31.4079	64.8286	68 869	211.5413	−65.7241	0.9055
B0203−40	0.63055	0.120E−14	31.5050	−40.4679	68 745	211.0775	40.3502	0.4434
B0203−40	0.63055	0.120E−14	31.5050	−40.4679	68 963	211.7708	40.7681	0.4010
J0218+4232	0.00232	0.774E−19	34.5262	42.5382	69 795	214.2679	−42.8625	0.4146
B0226+70	1.46682	0.311E−14	37.8083	70.4427	70 872	217.4004	−70.7919	0.5369
J0248+60	0.21700	0.100E+01	42.0000	60.0000	72 490	222.3354	−60.0797	0.3447
B0320+39	3.03207	0.636E−15	50.8608	39.7481	75 490	231.3121	−39.3348	0.6119
J0329+16	0.89330	0.100E+01	52.3042	16.9000	75 798	232.2804	−17.3818	0.4824
B0353+52	0.19703	0.477E−15	59.4367	52.6160	77 944	238.7583	−53.1377	0.8557
B0402+61	0.59457	0.558E−14	61.6250	61.6447	78 674	240.9192	−61.4709	0.7269
J0417+35	0.65440	0.100E+01	64.4292	35.7500	79 884	244.5879	−36.5660	0.8313
J0417+35	0.65440	0.100E+01	64.4292	35.7500	80 025	245.0363	−36.2876	0.8109
J0421−0345	2.16131	0.116E−14	65.3896	−3.7519	79 991	244.9350	2.9013	0.9645
J0435+27	0.32628	0.100E+01	68.8917	27.7333	81 456	249.5583	−27.0363	0.9645
J0437−4715	0.00576	0.573E−19	69.3154	−47.2523	81 101	248.4792	47.2716	0.8365
J0437−4715	0.00576	0.573E−19	69.3154	−47.2523	81 242	248.8888	47.6831	0.6063

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J0448−2749	0.45045	0.148E−15	72.1729	−27.8296	82 354	252.4092	28.3418	0.5640
J0448−2749	0.45045	0.148E−15	72.1729	−27.8296	82 359	252.4333	28.3851	0.6135
B0450−18	0.54894	0.575E−14	73.1417	−17.9898	82 568	253.1713	18.0622	0.0782
B0450−18	0.54894	0.575E−14	73.1417	−17.9898	82 712	253.6029	18.7435	0.8836
B0450+55	0.34073	0.237E−14	73.5321	55.7282	82 490	252.8862	−55.2999	0.7750
B0456−69	0.32042	0.102E−13	73.9479	−69.8595	82 887	254.0791	69.0087	0.8609
J0459−0210	1.13308	0.140E−14	74.9663	−2.1685	83 027	254.5017	2.3419	0.4959
B0458+46	0.63857	0.558E−14	75.5187	46.9017	83 122	254.7967	−46.9504	0.7237
B0458+46	0.63857	0.558E−14	75.5187	46.9017	83 381	255.6237	−46.5849	0.3337
B0458+46	0.63857	0.558E−14	75.5187	46.9017	83 460	255.8696	−46.4542	0.5686
B0525+21	3.74551	0.400E−13	82.2179	22.0003	85 285	261.4025	−21.6317	0.8949
B0525+21	3.74551	0.400E−13	82.2179	22.0003	85 642	262.5271	−22.9513	1.0000
B0531+21	0.03308	0.423E−12	83.6329	22.0144	85 908	263.3354	−21.3045	0.7697
J0538+2817	0.14316	0.367E−14	84.6042	28.2859	86 376	264.7529	−28.4124	0.1953
B0540−69	0.05035	0.479E−12	85.0467	−69.3319	86 775	265.9825	69.0741	0.9707
J0540−7125	1.28602	0.820E−15	85.1283	−71.4254	86 568	265.3637	70.4642	0.9896
J0540−7125	1.28602	0.820E−15	85.1283	−71.4254	86 804	266.0638	71.1973	0.9628
J0611+30	1.41209	0.100E+01	92.8167	30.2667	89 036	272.5871	−31.1119	0.8759
J0613−0200	0.00306	0.957E−20	93.4329	−2.0131	89 207	273.0754	1.8975	0.3757
J0613−0200	0.00306	0.957E−20	93.4329	−2.0131	89 412	273.6892	1.7584	0.3613
B0626+24	0.47662	0.200E−14	97.2737	24.2616	90 523	277.0713	−23.5687	0.7218
B0626+24	0.47662	0.200E−14	97.2737	24.2616	90 574	277.2363	−25.0428	0.7822
B0626+24	0.47662	0.200E−14	97.2737	24.2616	90 861	278.0325	−24.7331	0.8934
J0633+1746	0.23709	0.110E−13	98.4750	17.7699	90 788	277.8279	−17.7820	0.6472
B0656+14	0.38489	0.550E−13	104.9504	14.2393	93 398	285.3312	−13.6906	0.6679
J0711+0931	1.21409	0.400E−15	107.9004	9.5236	94 516	288.5504	−9.9709	0.7890
J0725−1635	0.42431	0.926E−16	111.2517	−16.5961	95 598	291.6612	16.0024	0.7212
B0727−18	0.51016	0.190E−13	112.3846	−18.6119	95 721	292.0500	18.9175	0.4531
B0727−18	0.51016	0.190E−13	112.3846	−18.6119	96 037	292.9075	17.7832	0.9798
J0737−2202	0.32037	0.547E−14	114.4333	−22.0348	96 447	294.1296	22.6005	0.6421
B0736−40	0.37492	0.162E−14	114.6346	−40.7112	96 528	294.3654	40.5889	0.2956
B0740−28	0.16676	0.168E−13	115.7042	−28.3788	97 012	295.7600	27.9433	0.4390
B0743−53	0.21484	0.273E−14	116.2596	−53.8561	97 286	296.5800	54.6385	0.8455
J0751+1807	0.00348	0.778E−20	117.7879	18.1274	97 596	297.5579	−17.9539	0.2881
B0751+32	1.44235	0.108E−14	118.6692	32.5323	97 927	298.5237	−32.0031	0.5488
B0751+32	1.44235	0.108E−14	118.6692	32.5323	97 977	298.6800	−33.2871	0.7549
B0823+26	0.53066	0.171E−14	126.7137	26.6233	100 883	306.8329	−27.4456	0.8309
B0823+26	0.53066	0.171E−14	126.7137	26.6233	101 003	307.1613	−26.2640	0.5739
J0834−4159	0.12112	0.444E−14	128.5679	−41.9975	101 763	309.3737	42.5543	0.9795
J0835−3707	0.54140	0.978E−14	128.7625	−37.1310	101 614	308.9109	36.4754	0.6721
B0835−41	0.75162	0.354E−14	129.3379	−41.5873	101 763	309.3737	42.5543	0.9677
B0835−41	0.75162	0.354E−14	129.3379	−41.5873	101 989	310.0321	41.2528	0.7706
B0841+80	1.60223	0.446E−15	132.2563	80.4831	102 742	312.2784	−81.1701	0.6874
B0853−33	1.26754	0.632E−14	133.9100	−33.5276	102 985	312.9825	33.2782	0.9605
B0853−33	1.26754	0.632E−14	133.9100	−33.5276	103 232	313.7075	32.7063	0.8459
J0855−4644	0.06469	0.726E−14	133.9004	−46.7371	103 523	314.6038	46.6040	0.7158
J0855−4658	0.57507	0.136E−13	133.8313	−46.9729	103 523	314.6038	46.6040	0.8561
B0855−61	0.96251	0.168E−14	134.2471	−61.6315	103 394	314.2108	61.5608	0.0794
B0855−61	0.96251	0.168E−14	134.2471	−61.6315	103 614	314.8946	61.2818	0.7359
J0857−4424	0.32677	0.233E−13	134.4796	−44.4029	103 694	315.1854	44.7853	0.8028
J0901−4624	0.44199	0.875E−13	135.4171	−46.4135	103 523	314.6038	46.6040	0.8353
B0903−42	0.96517	0.189E−14	136.2467	−42.7706	104 369	317.1591	42.5356	0.9423
J0905−4536	0.98828	0.149E−15	136.3496	−45.6147	104 407	317.2671	45.9868	0.9901
J0905−5127	0.34629	0.249E−13	136.4662	−51.4635	104 084	316.3087	51.1510	0.3500
B0905−51	0.25356	0.183E−14	136.8163	−51.9664	104 084	316.3087	51.1510	0.9605
B0906−17	0.40163	0.669E−15	137.1587	−17.6604	104 333	317.0221	17.1073	0.5698
B0909−71	1.36289	0.333E−15	137.4000	−72.2023	104 682	318.0725	72.4716	0.7244
B0917+63	1.56799	0.361E−14	140.3088	62.9039	105 276	319.8542	−62.1528	0.8779
J0922−4949	0.95029	0.976E−13	140.5621	−49.8200	105 290	319.9000	49.2212	0.8927
J0927+23	0.76189	0.100E+01	141.9042	23.7833	105 740	321.2571	−23.3185	0.7967
J0927+23	0.76189	0.100E+01	141.9042	23.7833	105 789	321.3696	−23.5811	0.5716
J0927+23	0.76189	0.100E+01	141.9042	23.7833	106 204	322.6767	−24.1683	0.8631
J0932−3217	1.93163	0.250E−15	143.1629	−32.2873	106 473	323.4758	32.8694	0.6609

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B0932−52	1.44477	0.464E−14	143.6179	−52.8242	106 794	324.4579	53.0801	0.8781
J0943+22	0.53291	0.100E+01	145.8542	22.9333	107 052	325.2225	−22.7816	0.6496
B0942−13	0.57026	0.453E−16	146.1204	−13.9116	107 494	326.5808	14.6322	0.8551
J0945−4833	0.33159	0.483E−14	146.4092	−48.5540	107 713	327.2992	48.4373	0.8976
B0943+10	1.09771	0.349E−14	146.5317	9.8653	107 266	325.8971	−9.9934	0.6474
J0947+27	0.85105	0.100E+01	146.8417	27.7000	107 305	326.0062	−27.8933	0.8575
J0947+27	0.85105	0.100E+01	146.8417	27.7000	107 817	327.6375	−27.3366	0.8749
B0950−38	1.37381	0.580E−15	148.0717	−38.6528	108 014	328.2450	38.3434	0.3546
B0950−38	1.37381	0.580E−15	148.0717	−38.6528	108 154	328.6808	38.2356	0.7384
B0950−38	1.37381	0.580E−15	148.0717	−38.6528	108 231	328.8912	38.8166	0.8358
B0959−54	1.43658	0.514E−13	150.4079	−55.1185	108 689	330.2646	55.9987	0.8917
B0959−54	1.43658	0.514E−13	150.4079	−55.1185	108 921	330.9500	55.8491	0.9097
J1001−5559	1.66118	0.860E−15	150.2858	−55.9834	108 689	330.2646	55.9987	0.0262
J1001−5559	1.66118	0.860E−15	150.2858	−55.9834	108 921	330.9500	55.8491	0.6776
J1002−5559	0.77750	0.157E−14	150.7413	−55.9936	108 689	330.2646	55.9987	0.4767
J1002−5559	0.77750	0.157E−14	150.7413	−55.9936	108 921	330.9500	55.8491	0.2539
J1012+5307	0.00526	0.171E−19	153.1392	53.1174	109 333	332.2475	−52.7688	0.9574
J1012+5307	0.00526	0.171E−19	153.1392	53.1174	109 787	333.5763	−53.2999	0.4737
J1012+5307	0.00526	0.171E−19	153.1392	53.1174	109 956	334.0387	−53.5529	0.9995
J1012−5830	2.13359	0.377E−13	153.2287	−58.5071	109 425	332.5433	57.8222	0.9690
J1012−5830	2.13359	0.377E−13	153.2287	−58.5071	109 841	333.6988	57.7107	0.9248
J1015−5719	0.13988	0.574E−13	153.9079	−57.3202	109 767	333.5038	57.1200	0.4510
J1015−5719	0.13988	0.574E−13	153.9079	−57.3202	109 841	333.6988	57.7107	0.4430
J1015−5719	0.13988	0.574E−13	153.9079	−57.3202	110 056	334.3675	58.0855	0.8927
J1016−5819	0.08783	0.698E−15	154.0504	−58.3170	109 841	333.6988	57.7107	0.7009
J1016−5819	0.08783	0.698E−15	154.0504	−58.3170	110 056	334.3675	58.0855	0.3926
J1016−5857	0.10738	0.806E−13	154.0879	−58.9534	110 056	334.3675	58.0855	0.9118
B1015−56	0.50346	0.313E−14	154.3033	−56.3585	110 327	335.1904	56.1139	0.9202
B1016−16	1.80470	0.174E−14	154.6679	−16.7028	109 950	334.0246	16.0209	0.9375
J1019−5749	0.16250	0.201E−13	154.9671	−57.8183	110 056	334.3675	58.0855	0.6564
J1024−0719	0.00516	0.185E−19	156.1612	−7.3219	110 760	336.5812	7.9036	0.7174
J1024−0719	0.00516	0.185E−19	156.1612	−7.3219	110 782	336.6504	6.5504	0.9135
J1035−6345	0.57958	0.350E−15	158.7625	−63.7551	111 496	338.8383	64.3814	0.6309
J1045−4509	0.00747	0.177E−19	161.4588	−45.1650	112 379	341.4146	45.3897	0.2290
B1055−52	0.19711	0.583E−14	164.4950	−52.4490	113 202	343.8646	52.6221	0.6538
B1056−57	1.18500	0.430E−14	164.7538	−57.7039	113 755	345.5533	58.2547	0.9709
B1112+50	1.65644	0.249E−14	168.9100	50.5034	114 950	349.2433	−51.3191	0.8812
J1117−6447	1.15527	0.240E−15	169.4375	−64.7994	114 792	348.8021	65.0123	0.6701
B1119−54	0.53578	0.277E−14	170.3296	−54.7349	115 222	350.0738	54.4874	0.3559
J1123−4844	0.24484	0.654E−16	170.8150	−48.7396	115 282	350.2258	48.1129	0.8602
J1126−6942	0.57942	0.330E−14	171.5900	−69.7042	115 604	351.2733	69.9499	0.4007
J1130−5826	0.16232	0.159E−16	172.5679	−58.4340	116 085	352.8371	59.1653	0.7792
J1130−5925	0.68098	0.952E−15	172.5433	−59.4261	116 085	352.8371	59.1653	0.3929
B1131−62	1.02287	0.452E−15	173.4642	−62.8474	116 221	353.2225	63.1554	0.3915
B1133+16	1.18791	0.373E−14	174.0129	15.8527	116 590	354.4088	−15.2146	0.7509
B1133−55	0.36471	0.822E−14	174.0088	−55.4190	116 497	354.1046	55.4957	0.1227
J1141−3107	0.53843	0.196E−14	175.3567	−31.1313	116 744	354.8996	30.9988	0.4759
J1141−3322	0.29147	0.463E−15	175.4279	−33.3771	117 059	355.9617	32.5465	0.9873
J1152−6012	0.37657	0.669E−14	178.2242	−60.2058	117 795	358.3321	59.9450	0.2822
J1210−5209	0.42413	0.200E−13	182.5021	−52.4419	894	2.7421	52.4428	0.2400
J1215−5328	0.63641	0.115E−15	183.7525	−53.4754	1224	3.8104	53.0741	0.4055
J1216−6223	0.37405	0.168E−13	184.1742	−62.3994	1184	3.6988	62.1964	0.5170
J1220−6318	0.78921	0.800E−16	185.0742	−63.3129	1673	5.2333	63.6675	0.3887
J1224−6208	0.58576	0.202E−13	186.1842	−62.1448	1846	5.8338	61.2155	0.9931
B1221−63	0.21648	0.495E−14	186.0921	−64.1316	1673	5.2333	63.6675	0.9761
J1225−6035	0.62632	0.288E−15	186.3692	−60.5938	1846	5.8338	61.2155	0.8205
J1225−6035	0.62632	0.288E−15	186.3692	−60.5938	2131	6.7575	60.4025	0.4329
J1231−47	1.87320	0.100E+01	187.9167	−47.7667	2712	8.6221	47.9154	0.7209
J1231−6303	1.35124	0.140E−14	187.8042	−63.0550	2717	8.6475	62.5905	0.9628
J1233−6312	0.56476	0.692E−14	188.3813	−63.2081	2717	8.6475	62.5905	0.6725
J1236−5033	0.29476	0.156E−15	189.2462	−50.5601	2602	8.2633	50.4930	0.9852
J1238+21	1.11859	0.145E−14	189.5962	21.8697	3003	9.5487	−22.2638	0.3970
J1238+21	1.11859	0.145E−14	189.5962	21.8697	3024	9.6321	−21.2842	0.5866

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1238+21	1.11859	0.145E−14	189.5962	21.8697	3051	9.6887	−21.0401	0.8348
B1237+25	1.38245	0.960E−15	189.9179	24.8972	2902	9.1950	−24.5008	0.8245
B1237+25	1.38245	0.960E−15	189.9179	24.8972	3099	9.8612	−24.5235	0.3780
B1237−41	0.51224	0.174E−14	190.0733	−41.4144	3293	10.5058	40.6884	0.8450
B1237−41	0.51224	0.174E−14	190.0733	−41.4144	3333	10.6283	40.9539	0.7212
J1246+22	0.47383	0.100E+01	191.6583	22.8833	3850	12.3600	−23.2128	0.7752
J1249−6507	0.43444	0.121E−16	192.4762	−65.1222	3831	12.2933	66.0512	0.9468
B1254−10	0.61731	0.363E−15	194.2696	−10.4516	4485	14.3700	9.5197	0.9373
B1257+12	0.00622	0.114E−18	195.0125	12.6824	4699	15.0942	−13.5992	0.9204
J1301−6305	0.18453	0.267E−12	195.4404	−63.0928	4650	14.9354	62.2591	0.9747
J1301−6305	0.18453	0.267E−12	195.4404	−63.0928	4740	15.2225	62.9238	0.2758
J1301−6305	0.18453	0.267E−12	195.4404	−63.0928	4872	15.6579	62.3448	0.7789
J1301−6310	0.66383	0.564E−13	195.3679	−63.1779	4740	15.2225	62.9238	0.2928
J1301−6310	0.66383	0.564E−13	195.3679	−63.1779	4872	15.6579	62.3448	0.8821
J1302−63	0.32572	0.100E+01	195.5167	−63.7481	4740	15.2225	62.9238	0.8752
J1302−63	0.32572	0.100E+01	195.5167	−63.7481	5106	16.3587	63.7217	0.8425
J1302−6313	0.96785	0.633E−14	195.5800	−63.2247	4740	15.2225	62.9238	0.4673
J1302−6313	0.96785	0.633E−14	195.5800	−63.2247	4872	15.6579	62.3448	0.8833
J1302−6313	0.96785	0.633E−14	195.5800	−63.2247	5106	16.3587	63.7217	0.9238
B1259−63	0.04776	0.228E−14	195.6983	−63.8357	5106	16.3587	63.7217	0.6702
J1303−6305	2.30664	0.218E−14	195.7500	−63.0836	4740	15.2225	62.9238	0.5512
J1303−6305	2.30664	0.218E−14	195.7500	−63.0836	4872	15.6579	62.3448	0.7444
J1303−6305	2.30664	0.218E−14	195.7500	−63.0836	5106	16.3587	63.7217	0.8819
J1305−6203	0.42776	0.321E−13	196.3371	−62.0560	4872	15.6579	62.3448	0.7380
J1305−6256	0.47823	0.211E−14	196.3667	−62.9442	4872	15.6579	62.3448	0.9282
J1305−6256	0.47823	0.211E−14	196.3667	−62.9442	5106	16.3587	63.7217	0.7776
B1302−64	0.57165	0.403E−14	196.3487	−64.9240	4904	15.7346	64.8363	0.6204
J1307−6318	4.96243	0.211E−13	196.9779	−63.3097	5106	16.3587	63.7217	0.7437
B1309−12	0.44752	0.151E−15	197.9692	−12.4671	5407	17.2962	12.6930	0.7098
B1310+18	0.03316	0.100E+01	198.2292	18.1667	5892	18.9267	−18.4161	0.7408
B1310+18	0.03316	0.100E+01	198.2292	18.1667	5968	19.1804	−18.1537	0.9513
J1313+0931	0.84893	0.800E−15	198.3458	9.5322	5644	18.1242	−9.2237	0.3799
J1320−3512	0.45849	0.190E−17	200.0525	−35.2072	6176	19.8087	35.7790	0.6216
B1317−53	0.27973	0.925E−14	200.2246	−53.9851	6465	20.7921	53.4729	0.7645
J1322−6329	2.76421	0.111E−13	200.5750	−63.4936	6619	21.2442	63.8819	0.7737
J1324−6302	2.48380	0.979E−15	201.0567	−63.0392	6619	21.2442	63.8819	0.8634
B1323−63	0.79267	0.310E−14	201.6358	−64.1456	6596	21.1775	64.6000	0.6454
B1323−63	0.79267	0.310E−14	201.6358	−64.1456	6619	21.2442	63.8819	0.4721
J1327−6400	0.28068	0.312E−13	201.7925	−64.0036	6596	21.1775	64.6000	0.8567
J1327−6400	0.28068	0.312E−13	201.7925	−64.0036	6619	21.2442	63.8819	0.5617
B1325−43	0.53270	0.301E−14	202.0267	−43.9623	6711	21.5775	43.4579	0.6754
J1332−3032	0.65043	0.560E−15	203.2184	−30.5381	6948	22.3650	30.8948	0.9249
J1332−3032	0.65043	0.560E−15	203.2184	−30.5381	6978	22.4633	31.0073	0.8889
J1335−3642	0.39919	0.100E+01	203.9000	−36.7000	7728	24.8758	36.6966	0.9758
J1347−5947	0.60996	0.142E−13	206.8304	−59.7944	8288	26.6967	59.1562	0.6520
J1355−5925	1.21338	0.599E−14	208.9962	−59.4169	8865	28.5083	59.5492	0.5055
J1358−2533	0.91297	0.100E+01	209.6750	−25.5500	9255	29.7429	26.1484	0.6022
B1356−60	0.12750	0.634E−14	209.9925	−60.6356	9360	30.0642	59.9073	0.7318
J1406−5806	0.28835	0.611E−15	211.5050	−58.1089	9857	31.7029	58.1373	0.1999
J1406−6121	0.21307	0.547E−13	211.7083	−61.3577	9704	31.2029	60.5063	0.9902
J1407−6048	0.49234	0.316E−14	211.9942	−60.8163	9704	31.2029	60.5063	0.8498
J1407−6048	0.49234	0.316E−14	211.9942	−60.8163	9726	31.2787	60.3457	0.8563
J1412−6111	0.52916	0.191E−14	213.2483	−61.1918	10 575	34.0292	60.6302	0.9618
J1416−6037	0.29558	0.428E−14	214.1271	−60.6332	10 575	34.0292	60.6302	0.0980
J1416−6037	0.29558	0.428E−14	214.1271	−60.6332	10 677	34.3458	61.3518	0.7512
J1418−3921	1.09681	0.889E−15	214.7092	−39.3551	10 735	34.5421	39.3278	0.1693
B1417−54	0.93577	0.237E−15	215.1212	−54.2731	10 960	35.3025	53.5609	0.7348
J1420−6048	0.06818	0.832E−13	215.0341	−60.8046	10 677	34.3458	61.3518	0.8794
J1425−6210	0.50173	0.480E−15	216.2821	−62.1680	11 118	35.7529	62.2166	0.5314
J1425−6210	0.50173	0.480E−15	216.2821	−62.1680	11 156	35.8783	61.7737	0.5644
J1434−6006	0.30637	0.302E−14	218.5221	−60.1081	11 706	37.7621	60.7114	0.9704
J1434−6029	0.96335	0.103E−14	218.6629	−60.4969	11 706	37.7621	60.7114	0.9260
J1452−6036	0.15499	0.145E−14	223.2158	−60.6087	13 447	43.2933	61.0969	0.4943

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\lvert dP/dt \rvert$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1452−6036	0.15499	0.145E−14	223.2158	−60.6087	13 460	43.3262	60.8535	0.2685
J1454−5846	0.04525	0.817E−18	223.5454	−58.7763	13 771	44.3063	58.3612	0.8667
B1454−51	1.74830	0.529E−14	224.4171	−51.3814	13 664	43.9833	51.7060	0.5418
J1457−5900	1.49864	0.366E−14	224.4125	−59.0142	13 771	44.3063	58.3612	0.6615
J1457−5902	0.39074	0.123E−13	224.3829	−59.0344	13 771	44.3063	58.3612	0.6775
B1503−51	0.84074	0.637E−14	226.6646	−51.9694	14 182	45.7192	52.2499	0.9861
B1504−43	0.28676	0.160E−14	226.8921	−43.8676	14 582	47.0658	44.2060	0.3804
B1508+55	0.73968	0.500E−14	227.3567	55.5257	14 788	47.7471	−55.1617	0.5338
J1509−6015	0.33904	0.212E−14	227.2812	−60.2552	14 687	47.4317	60.2386	0.1513
B1507−44	0.94387	0.610E−15	227.7038	−44.3686	14 582	47.0658	44.2060	0.6583
B1507−44	0.94387	0.610E−15	227.7038	−44.3686	14 922	48.1258	43.8606	0.6604
B1508−57	0.12869	0.685E−14	228.1792	−57.9999	15 220	49.0554	58.1682	0.8922
J1513−5739	0.97346	0.276E−13	228.4954	−57.6504	15 220	49.0554	58.1682	0.7627
J1514−5925	0.14880	0.288E−14	228.7462	−59.4287	15 202	48.9946	60.2007	0.8110
J1515−5720	0.28665	0.610E−14	228.7888	−57.3469	15 220	49.0554	58.1682	0.8634
J1517−4356	0.65084	0.216E−15	229.3638	−43.9383	15 591	50.2029	43.9791	0.8402
B1516+02B	0.00795	−0.333E−20	229.6308	2.0876	15 256	49.1958	−2.5839	0.6600
B1516+02B	0.00795	−0.333E−20	229.6308	2.0876	15 500	49.9346	−2.0715	0.3042
B1516+02A	0.00555	0.412E−19	229.6387	2.0910	15 256	49.1958	−2.5839	0.6627
B1516+02A	0.00555	0.412E−19	229.6387	2.0910	15 500	49.9346	−2.0715	0.2965
J1531−4012	0.35685	0.963E−16	232.7833	−40.2086	16 343	52.6583	40.3194	0.1671
J1532−5308	0.44383	0.650E−16	233.1479	−53.1350	16 612	53.4479	52.2883	0.8983
J1535−5450	0.56673	0.143E−13	233.9925	−54.8406	16 514	53.1588	55.1853	0.9022
J1535−5848	0.30718	0.272E−14	233.8196	−58.8077	16 581	53.3608	59.4175	0.7631
J1536−44	0.46842	0.100E+01	234.0625	−44.2667	16 906	54.3867	45.0542	0.8516
B1534+12	0.03790	0.242E−17	234.2913	11.9321	16 681	53.6587	−12.2977	0.7306
J1537−49	0.30131	0.100E+01	234.3750	−49.1500	17 104	54.9646	49.9358	0.9824
J1537−5153	1.52812	0.417E−14	234.3154	−51.8850	16 612	53.4479	52.2883	0.9567
J1537−5153	1.52812	0.417E−14	234.3154	−51.8850	16 973	54.5804	52.5991	0.7617
J1542−5034	0.59925	0.397E−14	235.6892	−50.5671	17 104	54.9646	49.9358	0.9610
J1542−5034	0.59925	0.397E−14	235.6892	−50.5671	17 231	55.3567	50.8214	0.4186
J1542−5034	0.59925	0.397E−14	235.6892	−50.5671	17 341	55.6729	51.1736	0.6068
J1542−5303	1.20757	0.778E−13	235.7271	−53.0614	17 033	54.7767	52.8191	0.9808
B1540−06	0.70906	0.880E−15	235.8754	−6.3459	17 332	55.6454	6.9869	0.6811
J1543−5013	0.64425	0.101E−13	235.9925	−50.2328	17 231	55.3567	50.8214	0.8665
J1543−5013	0.64425	0.101E−13	235.9925	−50.2328	17 341	55.6729	51.1736	0.9936
J1547−5839	0.24219	0.594E−15	236.8954	−58.6527	17 568	56.4354	58.8561	0.5029
J1547−5839	0.24219	0.594E−15	236.8954	−58.6527	17 790	57.1246	57.7676	0.9143
J1547−5839	0.24219	0.594E−15	236.8954	−58.6527	17 887	57.3950	58.7683	0.5128
J1548−4927	0.60274	0.405E−14	237.0808	−49.4612	18 004	57.7392	49.4743	0.6585
J1548−5607	0.17093	0.107E−13	237.1833	−56.1261	18 002	57.7312	55.3486	0.9511
J1548−5607	0.17093	0.107E−13	237.1833	−56.1261	18 023	57.7663	56.1077	0.5832
J1549+21	1.26247	0.100E+01	237.4208	21.2500	18 191	58.3762	−21.0135	0.9842
J1549−4848	0.28835	0.141E−13	237.3379	−48.8104	18 004	57.7392	49.4743	0.7758
J1549−5722	0.49777	0.470E−16	237.4496	−57.3672	17 790	57.1246	57.7676	0.5157
J1550−5242	0.74966	0.178E−13	237.5121	−52.7019	17 800	57.1562	51.8234	0.9479
J1550−5242	0.74966	0.178E−13	237.5121	−52.7019	18 207	58.4058	52.5630	0.9045
B1550−54	1.08133	0.156E−13	238.4983	−54.9350	18 002	57.7312	55.3486	0.8715
B1550−54	1.08133	0.156E−13	238.4983	−54.9350	18 256	58.5767	54.9044	0.0841
J1554−5512	3.41804	0.312E−13	238.6687	−55.2092	18 002	57.7312	55.3486	0.9478
J1554−5512	3.41804	0.312E−13	238.6687	−55.2092	18 256	58.5767	54.9044	0.3184
B1552−31	0.51811	0.622E−16	238.8246	−31.5723	18 204	58.3979	30.7735	0.9056
J1556−5358	0.99468	0.104E−13	239.2146	−53.9819	18 351	58.8458	53.5575	0.5622
B1556−57	0.19445	0.213E−14	240.0829	−57.8541	18 567	59.6225	58.6195	0.8932
J1601−5244	2.55936	0.720E−15	240.3638	−52.7358	18 712	60.1192	52.9474	0.3234
J1601−5244	2.55936	0.720E−15	240.3638	−52.7358	18 966	60.9629	53.2777	0.8079
J1601−5335	0.28846	0.624E−13	240.4787	−53.5953	18 712	60.1192	52.9474	0.7410
J1601−5335	0.28846	0.624E−13	240.4787	−53.5953	18 966	60.9629	53.2777	0.5791
B1601−52	0.65801	0.256E−15	241.3179	−52.9509	18 966	60.9629	53.2777	0.4825
B1604−00	0.42182	0.306E−15	241.8004	−0.5447	19 386	62.2875	0.1789	0.6091
J1610−5006	0.48112	0.136E−13	242.6846	−50.1117	19 581	62.9437	49.7460	0.4482
J1611−4949	0.66644	0.540E−15	242.9442	−49.8326	19 581	62.9437	49.7460	0.0865
B1609−47	0.38238	0.632E−15	243.3708	−47.2405	19 553	62.8200	46.9206	0.6370

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1613−5234	0.65522	0.663E−14	243.4892	−52.5671	20 028	64.4367	52.3727	0.9672
B1612+07	1.20680	0.236E−14	243.6704	7.6253	19 987	64.3058	−7.3942	0.6761
J1614−5144	1.53401	0.744E−14	243.6904	−51.7347	20 028	64.4367	52.3727	0.9818
J1616−5208	1.02583	0.289E−13	244.0975	−52.1347	20 028	64.4367	52.3727	0.4144
J1621−5243	0.37192	0.768E−15	245.4825	−52.7179	20 434	65.6558	51.9418	0.7952
J1622−4802	0.26507	0.307E−15	245.6962	−48.0370	20 359	65.3996	48.3370	0.4219
B1620−09	1.27645	0.258E−14	245.8233	−9.1470	20 273	65.1829	8.4093	0.9769
B1620−09	1.27645	0.258E−14	245.8233	−9.1470	20 447	65.7121	9.7715	0.6343
B1620−26	0.01108	0.671E−18	245.9091	−26.5316	20 626	66.2946	25.7493	0.8721
B1620−26	0.01108	0.671E−18	245.9091	−26.5316	20 652	66.3783	26.2924	0.5266
B1620−42	0.36459	0.102E−14	245.9512	−42.9348	20 753	66.7054	42.9099	0.7546
J1624−4721	0.44872	0.415E−14	246.2283	−47.3507	20 800	66.8525	46.8539	0.7978
J1625−4048	2.35528	0.443E−15	246.2929	−40.8060	20 550	66.0462	40.9609	0.2913
J1626−4537	0.37014	0.828E−14	246.7038	−45.6238	20 494	65.8862	45.0791	0.9824
J1626−4537	0.37014	0.828E−14	246.7038	−45.6238	20 861	67.0558	45.0457	0.6769
J1627+1419	0.49086	0.393E−15	246.8279	14.3224	20 915	67.2450	−13.6612	0.7818
J1627−5547	0.35246	0.738E−15	246.8375	−55.7979	20 910	67.2262	55.0005	0.8871
J1630−4719	0.55907	0.142E−13	247.5100	−47.3178	20 800	66.8525	46.8539	0.8047
B1633+24	0.49051	0.119E−15	248.8571	24.3133	21 354	68.7275	−25.0389	0.7371
J1635−4513	1.59475	0.360E−14	248.9808	−45.2174	21 701	69.8908	45.6204	0.9952
J1635−4944	0.67196	0.879E−14	248.9808	−49.7343	21 552	69.4125	49.8604	0.4497
B1630−59	0.52912	0.137E−14	248.7875	−59.9011	21 384	68.8408	60.7449	0.8454
J1636−4803	1.20464	0.207E−13	249.1333	−48.0515	21 496	69.2546	47.7583	0.3173
J1636−4933	0.43037	0.151E−14	249.2296	−49.5503	21 552	69.4125	49.8604	0.3600
B1634−45	0.11877	0.319E−14	249.4946	−45.8909	21 701	69.8908	45.6204	0.4798
J1637−4721	1.16574	0.444E−14	249.2975	−47.3501	21 496	69.2546	47.7583	0.4104
J1638−4608	0.27814	0.515E−13	249.5954	−46.1366	21 701	69.8908	45.6204	0.5947
J1638−5226	0.34050	0.265E−14	249.7496	−52.4493	21 553	69.4192	52.8948	0.5547
B1635−45	0.26456	0.289E−14	249.8383	−46.0759	21 701	69.8908	45.6204	0.4585
J1640−4648	0.17835	0.806E−15	250.1983	−46.8013	22 032	71.0458	46.9657	0.8633
B1636−47	0.51740	0.420E−13	250.0546	−47.2598	21 496	69.2546	47.7583	0.9426
J1640−4951	0.73910	0.334E−15	250.1812	−49.8506	21 552	69.4125	49.8604	0.7688
J1640−4951	0.73910	0.334E−15	250.1812	−49.8506	21 807	70.2704	50.0665	0.2336
B1639+36A	0.01038	0.100E+01	250.4200	36.4543	21 724	69.9637	−35.6440	0.9299
B1639+36A	0.01038	0.100E+01	250.4200	36.4543	21 872	70.5371	−35.4761	0.9851
B1639+36B	0.00353	0.100E+01	250.4208	36.4500	21 724	69.9637	−35.6440	0.9266
B1639+36B	0.00353	0.100E+01	250.4208	36.4500	21 872	70.5371	−35.4761	0.9808
J1641−2347	1.09101	0.411E−16	250.3250	−23.7843	21 788	70.2042	23.8097	0.1235
J1641−2347	1.09101	0.411E−16	250.3250	−23.7843	21 868	70.5242	23.0602	0.7510
J1641−2347	1.09101	0.411E−16	250.3250	−23.7843	21 961	70.8071	24.0890	0.5703
J1643−1224	0.00462	0.185E−19	250.9088	−12.4163	21 918	70.7029	12.2103	0.2912
J1643−1224	0.00462	0.185E−19	250.9088	−12.4163	22 012	70.9729	12.6858	0.2770
J1643−1224	0.00462	0.185E−19	250.9088	−12.4163	22 021	71.0154	12.9912	0.5847
J1643−4522	1.34790	0.828E−14	250.8350	−45.3667	21 701	69.8908	45.6204	0.9777
J1643−4550	0.71751	0.300E−13	250.8063	−45.8485	21 701	69.8908	45.6204	0.9434
B1641−45	0.45506	0.201E−13	251.2050	−45.9860	22 032	71.0458	46.9657	0.9925
J1645+1012	0.41086	0.813E−16	251.3933	10.2044	22 288	72.0042	−10.9334	0.9510
B1642−03	0.38769	0.178E−14	251.2583	−3.2996	22 177	71.5779	3.6363	0.4643
J1648−3256	0.71946	0.353E−14	252.0250	−32.9447	22 217	71.6650	32.6318	0.4769
J1648−3256	0.71946	0.353E−14	252.0250	−32.9447	22 559	72.8196	32.8902	0.7964
J1649+2533	1.01526	0.600E−15	252.4342	25.5502	22 668	73.1450	−25.9945	0.8383
J1649−4729	0.29769	0.655E−14	252.3259	−47.4848	22 124	71.4200	47.6988	0.9308
J1649−5553	0.61357	0.170E−14	252.3796	−55.8844	22 569	72.8625	55.8372	0.4852
J1649−5553	0.61357	0.170E−14	252.3796	−55.8844	22 624	73.0171	56.4234	0.8348
J1650−1654	1.74955	0.320E−14	252.6133	−16.9115	22 347	72.1717	16.6345	0.5214
J1650−1654	1.74955	0.320E−14	252.6133	−16.9115	22 782	73.5125	17.0268	0.9065
J1650−4502	0.38087	0.161E−13	252.6346	−45.0437	22 638	73.0558	44.9740	0.4270
B1648−17	0.97339	0.304E−14	252.8821	−17.1506	22 347	72.1717	16.6345	0.8781
B1648−17	0.97339	0.304E−14	252.8821	−17.1506	22 782	73.5125	17.0268	0.6424
B1648−17	0.97339	0.304E−14	252.8821	−17.1506	22 805	73.5858	17.6092	0.8400
J1651−4519	0.51744	0.819E−14	252.9883	−45.3170	22 638	73.0558	44.9740	0.3496
J1651−4519	0.51744	0.819E−14	252.9883	−45.3170	22 817	73.6388	45.6811	0.7454
B1647−52	0.63506	0.181E−14	252.9288	−52.3828	22 695	73.1942	51.5429	0.8809

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\lvert dP/dt \rvert$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B1647−528	0.89053	0.207E−14	252.9217	−52.9180	22 429	72.3883	53.3659	0.6964
J1652+2651	0.91580	0.650E−15	253.0125	26.8611	22 668	73.1450	−25.9945	0.8767
B1649−23	1.70374	0.316E−14	253.2438	−24.0514	22 557	72.8117	24.2908	0.4940
B1649−23	1.70374	0.316E−14	253.2438	−24.0514	22 729	73.3417	24.1774	0.1596
B1649−23	1.70374	0.316E−14	253.2438	−24.0514	22 801	73.5704	23.9829	0.3338
B1650−38	0.30504	0.279E−14	253.4154	−38.6391	22 760	73.4542	38.7720	0.1384
J1653−4249	0.61256	0.481E−14	253.4175	−42.8176	22 915	73.9683	43.1557	0.6463
J1653−4315	0.41928	0.150E−16	253.3737	−43.2500	22 915	73.9683	43.1557	0.6020
J1654−2713	0.79182	0.168E−15	253.5979	−27.2183	22 600	72.9379	26.8623	0.7499
J1654−2713	0.79182	0.168E−15	253.5979	−27.2183	22 802	73.5746	26.8077	0.4112
J1654−2713	0.79182	0.168E−15	253.5979	−27.2183	22 920	73.9825	27.8356	0.7273
J1654−2713	0.79182	0.168E−15	253.5979	−27.2183	23 056	74.4196	27.3761	0.8367
J1658−4306	1.16645	0.428E−13	254.5692	−43.1014	22 915	73.9683	43.1557	0.6033
B1657−13	0.64096	0.618E−15	254.9708	−13.0858	23 085	74.5271	13.0350	0.4467
J1700−3312	1.35831	0.471E−14	255.2208	−33.2125	23 269	75.1004	33.7343	0.5355
J1700−4939	0.57836	0.108E−14	255.0938	−49.6504	23 198	74.8829	48.7799	0.8957
J1700−4939	0.57836	0.108E−14	255.0938	−49.6504	23 307	75.1875	48.8146	0.8410
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	23 291	75.1533	29.4729	0.6526
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	23 302	75.1750	30.8972	0.7990
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	23 438	75.5733	29.9950	0.2940
J1701−3006B	0.00359	−0.350E−18	255.3025	−30.1136	23 291	75.1533	29.4729	0.6579
J1701−3006B	0.00359	−0.350E−18	255.3025	−30.1136	23 302	75.1750	30.8972	0.7939
J1701−3006B	0.00359	−0.350E−18	255.3025	−30.1136	23 438	75.5733	29.9950	0.2957
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	23 291	75.1533	29.4729	0.6609
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	23 302	75.1750	30.8972	0.7911
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	23 438	75.5733	29.9950	0.2961
J1701−3006D	0.00342	0.100E+01	255.3000	−30.1000	23 291	75.1533	29.4729	0.6440
J1701−3006D	0.00342	0.100E+01	255.3000	−30.1000	23 302	75.1750	30.8972	0.8069
J1701−3006D	0.00342	0.100E+01	255.3000	−30.1000	23 438	75.5733	29.9950	0.2928
J1701−3006E	0.00323	0.100E+01	255.3000	−30.1000	23 291	75.1533	29.4729	0.6440
J1701−3006E	0.00323	0.100E+01	255.3000	−30.1000	23 302	75.1750	30.8972	0.8069
J1701−3006E	0.00323	0.100E+01	255.3000	−30.1000	23 438	75.5733	29.9950	0.2928
J1701−3006F	0.00230	0.100E+01	255.3000	−30.1000	23 291	75.1533	29.4729	0.6440
J1701−3006F	0.00230	0.100E+01	255.3000	−30.1000	23 302	75.1750	30.8972	0.8069
J1701−3006F	0.00230	0.100E+01	255.3000	−30.1000	23 438	75.5733	29.9950	0.2928
J1701−3130	0.29134	0.560E−16	255.4312	−31.5102	23 205	74.9025	31.5852	0.5340
J1701−3130	0.29134	0.560E−16	255.4312	−31.5102	23 302	75.1750	30.8972	0.6644
J1701−3130	0.29134	0.560E−16	255.4312	−31.5102	23 409	75.4638	31.6327	0.1267
J1702−4310	0.24052	0.224E−12	255.6121	−43.1678	23 655	76.2592	43.3133	0.6632
B1700−18	0.80434	0.173E−14	255.9625	−18.7710	23 579	76.0400	19.0947	0.3328
J1703−4851	1.39640	0.508E−14	255.9767	−48.8655	23 307	75.1875	48.8146	0.7908
B1702−19	0.29899	0.414E−14	256.4004	−19.1107	23 579	76.0400	19.0947	0.3608
J1705−3423	0.25543	0.108E−14	256.4262	−34.3957	23 797	76.6967	34.5355	0.3044
J1705−3950	0.31894	0.606E−13	256.3742	−39.8350	23 764	76.6237	40.6142	0.8182
J1705−4108	0.86107	0.347E−13	256.3350	−41.1346	23 764	76.6237	40.6142	0.5951
J1706−4310	0.61698	0.651E−14	256.5187	−43.1673	23 655	76.2592	43.3133	0.2978
B1703−40	0.58102	0.192E−14	256.8404	−40.8989	23 764	76.6237	40.6142	0.3578
B1703−40	0.58102	0.192E−14	256.8404	−40.8989	24 096	77.6417	40.8441	0.8031
J1707−4341	0.89059	0.570E−14	256.9171	−43.6867	23 655	76.2592	43.3133	0.7565
J1708−3426	0.69211	0.420E−14	257.2404	−34.4465	23 797	76.6967	34.5355	0.5510
J1708−4008	10.99903	0.194E−10	257.1958	−40.1508	23 764	76.6237	40.6142	0.7362
J1708−4008	10.99903	0.194E−10	257.1958	−40.1508	24 096	77.6417	40.8441	0.8243
B1706−16	0.65305	0.631E−14	257.3600	−16.6826	23 847	76.9025	15.9682	0.8484
B1706−16	0.65305	0.631E−14	257.3600	−16.6826	24 142	77.7742	17.3994	0.8279
B1706−16	0.65305	0.631E−14	257.3600	−16.6826	24 292	78.1996	16.3077	0.9195
J1710−4148	0.28656	0.102E−15	257.5988	−41.8005	24 096	77.6417	40.8441	0.9573
J1710−4148	0.28656	0.102E−15	257.5988	−41.8005	24 243	78.0721	41.4471	0.5907
B1709−15	0.86880	0.110E−14	257.9792	−15.1611	24 104	77.6662	15.2796	0.3346
J1712−2715	0.25536	0.128E−14	258.0488	−27.2515	24 304	78.2308	27.7738	0.5532
J1712−2715	0.25536	0.128E−14	258.0488	−27.2515	24 370	78.4379	27.2401	0.3893
J1712−2715	0.25536	0.128E−14	258.0488	−27.2515	24 546	78.9875	27.1280	0.9468
J1713+0747	0.00457	0.854E−20	258.4563	7.7937	24 353	78.3862	−7.3299	0.4691
J1713+0747	0.00457	0.854E−20	258.4563	7.7937	24 472	78.7825	−7.3458	0.5542

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1713−3949	0.39200	0.100E+01	258.3667	−39.8167	24 583	79.1133	39.8586	0.7478
J1715−3700	0.77963	0.150E−15	258.7900	−37.0001	24 332	78.3229	37.3376	0.5763
J1715−3903	0.27848	0.377E−13	258.8096	−39.0501	24 583	79.1133	39.8586	0.8637
J1715−4034	2.07215	0.301E−14	258.9204	−40.5673	24 583	79.1133	39.8586	0.7345
J1716−3720	0.63031	0.180E−13	259.0471	−37.3346	24 332	78.3229	37.3376	0.7242
J1717−4043	0.39786	0.122E−13	259.4496	−40.7181	24 583	79.1133	39.8586	0.9229
J1717−40433	0.34993	0.175E−14	259.2583	−40.7175	24 583	79.1133	39.8586	0.8711
J1717−5800	0.32179	0.196E−15	259.3983	−58.0015	24 801	79.7550	58.1099	0.3727
B1715−40	0.18909	0.167E−14	259.7571	−40.1165	24 583	79.1133	39.8586	0.6935
J1720+2150	1.61566	0.700E−15	260.0054	21.8337	24 862	79.9458	−22.5431	0.7118
B1718−02	0.47771	0.828E−16	260.2383	−2.2066	24 864	79.9542	2.5139	0.4185
B1717−29	0.62045	0.746E−15	260.1421	−29.5545	25 141	80.7054	28.7469	0.9846
B1718−35	0.28042	0.252E−13	260.3863	−35.5471	25 030	80.3979	34.7441	0.8032
B1718−32	0.47716	0.646E−15	260.5121	−32.1292	24 877	80.0029	32.7857	0.8308
J1724−3505	1.22171	0.211E−13	261.1992	−35.0843	25 030	80.3979	34.7441	0.8705
B1726−00	0.38600	0.112E−14	262.1450	−0.1292	25 905	82.9342	0.0999	0.7897
J1730−2304	0.00812	0.202E−19	262.5900	−23.0754	25 586	82.0250	22.9307	0.5832
J1730−2304	0.00812	0.202E−19	262.5900	−23.0754	25 652	82.1992	23.9581	0.9653
J1732−1930	0.48377	0.182E−15	263.0829	−19.5005	26 018	83.2788	20.0363	0.5705
J1732−5049	0.00531	0.138E−19	263.1988	−50.8167	26 113	83.5362	51.2162	0.5230
B1730−22	0.87168	0.427E−16	263.3600	−22.4677	26 159	83.6521	21.6223	0.8945
B1730−22	0.87168	0.427E−16	263.3600	−22.4677	26 328	84.1100	21.9933	0.8875
J1735−3258	0.35096	0.261E−13	263.9871	−32.9672	26 326	84.1042	32.0037	0.9706
J1736−3511	0.50280	0.157E−14	264.0113	−35.1849	26 290	83.9800	35.5076	0.3242
J1736−3511	0.50280	0.157E−14	264.0113	−35.1849	26 506	84.5533	35.9772	0.9600
J1737−3102	0.76867	0.373E−13	264.3904	−31.0335	26 419	84.3404	31.3314	0.3021
J1737−3102	0.76867	0.373E−13	264.3904	−31.0335	26 550	84.6867	30.2240	0.8620
J1737−3102	0.76867	0.373E−13	264.3904	−31.0335	26 650	84.9604	31.2241	0.6010
J1737−3137	0.45043	0.139E−12	264.2675	−31.6173	26 326	84.1042	32.0037	0.4195
J1737−3137	0.45043	0.139E−12	264.2675	−31.6173	26 419	84.3404	31.3314	0.2950
J1737−3137	0.45043	0.139E−12	264.2675	−31.6173	26 650	84.9604	31.2241	0.7967
B1734−35	0.39759	0.612E−14	264.4167	−35.9288	26 290	83.9800	35.5076	0.6067
B1734−35	0.39759	0.612E−14	264.4167	−35.9288	26 506	84.5533	35.9772	0.1450
J1738−2955	0.44340	0.819E−13	264.7175	−29.9181	26 550	84.6867	30.2240	0.3075
B1735−32	0.76850	0.795E−15	264.7254	−32.1982	26 326	84.1042	32.0037	0.6510
B1735−32	0.76850	0.795E−15	264.7254	−32.1982	26 419	84.3404	31.3314	0.9485
B1735−32	0.76850	0.795E−15	264.7254	−32.1982	26 744	85.2408	32.8960	0.8675
B1735−32	0.76850	0.795E−15	264.7254	−32.1982	26 863	85.5521	31.8734	0.8882
J1739−3023	0.11437	0.114E−13	264.9158	−30.3837	26 550	84.6867	30.2240	0.2793
J1739−3023	0.11437	0.114E−13	264.9158	−30.3837	26 650	84.9604	31.2241	0.8416
J1739−3049	0.23932	0.218E−14	264.8467	−30.8178	26 419	84.3404	31.3314	0.7212
J1739−3049	0.23932	0.218E−14	264.8467	−30.8178	26 550	84.6867	30.2240	0.6150
J1739−3049	0.23932	0.218E−14	264.8467	−30.8178	26 650	84.9604	31.2241	0.4219
B1736−31	0.52944	0.186E−13	264.8513	−31.5209	26 326	84.1042	32.0037	0.8895
B1736−31	0.52944	0.186E−13	264.8513	−31.5209	26 419	84.3404	31.3314	0.5449
B1736−31	0.52944	0.186E−13	264.8513	−31.5209	26 650	84.9604	31.2241	0.3163
B1736−31	0.52944	0.186E−13	264.8513	−31.5209	26 863	85.5521	31.8734	0.7845
J1739−3159	0.87756	0.197E−15	264.9525	−31.9847	26 326	84.1042	32.0037	0.8485
J1739−3159	0.87756	0.197E−15	264.9525	−31.9847	26 419	84.3404	31.3314	0.8952
J1739−3159	0.87756	0.197E−15	264.9525	−31.9847	26 650	84.9604	31.2241	0.7607
J1739−3159	0.87756	0.197E−15	264.9525	−31.9847	26 744	85.2408	32.8960	0.9558
J1739−3159	0.87756	0.197E−15	264.9525	−31.9847	26 863	85.5521	31.8734	0.6098
J1740+1000	0.15409	0.215E−13	265.1079	10.0017	26 670	85.0208	−10.7322	0.7356
J1740+1000	0.15409	0.215E−13	265.1079	10.0017	27 058	86.0729	−10.0164	0.9651
B1737+13	0.80305	0.145E−14	265.0304	13.1991	26 654	84.9733	−13.8699	0.6732
B1737−30	0.60667	0.466E−12	265.1408	−30.2621	26 550	84.6867	30.2240	0.4557
B1737−30	0.60667	0.466E−12	265.1408	−30.2621	26 650	84.9604	31.2241	0.9788
J1740−3052	0.57031	0.255E−13	265.2083	−30.8678	26 419	84.3404	31.3314	0.9840
J1740−3052	0.57031	0.255E−13	265.2083	−30.8678	26 550	84.6867	30.2240	0.8286
J1740−3052	0.57031	0.255E−13	265.2083	−30.8678	26 650	84.9604	31.2241	0.4341
J1740−5340	0.00365	0.168E−18	265.1854	−53.6780	26 871	85.5804	53.5156	0.4271
J1740−5340	0.00365	0.168E−18	265.1854	−53.6780	26 933	85.7446	54.2576	0.8054
J1741+2758	1.36074	0.184E−14	265.4725	27.9669	26 731	85.1942	−28.2734	0.4140

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\lvert dP/dt \rvert$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B1738−08	2.04308	0.227E−14	265.3438	−8.6755	26 729	85.1929	9.2656	0.6091
J1741−2019	3.90451	0.163E−13	265.2783	−20.3173	26 568	84.7321	20.0306	0.6169
J1741−2019	3.90451	0.163E−13	265.2783	−20.3173	26 951	85.7825	20.0730	0.5603
J1741−2945	0.22356	0.634E−15	265.3100	−29.7510	26 550	84.6867	30.2240	0.7825
J1741−3016	1.89375	0.899E−14	265.2791	−30.2675	26 550	84.6867	30.2240	0.5941
B1737−39	0.51221	0.193E−14	265.3250	−39.4607	26 909	85.6942	40.2434	0.8654
B1740−03	0.44464	0.156E−14	265.7838	−3.6532	26 615	84.8621	3.4165	0.9516
B1740−31	2.41458	0.121E−12	265.9025	−31.8394	26 863	85.5521	31.8734	0.3521
J1743−3153	0.19310	0.106E−13	265.8146	−31.8848	26 863	85.5521	31.8734	0.2627
J1743−4212	0.30617	0.783E−15	265.7717	−42.2007	27 251	86.6329	42.0739	0.8705
J1744−3130	1.06606	0.212E−13	266.0233	−31.5001	26 863	85.5521	31.8734	0.6012
J1746+2540	1.05815	0.800E−15	266.5275	25.6677	26 977	85.8687	−25.6220	0.6603
J1746+2540	1.05815	0.800E−15	266.5275	25.6677	27 292	86.7467	−25.7067	0.2226
J1747−2958	0.09881	0.614E−13	266.8171	−29.9669	27 336	86.8533	29.6579	0.3111
B1745−20	0.28860	0.400E−15	267.2191	−20.3512	27 495	87.3354	21.0392	0.6978
J1748−2444	0.44284	0.111E−15	267.2021	−24.7344	27 236	86.5846	25.4764	0.9654
J1748−2444	0.44284	0.111E−15	267.2021	−24.7344	27 640	87.7604	25.2288	0.7458
B1744−24A	0.01156	−0.340E−19	267.0092	−24.7769	27 236	86.5846	25.4764	0.8183
B1744−24A	0.01156	−0.340E−19	267.0092	−24.7769	27 640	87.7604	25.2288	0.8767
J1748−2446C	0.00844	−0.606E−18	267.0187	24.7677	27 292	86.7467	−25.7067	0.9777
J1749−2629	1.33539	0.172E−14	267.2967	−26.4836	27 527	87.4400	27.1220	0.6543
B1746−30	0.60987	0.787E−14	267.3058	−30.0343	27 336	86.8533	29.6579	0.5886
J1750−2438	0.71279	0.108E−13	267.7487	−24.6349	27 640	87.7604	25.2288	0.5940
J1750−3503	0.68401	0.381E−16	267.6854	−35.0525	27 361	86.9233	35.5569	0.9139
J1750−3503	0.68401	0.381E−16	267.6854	−35.0525	27 501	87.3533	35.9819	0.9869
J1751−2516	0.39484	0.264E−14	267.9691	−25.2679	27 640	87.7604	25.2288	0.2123
J1751−3323	0.54822	0.890E−14	267.8863	−33.3844	27 528	87.4421	32.9731	0.6053
J1751−3323	0.54822	0.890E−14	267.8863	−33.3844	27 860	88.4154	33.7377	0.6362
B1747−46	0.74235	0.129E−14	267.9258	−46.9569	27 372	86.9579	46.9837	0.9683
B1749−28	0.56256	0.813E−14	268.2442	−28.1104	28 020	88.9000	28.0321	0.6605
J1752−2821	0.64023	0.347E−14	268.1021	−28.3503	28 020	88.9000	28.0321	0.8590
B1750−24	0.52834	0.141E−13	268.3775	−25.0007	27 640	87.7604	25.2288	0.6579
B1753+52	2.39140	0.156E−14	268.5954	52.0201	28 240	89.5108	−52.2047	0.9339
J1755−2725	0.26195	0.140E−16	268.9242	−27.4179	27 907	88.5783	26.6397	0.8516
J1755−2725	0.26195	0.140E−16	268.9242	−27.4179	28 020	88.9000	28.0321	0.6147
J1758+3030	0.94726	0.720E−15	269.6075	30.5067	28 021	88.9021	−29.9170	0.9194
J1758+3030	0.94726	0.720E−15	269.6075	30.5067	28 396	89.9692	−30.8579	0.5041
J1759−1940	0.25472	0.934E−16	269.9875	−19.6675	28 312	89.7375	18.9800	0.7315
J1759−1956	2.84339	0.186E−13	269.8975	−19.9336	28 312	89.7375	18.9800	0.9669
J1759−2549	0.95655	0.996E−13	269.8963	−25.8169	28 640	90.7188	25.8845	0.8253
J1759−2922	0.57440	0.463E−14	269.9508	−29.3686	28 411	90.0100	28.7470	0.6244
B1758−03	0.92149	0.331E−14	270.3441	−3.9653	28 428	90.0575	4.8352	0.9159
J1801−1855	2.55050	0.180E−15	270.3429	−18.9180	28 312	89.7375	18.9800	0.6086
J1801−1909	1.10872	0.703E−15	270.4442	−19.1510	28 312	89.7375	18.9800	0.7271
B1757−24	0.12492	0.128E−12	270.2500	−24.8576	28 791	91.1763	25.1788	0.9803
B1758−29	1.08191	0.329E−14	270.4450	−29.3441	28 411	90.0100	28.7470	0.7387
J1802−2426	0.56901	0.856E−14	270.5129	−24.4345	28 791	91.1763	25.1788	0.9970
B1800−21	0.13362	0.134E−12	270.9637	−21.6008	28 494	90.2246	21.0219	0.9389
B1800−27	0.33441	0.171E−16	270.8817	−27.2002	28 528	90.3258	27.2816	0.5618
B1802−07	0.02310	0.467E−18	271.2075	−7.5902	29 063	91.9675	8.2203	0.9872
J1804−2228	0.57051	0.143E−15	271.1171	−22.4672	29 061	91.9521	22.0028	0.9554
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	28 528	90.3258	27.2816	0.7622
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	29 074	91.9958	27.4284	0.9181
B1804−12	0.52262	0.141E−14	271.5279	−11.9079	29 111	92.0829	11.4595	0.7135
J1806−1920	0.87979	0.170E−16	271.5275	−19.3340	29 221	92.4246	19.0933	0.9288
J1806−2125	0.48179	0.121E−12	271.5813	−21.4178	29 061	91.9521	22.0028	0.6926
B1804−08	0.16373	0.288E−16	271.9083	−8.7953	29 063	91.9675	8.2203	0.5781
B1804−08	0.16373	0.288E−16	271.9083	−8.7953	29 132	92.1696	9.4782	0.7312
J1807−2459	0.00306	0.100E+01	271.8346	−24.9979	28 791	91.1763	25.1788	0.6827
B1804−27	0.82778	0.122E−13	271.7850	−27.2508	29 074	91.9958	27.4284	0.2757
J1808−0813	0.87604	0.124E−14	272.0392	−8.2171	29 063	91.9675	8.2203	0.0717
J1809−0743	0.31389	0.152E−15	272.3996	−7.7171	29 063	91.9675	8.2203	0.6633
J1809−1917	0.08275	0.255E−13	272.4296	−19.2939	29 221	92.4246	19.0933	0.2007

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1809−2004	0.43481	0.728E−14	272.3158	−20.0670	29 221	92.4246	19.0933	0.9798
B1806−21	0.70241	0.382E−14	272.3096	−21.1507	29 061	91.9521	22.0028	0.9240
J1809−3547	0.86039	0.120E−15	272.3621	−35.7838	28 908	91.5358	35.3884	0.9160
J1809−3547	0.86039	0.120E−15	272.3621	−35.7838	29 504	93.2438	35.3484	0.9833
J1810−1820	0.15372	0.520E−16	272.7313	−18.3344	29 189	92.3625	17.8345	0.6212
J1810−1820	0.15372	0.520E−16	272.7313	−18.3344	29 221	92.4246	19.0933	0.8185
J1810−1820	0.15372	0.520E−16	272.7313	−18.3344	29 248	92.5037	17.9348	0.4599
B1806−53	0.26105	0.383E−15	272.6850	−53.6355	29 532	93.3254	52.9105	0.9673
J1811−1736	0.10418	0.180E−17	272.9792	−17.6103	29 189	92.3625	17.8345	0.6562
J1811−1736	0.10418	0.180E−17	272.9792	−17.6103	29 248	92.5037	17.9348	0.5756
J1811−1835	0.55746	0.631E−14	272.8737	−18.5846	29 189	92.3625	17.8345	0.9077
J1811−1835	0.55746	0.631E−14	272.8737	−18.5846	29 221	92.4246	19.0933	0.6786
J1811−1835	0.55746	0.631E−14	272.8737	−18.5846	29 248	92.5037	17.9348	0.7477
J1811−1925	0.06467	0.440E−13	272.8717	−19.4174	29 221	92.4246	19.0933	0.5522
B1809−173	1.20537	0.191E−13	273.0300	−17.3082	29 189	92.3625	17.8345	0.8501
B1809−173	1.20537	0.191E−13	273.0300	−17.3082	29 248	92.5037	17.9348	0.8183
B1809−176	0.53834	0.982E−15	273.0659	−17.5511	29 189	92.3625	17.8345	0.7583
B1809−176	0.53834	0.982E−15	273.0659	−17.5511	29 248	92.5037	17.9348	0.6806
B1811+40	0.93109	0.255E−14	273.3050	40.2275	29 804	94.1300	−40.5323	0.8795
J1814+1130	0.75126	0.166E−14	273.6779	11.5122	29 803	94.1188	−11.1432	0.5749
J1814−1649	0.95746	0.633E−14	273.6554	−16.8174	29 828	94.2200	17.4384	0.8392
J1814−1744	3.97585	0.743E−12	273.6788	−17.7343	29 828	94.2200	17.4384	0.6168
J1814−1744	3.97585	0.743E−12	273.6788	−17.7343	29 875	94.3571	17.9894	0.7247
B1813−17	0.78231	0.726E−14	274.0775	−17.4841	29 828	94.2200	17.4384	0.1496
B1813−17	0.78231	0.726E−14	274.0775	−17.4841	29 875	94.3571	17.9894	0.5775
B1813−36	0.38702	0.205E−14	274.2737	−36.3011	29 701	93.8504	36.3579	0.4271
B1813−36	0.38702	0.205E−14	274.2737	−36.3011	29 910	94.4625	35.3281	0.9912
J1817−3837	0.38449	0.580E−15	274.2508	−38.6332	29 582	93.5025	38.8417	0.7768
J1818−1519	0.93969	0.411E−14	274.5608	−15.3179	30 067	94.9171	16.0133	0.7814
J1818−1541	0.55113	0.968E−14	274.6562	−15.6846	30 067	94.9171	16.0133	0.4196
J1819−1510	0.22654	0.790E−17	274.9734	−15.1724	30 067	94.9171	16.0133	0.8428
B1817−18	0.30990	0.936E−16	275.1625	−18.3009	29 875	94.3571	17.9894	0.8636
J1821+17	1.36668	0.870E−15	275.3058	17.2512	30 232	95.4054	−18.1664	0.9206
J1822+11	1.78700	0.100E+01	275.5708	11.3667	30 114	95.0592	−10.7250	0.8207
B1821+05	0.75291	0.227E−15	275.8788	5.8401	30 509	96.1975	−5.5036	0.4635
J1823−0154	0.75978	0.113E−14	275.9671	−1.9013	30 112	95.0550	2.2591	0.9798
J1823−0154	0.75978	0.113E−14	275.9671	−1.9013	30 585	96.4221	1.1519	0.8767
B1820−11	0.27983	0.138E−14	275.9179	−11.2503	30 552	96.3346	11.2334	0.4170
J1823−1807	1.63679	0.280E−15	275.7900	−18.1176	30 220	95.3654	17.2951	0.9256
B1821−11	0.43576	0.355E−14	276.1229	−11.3118	30 552	96.3346	11.2334	0.2258
J1824−1159	0.36249	0.538E−14	276.2337	−11.9982	30 552	96.3346	11.2334	0.7714
B1822+00	0.77895	0.876E−15	276.3137	0.0721	30 243	95.4313	−0.5388	0.9982
B1822+00	0.77895	0.876E−15	276.3137	0.0721	30 545	96.3183	−0.9454	0.8732
B1823−11	2.09314	0.491E−14	276.5225	−11.5288	30 552	96.3346	11.2334	0.3501
B1823−11	2.09314	0.491E−14	276.5225	−11.5288	30 905	97.3042	10.9341	0.9823
J1828−1101	0.07205	0.148E−13	277.0783	−11.0308	30 552	96.3346	11.2334	0.7708
J1828−1101	0.07205	0.148E−13	277.0783	−11.0308	30 905	97.3042	10.9341	0.2457
B1826−17	0.30713	0.555E−14	277.4296	−17.8511	30 890	97.2654	17.7456	0.1951
B1828−10	0.40504	0.600E−13	277.6979	−10.9911	30 905	97.3042	10.9341	0.3979
J1830−1135	6.22155	0.477E−13	277.5071	−11.5842	30 905	97.3042	10.9341	0.6811
J1832−0644	0.74430	0.371E−13	278.1775	−6.7338	31 069	97.7962	5.8771	0.9377
B1831−03	0.68670	0.416E−13	278.4246	−3.6512	31 083	97.8396	2.9113	0.9432
J1833−0559	0.48346	0.124E−13	278.2816	−5.9840	31 069	97.7962	5.8771	0.4970
J1833−0559	0.48346	0.124E−13	278.2816	−5.9840	31 246	98.3021	5.4632	0.5213
J1834−0602	0.48791	0.183E−14	278.6579	−6.0343	31 069	97.7962	5.8771	0.8759
J1834−0602	0.48791	0.183E−14	278.6579	−6.0343	31 246	98.3021	5.4632	0.6729
J1834−1710	0.35831	0.469E−16	278.7225	−17.1681	31 435	98.8029	18.0654	0.9010
J1837−1837	0.61836	0.550E−14	279.4758	−18.6169	31 435	98.8029	18.0654	0.8700
J1839−0321	0.23878	0.125E−13	279.9062	−3.3529	31 849	99.8804	3.3198	0.0420
J1839−0402	0.52094	0.769E−14	279.9625	−4.0402	31 849	99.8804	3.3198	0.7251
J1841−0345	0.20407	0.589E−13	280.4108	−3.8118	31 849	99.8804	3.3198	0.7235
B1839−04	1.83994	0.509E−15	280.6100	−3.9999	31 849	99.8804	3.3198	0.9975
J1844+00	0.46050	0.100E+01	281.0458	0.5833	32 270	101.0583	−0.9254	0.3423

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\lvert dP/dt \rvert$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B1842+14	0.37546	0.187E−14	281.2283	14.9039	32 076	100.5221	−15.2149	0.7717
B1842+14	0.37546	0.187E−14	281.2283	14.9039	32 303	101.1663	−14.7284	0.1861
J1849+06	2.21900	0.100E+01	282.2792	6.1167	32 524	101.8058	−5.6138	0.6906
J1849+24	0.27500	0.100E+01	282.2500	24.0000	32 662	102.1979	−23.2031	0.7986
J1850+0026	1.08184	0.359E−15	282.6879	0.4404	32 608	102.0479	0.3049	0.9824
B1848+04	0.28470	0.109E−14	282.7633	4.3033	32 644	102.1488	−4.0757	0.6554
B1848+04	0.28470	0.109E−14	282.7633	4.3033	32 984	103.0763	−5.1737	0.9249
J1852−2610	0.33634	0.877E−16	283.2475	−26.1702	32 874	102.7517	25.7608	0.6430
J1852−2610	0.33634	0.877E−16	283.2475	−26.1702	33 277	103.8275	25.3756	0.9838
J1852−2610	0.33634	0.877E−16	283.2475	−26.1702	33 356	104.0658	25.9598	0.8450
J1853+0545	0.12640	0.611E−15	283.4933	5.7653	32 984	103.0763	−5.1737	0.7239
J1857+0526	0.34995	0.693E−14	284.3159	5.4413	33 719	105.0754	−5.3674	0.7632
B1855+09	0.00536	0.178E−19	284.4013	9.7215	33 109	103.4367	−9.5154	0.9864
B1851−79	1.27919	0.186E−14	285.1017	−79.8634	33 932	105.6187	79.1646	0.8693
J1901+1306	1.83086	0.131E−15	285.4529	13.1134	33 973	105.7292	−13.2179	0.2953
J1901−0906	1.78193	0.164E−14	285.4708	−9.1030	33 995	105.8038	9.0237	0.3423
B1900+05	0.74658	0.129E−13	285.6775	5.9405	33 719	105.0754	−5.3674	0.8313
B1900+01	0.72930	0.403E−14	285.8746	1.5940	34 239	106.4696	−1.0200	0.8267
J1903+2225	0.65118	0.445E−15	285.9704	22.4201	33 799	105.2688	−21.9648	0.8364
B1900−06	0.43189	0.340E−14	285.9079	−6.5394	33 848	105.3979	6.9268	0.6404
B1901+10	1.85657	0.276E−15	286.0100	10.1929	34 104	106.0737	−10.5068	0.3203
J1906+0912	0.77535	0.132E−15	286.6183	9.2157	34 423	107.0392	−9.9688	0.8627
J1907+0918	0.22611	0.943E−13	286.8433	9.3085	34 423	107.0392	−9.9688	0.6887
J1907+0919	5.16892	0.778E−10	286.8096	9.3223	34 423	107.0392	−9.9688	0.6861
B1905+39	1.23576	0.541E−15	286.8942	40.0349	34 254	106.5096	−39.8672	0.4196
J1908+0909	0.33656	0.349E−13	287.0309	9.1534	34 423	107.0392	−9.9688	0.8154
B1906+09	0.83027	0.980E−16	287.2446	9.2671	34 423	107.0392	−9.9688	0.7312
B1907+02	0.98983	0.553E−14	287.4096	2.9141	34 848	108.1758	−3.1779	0.8104
J1909+0912	0.22295	0.358E−13	287.3329	9.2149	34 423	107.0392	−9.9688	0.8091
B1907+12	1.44174	0.823E−14	287.5562	12.5278	34 710	107.8238	−12.0412	0.5553
B1907−03	0.50460	0.219E−14	287.6233	−3.1650	34 341	106.7888	3.4481	0.8813
J1910−5959A	0.00327	0.307E−20	287.9279	−59.9741	34 804	108.0712	59.2652	0.7233
J1910−5959B	0.00836	−0.799E−18	287.7166	−59.9836	34 804	108.0712	59.2652	0.8011
J1910−5959C	0.00528	0.220E−20	287.7729	−60.0166	34 804	108.0712	59.2652	0.8085
J1910−5959D	0.00903	0.963E−18	287.7183	−59.9848	34 804	108.0712	59.2652	0.8015
J1910−5959E	0.00457	−0.437E−18	287.7171	−59.9839	34 804	108.0712	59.2652	0.8012
J1911−1114	0.00363	0.142E−19	287.9550	−11.2395	34 767	107.9629	10.5122	0.7274
J1912+2525	0.62198	0.225E−15	288.0775	25.4172	34 785	108.0200	−24.8921	0.5283
J1913+1145	0.30607	0.502E−14	288.4325	11.7592	34 710	107.8238	−12.0412	0.6709
B1911+11	0.60100	0.656E−15	288.5421	11.3677	34 710	107.8238	−12.0412	0.9847
J1918+08	2.12966	0.100E+01	289.6333	8.6342	35 642	110.3196	−8.8776	0.7281
B1918+19	0.82104	0.896E−15	290.2658	19.8124	35 555	110.0538	−19.8187	0.2122
B1918+19	0.82104	0.896E−15	290.2658	19.8124	35 851	110.8717	−20.0226	0.6412
B1919+20	0.76068	0.500E−16	290.4646	20.0558	35 555	110.0538	−19.8187	0.4743
B1919+20	0.76068	0.500E−16	290.4646	20.0558	35 851	110.8717	−20.0226	0.4084
B1920+20	1.17276	0.649E−15	290.5333	20.2992	35 555	110.0538	−19.8187	0.6789
B1920+20	1.17276	0.649E−15	290.5333	20.2992	35 851	110.8717	−20.0226	0.4371
B1920+21	1.07792	0.818E−14	290.7229	21.1783	36 058	111.4708	−21.5832	0.8505
B1921+17	0.54721	0.430E−16	290.7825	17.1026	35 741	110.5854	−17.8123	0.7365
B1921+17	0.54721	0.430E−16	290.7825	17.1026	35 943	111.1425	−17.8921	0.8677
B1922+20	0.23779	0.209E−14	291.1667	20.6667	35 851	110.8717	−20.0226	0.7085
B1922+20	0.23779	0.209E−14	291.1667	20.6667	36 058	111.4708	−21.5832	0.9656
B1923+04	1.07408	0.246E−14	291.6017	4.5254	35 881	110.9654	−5.2714	0.9804
B1924+16	0.57982	0.180E−13	291.6887	16.8091	36 392	112.3346	−17.3449	0.8392
B1924+19	1.34601	0.143E−14	291.5950	19.4699	35 851	110.8717	−20.0226	0.9103
B1929+15	0.31435	0.501E−14	292.9821	15.6160	36 512	112.6662	−15.9943	0.4929
B1929+15	0.31435	0.501E−14	292.9821	15.6160	36 809	113.5550	−16.1881	0.8097
B1929+20	0.26822	0.422E−14	293.0333	20.3462	36 951	113.9492	−20.0484	0.9631
B1930+22	0.14447	0.576E−13	293.0946	22.3476	36 731	113.3179	−22.3009	0.2282
J1932−3655	0.57142	0.284E−15	293.0254	−36.9173	36 627	112.9896	36.2304	0.6877
J1933+07	0.43745	0.100E+01	293.3333	7.8833	36 587	112.8767	−8.1436	0.5256
B1931+24	0.81369	0.811E−14	293.4075	24.6110	36 667	113.1571	−24.5728	0.2533
B1931+24	0.81369	0.811E−14	293.4075	24.6110	37 109	114.3833	−24.5969	0.9759

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B1933+16	0.35874	0.600E−14	293.9492	16.2778	36 809	113.5550	−16.1881	0.4042
B1933+17	0.65441	0.378E−15	293.8746	17.7534	36 901	113.8008	−17.5486	0.2177
B1933+15	0.96734	0.404E−14	294.0063	15.6100	36 809	113.5550	−16.1881	0.7334
B1935+25	0.20098	0.643E−15	294.2550	25.7371	37 309	114.8971	−26.4743	0.9776
J1938+06	1.12156	0.100E+01	294.5000	6.8667	37 413	115.2162	−7.2919	0.8330
B1937+21	0.00156	0.105E−18	294.9104	21.5831	37 217	114.6692	−21.2234	0.4331
B1937+24	0.64530	0.183E−13	294.7729	24.7154	37 109	114.3833	−24.5969	0.4072
B1941−17	0.84116	0.986E−15	296.0217	−17.8336	37 622	115.7988	18.1796	0.4115
B1941−17	0.84116	0.986E−15	296.0217	−17.8336	37 922	116.5683	17.0143	0.9850
B1943+18	1.06871	0.242E−15	296.4004	18.5723	37 528	115.5379	−18.8291	0.8999
B1942−00	1.04563	0.535E−15	296.3679	−0.6828	37 885	116.4704	0.8231	0.1738
B1944+22	1.33445	0.889E−15	296.6033	22.7498	37 906	116.5150	−23.1416	0.4016
J1946+2611	0.43506	0.220E−13	296.6908	26.1970	37 968	116.7379	−25.3704	0.8279
J1947+10	1.11094	0.100E+01	296.9000	10.7333	37 844	116.3717	−10.1607	0.7792
J1947+10	1.11094	0.100E+01	296.9000	10.7333	37 972	116.7487	−10.7574	0.1531
B1946−25	0.95762	0.327E−14	297.3558	−25.4002	38 172	117.3288	24.4888	0.9119
B1946−25	0.95762	0.327E−14	297.3558	−25.4002	38 312	117.7400	25.1107	0.4811
J1951+1123	5.09408	0.303E−14	297.7842	11.3903	38 392	117.9829	−11.0326	0.4093
J1953+1149	0.85189	0.287E−14	298.4475	11.8285	38 392	117.9829	−11.0326	0.9216
B1953+50	0.51894	0.137E−14	298.8279	50.9987	38 649	118.7054	−50.5644	0.4512
B1953+50	0.51894	0.137E−14	298.8279	50.9987	38 715	118.8942	−50.7090	0.2972
J2002+1637	0.27650	0.225E−15	300.6988	16.6213	39 293	120.5150	−17.1722	0.5807
J2002+30	0.42179	0.100E+01	300.7417	30.5833	39 101	119.9879	−30.3756	0.7818
J2002+30	0.42179	0.100E+01	300.7417	30.5833	39 327	120.6104	−30.4180	0.2111
B2000+40	0.90507	0.174E−14	300.6833	40.8483	39 007	119.7442	−40.9010	0.9406
B2002+31	2.11126	0.746E−13	301.2175	31.6194	39 748	121.8558	−32.0091	0.7479
J2005−0020	2.27966	0.257E−13	301.4321	−0.3394	39 669	121.5933	−0.1128	0.4800
B2003−08	0.58087	0.460E−16	301.5679	−8.1172	39 721	121.7875	7.3837	0.7656
J2015+2524	2.30330	0.510E−15	303.8029	25.4087	40 652	124.4775	−25.3612	0.6763
B2016+28	0.55795	0.148E−15	304.5158	28.6651	40 424	123.8113	−28.6860	0.7049
B2016+28	0.55795	0.148E−15	304.5158	28.6651	40 914	125.2504	−28.6249	0.7357
B2020+28	0.34340	0.189E−14	305.6542	28.9064	40 914	125.2504	−28.6249	0.4922
B2022+50	0.37262	0.251E−14	305.9246	50.6263	40 840	125.0096	−50.8837	0.9505
J2033+17	0.00595	0.110E−19	308.3375	17.6000	42 281	129.3150	−17.4948	0.9832
J2038−3816	1.57729	0.413E−14	309.7254	−38.2700	42 405	129.6971	38.1719	0.1020
J2038−3816	1.57729	0.413E−14	309.7254	−38.2700	42 445	129.8125	37.5277	0.7474
J2040+16	0.86560	0.100E+01	310.0541	16.9000	42 281	129.3150	−17.4948	0.9487
J2040+16	0.86560	0.100E+01	310.0541	16.9000	42 844	130.9579	−17.0202	0.9117
J2043+2740	0.09613	0.127E−14	310.9312	27.6682	42 872	131.0450	−28.1931	0.5370
J2044+4614	1.39271	0.630E−15	311.2450	46.2348	42 847	130.9692	−46.4995	0.3823
B2044+15	1.13829	0.182E−15	311.6637	15.6760	42 935	131.2696	−15.4246	0.4675
B2045+56	0.47673	0.111E−13	311.6942	57.1436	42 885	131.0996	−57.7693	0.8632
B2043−04	1.54694	0.147E−14	311.5004	−4.3572	42 862	131.0150	4.6415	0.5625
B2043−04	1.54694	0.147E−14	311.5004	−4.3572	43 070	131.5954	4.5017	0.1729
B2045−16	1.96157	0.110E−13	312.1475	−16.2790	43 217	132.0625	15.7276	0.5579
J2050+13	1.22000	0.100E+01	312.5000	13.0167	43 565	133.0850	−12.8084	0.6210
J2051−0827	0.00451	0.127E−19	312.7812	−8.4605	43 618	133.2563	9.1858	0.8670
J2051−0827	0.00451	0.127E−19	312.7812	−8.4605	43 692	133.4908	8.4215	0.7106
B2053+21	0.81518	0.134E−14	313.9129	22.1576	43 921	134.2075	−22.5251	0.4710
B2053+36	0.22151	0.369E−15	313.8804	36.5059	43 880	134.0829	−37.1225	0.6489
B2106+44	0.41487	0.862E−16	317.0850	44.6969	45 072	137.7100	−45.3088	0.8747
J2108−3429	1.42310	0.350E−14	317.1266	−34.4939	44 559	136.1871	34.4011	0.9441
J2108−3429	1.42310	0.350E−14	317.1266	−34.4939	45 053	137.6400	34.6113	0.5266
B2110+27	1.20285	0.262E−14	318.2679	27.9006	45 301	138.4979	−27.5198	0.4449
J2124−3358	0.00493	0.205E−19	321.1825	−33.9789	46 022	140.7904	33.9056	0.3989
J2124−3358	0.00493	0.205E−19	321.1825	−33.9789	46 098	141.0100	34.7969	0.8359
J2139+2242	1.08351	0.142E−14	324.8621	22.7117	47 156	144.1354	−22.4297	0.7794
J2139+2242	1.08351	0.142E−14	324.8621	22.7117	47 353	144.7287	−22.9649	0.2862
J2144−3933	8.50983	0.496E−15	326.0504	−39.5653	47 527	145.3408	38.9505	0.9389
J2144−3933	8.50983	0.496E−15	326.0504	−39.5653	47 581	145.5279	39.2473	0.6117
J2144−3933	8.50983	0.496E−15	326.0504	−39.5653	47 933	146.5212	39.8710	0.5613
J2145−0750	0.01605	0.299E−19	326.4600	−7.8384	47 587	145.5417	7.5901	0.9513
J2145−0750	0.01605	0.299E−19	326.4600	−7.8384	47 722	145.9321	7.9531	0.5402

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Table A1 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\lvert dP/dt \rvert$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J2145−0750	0.01605	0.299E−19	326.4600	−7.8384	48 165	147.2637	7.8193	0.8040
B2148+63	0.38014	0.168E−15	327.4938	63.4954	48 018	146.8296	−63.7206	0.7013
B2148+63	0.38014	0.168E−15	327.4938	63.4954	48 470	148.2608	−63.5129	0.7673
B2148+52	0.33221	0.101E−13	327.6571	52.7971	48 133	147.1954	−52.6163	0.4958
B2148+52	0.33221	0.101E−13	327.6571	52.7971	48 143	147.2167	−53.5854	0.9030
B2152−31	1.03000	0.124E−14	328.8067	−31.3152	48 570	148.5950	32.2571	0.9654
B2152−31	1.03000	0.124E−14	328.8067	−31.3152	48 740	149.1254	31.7388	0.5301
J2156+2618	0.49815	0.142E−16	329.0988	26.3084	48 659	148.8496	−27.2609	0.9846
J2156+2618	0.49815	0.142E−16	329.0988	26.3084	48 757	149.1721	−25.3372	0.9740
J2156+2618	0.49815	0.142E−16	329.0988	26.3084	48 930	149.7350	−27.0659	0.9892
B2154+40	1.52527	0.343E−14	329.2575	40.2961	48 718	149.0525	−40.7868	0.5318
J2205+1444	0.93801	0.900E−15	331.3217	14.7420	49 577	151.8075	−14.3047	0.6537
B2210+29	1.00459	0.495E−15	333.0971	29.5516	49 821	152.5571	−29.5048	0.5420
B2217+47	0.53847	0.277E−14	334.9504	47.9150	50 436	154.4688	−48.3535	0.6514
B2217+47	0.53847	0.277E−14	334.9504	47.9150	50 761	155.4846	−47.3591	0.7709
B2217+47	0.53847	0.277E−14	334.9504	47.9150	50 866	155.7988	−48.3348	0.9465
J2222+2923	0.28140	0.617E−17	335.7633	29.3996	50 568	154.9488	−28.9624	0.9245
J2222+2923	0.28140	0.617E−17	335.7633	29.3996	50 681	155.2396	−28.7413	0.8413
J2222+2923	0.28140	0.617E−17	335.7633	29.3996	50 807	155.5975	−28.8477	0.5763
J2222+2923	0.28140	0.617E−17	335.7633	29.3996	50 921	155.9804	−29.6458	0.3282
J2229+2643	0.00298	0.146E−20	337.4617	26.7327	51 297	157.1775	−27.3654	0.6936
J2229+2643	0.00298	0.146E−20	337.4617	26.7327	51 494	157.7537	−26.8675	0.3217
J2229+2643	0.00298	0.146E−20	337.4617	26.7327	51 657	158.3067	−26.8142	0.8489
J2229+6114	0.05162	0.783E−13	337.2717	61.2359	51 166	156.7671	−62.0058	0.9205
J2229+6114	0.05162	0.783E−13	337.2717	61.2359	51 177	156.7933	−62.0187	0.9173
B2227+61	0.44306	0.226E−14	337.4242	62.0933	51 166	156.7671	−62.0058	0.6629
B2227+61	0.44306	0.226E−14	337.4242	62.0933	51 177	156.7933	−62.0187	0.6353
J2248−0101	0.47723	0.659E−15	342.1117	−1.0299	52 610	161.3717	1.0108	0.7403
J2253+1516	0.79224	0.665E−16	343.3104	15.2772	52 990	162.6067	−15.1040	0.7247
J2253+1516	0.79224	0.665E−16	343.3104	15.2772	53 250	163.3658	−15.8206	0.5463
B2255+58	0.36825	0.575E−14	344.4904	59.1541	53 448	164.0046	−59.5223	0.6096
B2303+30	1.57589	0.289E−14	346.4930	31.0005	54 400	166.9779	−30.1742	0.9580
B2303+30	1.57589	0.289E−14	346.4930	31.0005	54 496	167.2400	−31.3274	0.8155
B2306+55	0.47507	0.199E−15	347.0575	55.7933	54 187	166.2700	−56.4030	0.9959
B2306+55	0.47507	0.199E−15	347.0575	55.7933	54 506	167.2721	−56.4339	0.6756
B2310+42	0.34943	0.112E−15	348.2854	42.8869	54 984	168.8783	−42.6131	0.6531
J2317+1439	0.00344	0.242E−20	349.2883	14.6587	55 066	169.0925	−14.6931	0.1988
B2323+63	1.43631	0.283E−14	351.3054	63.2812	55 779	171.4312	−63.9723	0.7025
B2324+60	0.23365	0.353E−15	351.7441	61.2268	55 691	171.1704	−61.6478	0.7116
B2327−20	1.64362	0.463E−14	352.6117	−20.0916	56 399	173.4375	19.5627	0.9807
J2346−0609	1.18146	0.136E−14	356.7100	−6.1665	57 369	176.4200	5.5001	0.7268
J2346−0609	1.18146	0.136E−14	356.7100	−6.1665	57 676	177.4358	6.5235	0.8089

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Table A2. *1066 correlations between pulsar positions and the habstar catalogue*

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J0006+1834	0.69375	0.210E−14	1.5200	18.5831	206	0.6467	18.8360	0.9092
J0006+1834	0.69375	0.210E−14	1.5200	18.5831	493	1.4783	18.2354	0.3502
J0006+1834	0.69375	0.210E−14	1.5200	18.5831	495	1.4813	18.0762	0.5083
B0011+47	1.24070	0.564E−15	3.5738	47.7759	889	2.7329	48.1104	0.9049
B0021−72C	0.00576	−0.499E−19	5.9596	−72.0754	2186	6.9092	−71.8826	0.9689
B0021−72D	0.00536	−0.343E−20	6.0575	−72.0788	2186	6.9092	−71.8826	0.8740
B0021−72E	0.00354	0.985E−19	6.0462	−72.0889	2186	6.9092	−71.8826	0.8872
B0021−72F	0.00262	0.645E−19	6.0158	−72.0786	2186	6.9092	−71.8826	0.9146
B0021−72G	0.00404	−0.421E−19	6.0329	−72.0777	2186	6.9092	−71.8826	0.8977
B0021−72H	0.00321	−0.184E−20	6.0279	−72.0685	2186	6.9092	−71.8826	0.9006
B0021−72I	0.00348	−0.459E−19	6.0329	−72.0777	2186	6.9092	−71.8826	0.8977
B0021−72J	0.00210	−0.979E−20	5.9975	−72.0663	2186	6.9092	−71.8826	0.9300
B0021−72L	0.00435	−0.122E−18	6.0154	−72.0825	2186	6.9092	−71.8826	0.9158
B0021−72M	0.00368	−0.384E−19	5.9767	−72.0919	1779	5.6446	−73.0323	0.9973
B0021−72M	0.00368	−0.384E−19	5.9767	−72.0919	2186	6.9092	−71.8826	0.9557
B0021−72N	0.00305	−0.219E−19	6.0379	−72.0747	2186	6.9092	−71.8826	0.8922
J0024−7204O	0.00264	0.304E−19	6.0192	−72.0816	2186	6.9092	−71.8826	0.9120
J0024−7204P	0.00364	0.100E+01	6.0250	−72.0667	2186	6.9092	−71.8826	0.9031
J0024−7204Q	0.00403	0.340E−19	6.0683	−72.0736	2186	6.9092	−71.8826	0.8623
J0024−7204R	0.00348	0.100E+01	6.0208	−72.0667	2186	6.9092	−71.8826	0.9072
J0024−7204S	0.00283	−0.121E−18	6.0163	−72.0784	2186	6.9092	−71.8826	0.9141
J0024−7204T	0.00759	0.294E−18	6.0354	−72.0775	2186	6.9092	−71.8826	0.8952
J0024−7204U	0.00434	0.952E−19	6.0408	−72.0666	2186	6.9092	−71.8826	0.8876
J0024−7204V	0.00481	0.100E+01	6.0208	−72.0667	2186	6.9092	−71.8826	0.9072
J0024−7204W	0.00235	0.100E+01	6.0208	−72.0667	2186	6.9092	−71.8826	0.9072
J0030+0451	0.00487	0.100E−19	7.6142	4.8610	2659	8.4200	4.9478	0.8105
J0034−0534	0.00188	0.496E−20	8.5908	−5.5768	2980	9.4867	−5.9979	0.9899
B0031−07	0.94295	0.408E−15	8.5367	−7.3648	2805	8.9275	−8.2097	0.9309
B0045+33	1.21709	0.235E−14	12.1412	34.2022	3723	11.9492	34.5851	0.4283
J0051+0423	0.35473	0.700E−17	12.8754	4.3803	4056	12.9842	4.0603	0.3379
J0051+0423	0.35473	0.700E−17	12.8754	4.3803	4123	13.2100	3.8177	0.6546
B0052+51	2.11517	0.954E−14	13.9388	51.2902	4168	13.3092	50.8632	0.7607
B0059+65	1.67916	0.595E−14	15.6371	65.6204	4904	15.7346	64.8363	0.7901
B0105+68	1.07112	0.481E−16	17.1229	69.0979	5273	16.8512	69.8794	0.8273
J0108−1431	0.80756	0.770E−16	17.0346	−14.5303	5607	17.9762	−14.5546	0.9420
J0133−6957	0.46347	0.120E−15	23.3850	−69.9582	7101	22.8779	−69.2817	0.8455
J0133−6957	0.46347	0.120E−15	23.3850	−69.9582	7107	22.8904	−69.9926	0.4958
J0134−2937	0.13696	0.784E−16	23.5775	−29.6213	7467	24.0421	−29.3924	0.5179
J0134−2937	0.13696	0.784E−16	23.5775	−29.6213	7539	24.2850	−29.3931	0.7434
J0137+16	0.41477	0.100E+01	24.3792	16.9167	7626	24.5583	17.8298	0.9306
B0144+59	0.19632	0.257E−15	26.9358	59.3676	8288	26.6967	59.1562	0.3191
B0148−06	1.46467	0.443E−15	27.8446	−6.5841	8844	28.4388	−6.0506	0.7986
B0148−06	1.46467	0.443E−15	27.8446	−6.5841	8918	28.7017	−6.5921	0.8571
B0149−16	0.83274	0.130E−14	28.0450	−16.6314	8647	27.8683	−16.7403	0.2075
B0149−16	0.83274	0.130E−14	28.0450	−16.6314	8863	28.5067	−15.9874	0.7924
B0153+39	1.81156	0.152E−15	29.2304	39.8247	8838	28.4117	39.8830	0.8208
B0153+39	1.81156	0.152E−15	29.2304	39.8247	9151	29.4804	40.7608	0.9689
B0203−40	0.63055	0.120E−14	31.5050	−40.4679	9524	30.6262	−40.5202	0.8803
B0203−40	0.63055	0.120E−14	31.5050	−40.4679	9553	30.6871	−40.9507	0.9498
B0203−40	0.63055	0.120E−14	31.5050	−40.4679	9629	30.9404	−40.4692	0.5646
J0218+4232	0.00232	0.774E−19	34.5262	42.5382	10 753	34.5808	41.9297	0.6109
B0226+70	1.46682	0.311E−14	37.8083	70.4427	11 817	38.0975	70.1273	0.4279
B0254−53	0.44771	0.306E−16	43.9842	−53.0726	13 400	43.1192	−52.8873	0.8846
J0329+16	0.89330	0.100E+01	52.3042	16.9000	15 961	51.3783	17.1428	0.9571
J0329+16	0.89330	0.100E+01	52.3042	16.9000	16 469	53.0258	16.7282	0.7418
B0329+54	0.71452	0.205E−14	53.2471	54.5788	16 514	53.1588	55.1853	0.6130
B0353+52	0.19703	0.477E−15	59.4367	52.6160	18 712	60.1192	52.9474	0.7587
B0410+69	0.39072	0.766E−16	63.9817	69.9027	19 655	63.1763	70.2015	0.8590
B0410+69	0.39072	0.766E−16	63.9817	69.9027	19 998	64.3308	69.5023	0.5313
J0421−0345	2.16131	0.116E−14	65.3896	−3.7519	20 142	64.7737	−4.1488	0.7327
J0421−0345	2.16131	0.116E−14	65.3896	−3.7519	20 233	65.0471	−4.4931	0.8166
J0435+27	0.32628	0.100E+01	68.8917	27.7333	21 333	68.6767	27.5346	0.2928
J0435+27	0.32628	0.100E+01	68.8917	27.7333	21 353	68.7246	28.0645	0.3710

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J0435+27	0.32628	0.100E+01	68.8917	27.7333	21 478	69.1854	27.2554	0.5610
J0437−4715	0.00576	0.573E−19	69.3154	−47.2523	21 425	69.0008	−47.6551	0.5111
J0437−4715	0.00576	0.573E−19	69.3154	−47.2523	21 458	69.1108	−46.4855	0.7937
J0448−2749	0.45045	0.148E−15	72.1729	−27.8296	22 373	72.2417	−28.7241	0.8971
B0450−18	0.54894	0.575E−14	73.1417	−17.9898	22 608	72.9596	−18.8512	0.8804
B0450−18	0.54894	0.575E−14	73.1417	−17.9898	22 762	73.4571	−17.7719	0.3834
B0450+55	0.34073	0.237E−14	73.5321	55.7282	22 569	72.8625	55.8372	0.6784
B0450+55	0.34073	0.237E−14	73.5321	55.7282	22 624	73.0171	56.4234	0.8652
B0523+11	0.35444	0.736E−16	81.4850	11.2553	25 245	80.9742	11.0836	0.5389
B0523+11	0.35444	0.736E−16	81.4850	11.2553	25 554	81.9379	10.7784	0.6577
B0525+21	3.74551	0.400E−13	82.2179	22.0003	25 586	82.0250	22.9307	0.9501
B0525+21	3.74551	0.400E−13	82.2179	22.0003	25 613	82.0804	21.4437	0.5734
B0525+21	3.74551	0.400E−13	82.2179	22.0003	25 694	82.3146	21.3160	0.6912
B0531+21	0.03308	0.423E−12	83.6329	22.0144	26 159	83.6521	21.6223	0.3926
B0531+21	0.03308	0.423E−12	83.6329	22.0144	26 250	83.8658	21.2944	0.7568
B0531+21	0.03308	0.423E−12	83.6329	22.0144	26 328	84.1100	21.9933	0.4776
J0538+2817	0.14316	0.367E−14	84.6042	28.2859	26 196	83.7529	28.0992	0.8715
B0559−57	2.26136	0.278E−14	90.1937	−57.9483	28 251	89.5483	−57.3728	0.8648
J0611+30	1.41209	0.100E+01	92.8167	30.2667	29 301	92.6637	30.9571	0.7072
J0611+30	1.41209	0.100E+01	92.8167	30.2667	29 500	93.2371	29.7234	0.6869
J0611+30	1.41209	0.100E+01	92.8167	30.2667	29 617	93.6225	30.7826	0.9568
B0609+37	0.29798	0.595E−16	93.2025	37.3604	29 238	92.4671	37.5712	0.7651
J0625+10	0.49840	0.100E+01	96.4375	10.2667	30 552	96.3346	11.2334	0.9722
B0626+24	0.47662	0.200E−14	97.2737	24.2616	31 046	97.7121	24.3843	0.4552
B0628−28	1.24442	0.712E−14	97.7058	−28.5786	30 976	97.5217	−28.6579	0.2005
J0631+1036	0.28777	0.105E−12	97.8646	10.6173	30 905	97.3042	10.9341	0.6437
J0633+1746	0.23709	0.110E−13	98.4750	17.7699	31 435	98.8029	18.0654	0.4415
J0635+0533	0.03386	0.100E+01	98.8250	5.5531	31 246	98.3021	5.4632	0.5306
J0711+0931	1.21409	0.400E−15	107.9004	9.5236	34 767	107.9629	10.5122	0.9905
J0711−6830	0.00549	0.149E−19	107.9758	−68.5132	34 805	108.0721	−67.7823	0.7372
J0711−6830	0.00549	0.149E−19	107.9758	−68.5132	35 052	108.7346	−68.0708	0.8783
J0725−1635	0.42431	0.926E−16	111.2517	−16.5961	36 081	111.5150	−15.6657	0.9669
J0737−2202	0.32037	0.547E−14	114.4333	−22.0348	37 217	114.6692	−21.2234	0.8450
B0736−40	0.37492	0.162E−14	114.6346	−40.7112	36 877	113.7171	−40.7278	0.9177
B0740−28	0.16676	0.168E−13	115.7042	−28.3788	37 715	116.0475	−27.7102	0.7516
B0743−53	0.21484	0.273E−14	116.2596	−53.8561	38 041	116.9563	−54.2635	0.8070
J0749−4247	1.09545	0.977E−15	117.4567	−42.7950	37 894	116.5021	−42.7033	0.9590
B0751+32	1.44235	0.108E−14	118.6692	32.5323	38 340	117.8046	32.9799	0.9736
B0751+32	1.44235	0.108E−14	118.6692	32.5323	38 513	118.3083	32.2013	0.4896
B0751+32	1.44235	0.108E−14	118.6692	32.5323	38 637	118.6692	33.1491	0.6168
B0751+32	1.44235	0.108E−14	118.6692	32.5323	38 658	118.7258	32.2848	0.2539
B0756−15	0.68226	0.162E−14	119.6208	−15.4691	38 702	118.8492	−15.4984	0.7722
B0756−15	0.68226	0.162E−14	119.6208	−15.4691	38 862	119.3029	−14.5915	0.9334
B0756−15	0.68226	0.162E−14	119.6208	−15.4691	38 969	119.6063	−15.0197	0.4496
B0818−41	0.54545	0.189E−16	125.0642	−41.2434	40 695	124.6067	−40.3584	0.9963
B0820+02	0.86487	0.105E−15	125.7904	1.9868	40 903	125.2000	1.3881	0.8409
B0820+02	0.86487	0.105E−15	125.7904	1.9868	41 142	125.9100	2.1798	0.2271
B0823+26	0.53066	0.171E−14	126.7137	26.6233	41 447	126.8129	25.7253	0.9034
B0826−34	1.84892	0.996E−15	127.0692	−34.2853	41 445	126.8067	−33.4569	0.8690
J0831−4406	0.31167	0.128E−14	127.8850	−44.1033	41 744	127.6862	−43.1751	0.9493
J0834−4159	0.12112	0.444E−14	128.5679	−41.9975	42 157	128.9050	−42.5605	0.6562
J0834−4159	0.12112	0.444E−14	128.5679	−41.9975	42 196	129.0600	−41.5575	0.6601
B0834+06	1.27377	0.680E−14	129.2733	6.1707	42 418	129.7512	6.9562	0.9194
B0835−41	0.75162	0.354E−14	129.3379	−41.5873	42 196	129.0600	−41.5575	0.2795
J0838−3947	1.70395	0.810E−15	129.6283	−39.7894	42 123	128.8017	−39.9706	0.8463
J0838−3947	1.70395	0.810E−15	129.6283	−39.7894	42 291	129.3342	−40.1478	0.4636
B0840−48	0.64435	0.950E−14	130.5221	−48.8558	42 914	131.1763	−48.6712	0.6797
B0844−35	1.11610	0.160E−14	131.5250	−35.5613	43 190	131.9917	−35.7275	0.4954
B0853−33	1.26754	0.632E−14	133.9100	−33.5276	43 802	133.8192	−34.0177	0.4984
B0903−42	0.96517	0.189E−14	136.2467	−42.7706	44 549	136.1508	−43.4540	0.6902
B0903−42	0.96517	0.189E−14	136.2467	−42.7706	44 698	136.6292	−42.0052	0.8556
B0903−42	0.96517	0.189E−14	136.2467	−42.7706	44 713	136.6613	−43.4924	0.8325
B0906−17	0.40163	0.669E−15	137.1587	−17.6604	44 927	137.2746	−16.7587	0.9092

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B0906−49	0.10676	0.152E−13	137.1479	−49.2185	44 821	137.0088	−49.4498	0.2699
B0919+06	0.43062	0.137E−13	140.5579	6.6393	45 943	140.5371	6.6892	0.0541
B0919+06	0.43062	0.137E−13	140.5579	6.6393	46 134	141.1192	6.3502	0.6313
J0922−4949	0.95029	0.976E−13	140.5621	−49.8200	46 179	141.2471	−49.2252	0.9072
B0922−52	0.74629	0.355E−13	141.0358	−53.0456	45 964	140.6179	−53.7368	0.8077
B0923−58	0.73950	0.488E−14	141.1292	−58.2351	46 388	141.8825	−58.0945	0.7663
J0932−3217	1.93163	0.250E−15	143.1629	−32.2873	46 626	142.6171	−32.1042	0.5757
J0932−3217	1.93163	0.250E−15	143.1629	−32.2873	46 966	143.5900	−32.5777	0.5165
J0941−5244	0.65856	0.114E−14	145.4212	−52.7346	47 708	145.9067	−51.9409	0.9303
B0941−56	0.80813	0.396E−13	145.7267	−56.9621	47 903	146.4429	−57.0015	0.7173
B0940+16	1.08742	0.911E−16	145.8750	16.5265	47 455	145.1029	16.9688	0.8898
B0940+16	1.08742	0.911E−16	145.8750	16.5265	47 784	146.1425	16.4137	0.2903
B0940+16	1.08742	0.911E−16	145.8750	16.5265	47 972	146.6654	16.5318	0.7904
B0942−13	0.57026	0.453E−16	146.1204	−13.9116	47 738	145.9750	−13.0911	0.8332
J0945−4833	0.33159	0.483E−14	146.4092	−48.5540	47 836	146.2575	−49.4874	0.9456
J0945−4833	0.33159	0.483E−14	146.4092	−48.5540	47 839	146.2650	−49.4856	0.9427
B0943+10	1.09771	0.349E−14	146.5317	9.8653	47 704	145.8967	10.5192	0.9115
B0950−38	1.37381	0.580E−15	148.0717	−38.6528	48 134	147.1950	−38.3145	0.9397
B0950+08	0.25306	0.230E−15	148.2888	7.9267	48 380	147.9388	7.3861	0.6440
B0950+08	0.25306	0.230E−15	148.2888	7.9267	48 412	148.0492	8.1126	0.3032
J0954−5430	0.47283	0.439E−13	148.5250	−54.5149	48 376	147.9221	−54.6593	0.6200
B0959−54	1.43658	0.514E−13	150.4079	−55.1185	49 131	150.4125	−55.4851	0.3666
J1001−5559	1.66118	0.860E−15	150.2858	−55.9834	49 094	150.3079	−56.6690	0.6859
J1001−5559	1.66118	0.860E−15	150.2858	−55.9834	49 131	150.4125	−55.4851	0.5141
J1002−5559	0.77750	0.157E−14	150.7413	−55.9936	49 094	150.3079	−56.6690	0.8024
J1002−5559	0.77750	0.157E−14	150.7413	−55.9936	49 131	150.4125	−55.4851	0.6055
B1001−47	0.30707	0.221E−13	150.8396	−47.7839	49 248	150.8008	−48.6434	0.8604
B1014−53	0.76958	0.193E−14	154.1300	−53.7538	50 477	154.5992	−54.5788	0.9491
B1015−56	0.50346	0.313E−14	154.3033	−56.3585	50 360	154.2450	−55.8234	0.5383
J1020−5921	1.23830	0.405E−13	155.0583	−59.3594	50 808	155.6008	−60.1761	0.9805
J1034−3224	1.15059	0.230E−15	158.5808	−32.4073	51 581	158.0350	−31.8405	0.7869
B1039−19	1.38637	0.945E−15	160.4004	−19.7038	52 463	160.8708	−18.8642	0.9624
B1039−55	1.17086	0.673E−14	160.5025	−55.3515	52 090	159.6587	−55.7330	0.9260
B1039−55	1.17086	0.673E−14	160.5025	−55.3515	52 500	161.0212	−54.9113	0.6804
B1039−55	1.17086	0.673E−14	160.5025	−55.3515	52 504	161.0333	−54.7553	0.7983
J1043−6116	0.28860	0.104E−13	160.9800	−61.2808	52 421	160.7567	−62.2211	0.9665
J1045−4509	0.00747	0.177E−19	161.4588	−45.1650	52 629	161.4388	−45.7589	0.5942
J1045−4509	0.00747	0.177E−19	161.4588	−45.1650	52 666	161.5379	−45.7904	0.6304
B1044−57	0.36943	0.114E−14	161.5783	−58.2311	52 552	161.1671	−58.1750	0.4151
B1044−57	0.36943	0.114E−14	161.5783	−58.2311	52 578	161.2675	−58.1488	0.3215
J1047−3032	0.33033	0.610E−16	161.7533	−30.5382	52 596	161.3196	−30.8069	0.5102
J1047−3032	0.33033	0.610E−16	161.7533	−30.5382	52 888	162.2517	−31.0589	0.7207
J1047−3032	0.33033	0.610E−16	161.7533	−30.5382	52 905	162.3008	−30.6406	0.5570
J1047−3032	0.33033	0.610E−16	161.7533	−30.5382	52 939	162.3975	−29.9944	0.8430
B1046−58	0.12367	0.963E−13	162.0508	−58.5349	52 552	161.1671	−58.1750	0.9543
B1046−58	0.12367	0.963E−13	162.0508	−58.5349	52 578	161.2675	−58.1488	0.8734
B1046−58	0.12367	0.963E−13	162.0508	−58.5349	53 003	162.6500	−58.1938	0.6894
J1049−5833	2.20233	0.441E−14	162.4596	−58.5624	53 003	162.6500	−58.1938	0.4148
J1052−5954	0.18059	0.200E−13	163.1588	−59.9123	53 448	164.0046	−59.5223	0.9314
J1054−5943	0.34691	0.407E−14	163.7404	−59.7206	53 448	164.0046	−59.5223	0.3303
J1055−6905	2.91940	0.203E−13	163.9363	−69.0865	53 534	164.2883	−69.9806	0.9609
J1056−5709	0.67608	0.576E−15	164.1821	−57.1596	53 657	164.6604	−57.4834	0.5776
J1057−47	0.62830	0.100E+01	164.4375	−47.9500	53 779	165.0542	−48.4706	0.8070
B1055−52	0.19711	0.583E−14	164.4950	−52.4490	53 520	164.2254	−53.2072	0.8047
J1058−5957	0.61627	0.657E−15	164.6425	−59.9601	53 448	164.0046	−59.5223	0.7737
B1056−57	1.18500	0.430E−14	164.7538	−57.7039	53 657	164.6604	−57.4834	0.2395
B1107−56	0.55825	0.206E−14	167.5017	−56.6258	54 506	167.2721	−56.4339	0.2992
B1110−69	0.82048	0.284E−14	168.2125	−69.4419	54 777	168.2121	−70.3504	0.9084
B1112−60	0.88082	0.461E−13	168.5938	−61.0095	55 069	169.1183	−60.5680	0.6857
B1112+50	1.65644	0.249E−14	168.9100	50.5034	55 034	168.9917	50.6408	0.1599
J1115−6052	0.25978	0.723E−14	168.9733	−60.8716	55 069	169.1183	−60.5680	0.3365
J1117−6447	1.15527	0.240E−15	169.4375	−64.7994	55 309	169.9037	−64.6894	0.4791
B1118−79	2.28060	0.367E−14	169.9200	−79.6084	55 156	169.3875	−79.3600	0.5876

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1123−4844	0.24484	0.654E−16	170.8150	−48.7396	55 516	170.5617	−48.9453	0.3263
J1123−4844	0.24484	0.654E−16	170.8150	−48.7396	55 659	171.0558	−47.9758	0.8009
J1123−6102	0.64023	0.646E−14	170.9238	−61.0351	55 691	171.1704	−61.6478	0.6605
J1123−6651	0.23298	0.275E−14	170.9675	−66.8636	55 827	171.6263	−67.0789	0.6931
J1124−5638	0.18556	0.900E−17	171.2350	−56.6444	55 633	170.9579	−56.6945	0.2816
J1124−6421	0.47910	0.620E−15	171.2479	−64.3547	55 779	171.4312	−63.9723	0.4241
B1124−60	0.20274	0.281E−15	171.7192	−60.9111	55 691	171.1704	−61.6478	0.9186
J1130−5826	0.16232	0.159E−16	172.5679	−58.4340	56 270	173.0342	−58.5048	0.4716
J1130−6807	0.25635	0.460E−15	172.6329	−68.1246	56 174	172.7233	−67.5750	0.5569
B1131−62	1.02287	0.452E−15	173.4642	−62.8474	56 335	173.2304	−62.4431	0.4670
B1133+16	1.18791	0.373E−14	174.0129	15.8527	56 720	174.4375	15.1429	0.8271
J1141−3107	0.53843	0.196E−14	175.3567	−31.1313	56 845	174.8200	−30.3489	0.9488
J1141−3107	0.53843	0.196E−14	175.3567	−31.1313	56 869	174.8892	−30.4838	0.7986
J1141−3322	0.29147	0.463E−15	175.4279	−33.3771	57 227	176.0133	−33.3797	0.5854
J1144−6146	0.98778	−0.380E−16	176.1450	−61.7803	57 521	176.8413	−61.9338	0.7130
J1144−6217	0.85066	0.308E−13	176.0088	−62.2917	57 521	176.8413	−61.9338	0.9062
B1143−60	0.27337	0.179E−14	176.5321	−60.5165	57 230	176.0154	−60.4595	0.5198
J1152−6012	0.37657	0.669E−14	178.2242	−60.2058	57 796	177.7692	−60.1766	0.4559
J1157−5112	0.04359	0.143E−18	179.2837	−51.2156	58 226	179.1292	−50.7597	0.4814
J1157−5112	0.04359	0.143E−18	179.2837	−51.2156	58 384	179.5775	−51.5158	0.4201
J1204−6843	0.30886	0.217E−15	181.1529	−68.7214	58 739	180.7125	−68.5849	0.4611
J1204−6843	0.30886	0.217E−15	181.1529	−68.7214	59 030	181.5363	−69.1255	0.5570
J1214−5830	0.90982	0.534E−16	183.5350	−58.5072	59 437	182.8783	−58.2573	0.7026
J1214−5830	0.90982	0.534E−16	183.5350	−58.5072	59 786	183.8875	−59.1829	0.7622
J1216−6223	0.37405	0.168E−13	184.1742	−62.3994	59 865	184.1600	−63.1979	0.7987
J1216−6223	0.37405	0.168E−13	184.1742	−62.3994	59 913	184.3446	−63.2270	0.8449
J1220−6318	0.78921	0.800E−16	185.0742	−63.3129	59 865	184.1600	−63.1979	0.9214
J1220−6318	0.78921	0.800E−16	185.0742	−63.3129	59 913	184.3446	−63.2270	0.7346
J1224−6208	0.58576	0.202E−13	186.1842	−62.1448	60 288	185.4363	−61.5386	0.9627
B1221−63	0.21648	0.495E−14	186.0921	−64.1316	60 644	186.4438	−64.0219	0.3684
B1222−63	0.41962	0.946E−15	186.4283	−64.1453	60 644	186.4438	−64.0219	0.1243
B1232−55	0.63823	0.100E+01	188.8292	−55.2667	61 313	188.4175	−54.9234	0.5360
J1236−5033	0.29476	0.156E−15	189.2462	−50.5601	61 260	188.3167	−50.6506	0.9340
J1238+21	1.11859	0.145E−14	189.5962	21.8697	61 490	188.9812	22.2624	0.7296
J1238+21	1.11859	0.145E−14	189.5962	21.8697	61 742	189.8154	21.0289	0.8689
J1238+21	1.11859	0.145E−14	189.5962	21.8697	61 832	190.0708	21.5201	0.5895
J1238+21	1.11859	0.145E−14	189.5962	21.8697	61 914	190.3446	21.8304	0.7494
J1238+21	1.11859	0.145E−14	189.5962	21.8697	61 924	190.3608	21.6140	0.8062
B1237+25	1.38245	0.960E−15	189.9179	24.8972	61 705	189.7200	24.3988	0.5363
B1237−41	0.51224	0.174E−14	190.0733	−41.4144	61 580	189.2850	−41.9953	0.9792
B1237−41	0.51224	0.174E−14	190.0733	−41.4144	61 595	189.3188	−40.8121	0.9655
B1237−41	0.51224	0.174E−14	190.0733	−41.4144	61 810	190.0146	−41.2699	0.1560
J1244−5053	0.27521	0.100E−14	191.0475	−50.8891	62 277	191.4283	−50.1797	0.8051
J1246+22	0.47383	0.100E+01	191.6583	22.8833	62 150	191.0754	23.0018	0.5948
J1246+22	0.47383	0.100E+01	191.6583	22.8833	62 366	191.7167	22.4881	0.3995
J1246+22	0.47383	0.100E+01	191.6583	22.8833	62 384	191.7779	22.6169	0.2921
J1246+22	0.47383	0.100E+01	191.6583	22.8833	62 454	191.9942	22.9416	0.3409
J1253−5820	0.25550	0.210E−14	193.3679	−58.3447	62 699	192.7250	−57.7217	0.8952
J1255−6131	0.65797	0.400E−14	193.9783	−61.5195	62 871	193.2867	−60.8815	0.9410
B1254−10	0.61731	0.363E−15	194.2696	−10.4516	63 366	194.7583	−9.8346	0.7872
B1256−67	0.66333	0.121E−14	194.8446	−67.6944	63 427	194.9683	−68.5581	0.8725
B1256−67	0.66333	0.121E−14	194.8446	−67.6944	63 482	195.1108	−68.6051	0.9488
B1257+12	0.00622	0.114E−18	195.0125	12.6824	63 577	195.4238	13.1736	0.6406
J1301−6305	0.18453	0.267E−12	195.4404	−63.0928	63 550	195.3338	−63.1941	0.1471
J1301−6305	0.18453	0.267E−12	195.4404	−63.0928	63 586	195.4550	−62.4810	0.6119
J1301−6310	0.66383	0.564E−13	195.3679	−63.1779	63 550	195.3338	−63.1941	0.0378
J1301−6310	0.66383	0.564E−13	195.3679	−63.1779	63 586	195.4550	−62.4810	0.7023
J1302−63	0.32572	0.100E+01	195.5167	−63.7481	63 550	195.3338	−63.1941	0.5834
J1302−6313	0.96785	0.633E−14	195.5800	−63.2247	63 550	195.3338	−63.1941	0.2481
J1302−6313	0.96785	0.633E−14	195.5800	−63.2247	63 586	195.4550	−62.4810	0.7541
B1259−63	0.04776	0.228E−14	195.6983	−63.8357	63 550	195.3338	−63.1941	0.7380
J1303−6305	2.30664	0.218E−14	195.7500	−63.0836	63 550	195.3338	−63.1941	0.4307
J1303−6305	2.30664	0.218E−14	195.7500	−63.0836	63 586	195.4550	−62.4810	0.6709

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1305−6203	0.42776	0.321E−13	196.3371	−62.0560	63 586	195.4550	−62.4810	0.9791
J1305−6203	0.42776	0.321E−13	196.3371	−62.0560	63 994	196.7075	−62.1111	0.3745
J1305−6256	0.47823	0.211E−14	196.3667	−62.9442	63 994	196.7075	−62.1111	0.9001
J1306−6242	0.98190	0.586E−14	196.6858	−62.7008	63 994	196.7075	−62.1111	0.5901
B1303−66	0.47303	0.597E−14	196.6588	−66.2894	63 797	196.1292	−65.9217	0.6447
B1303−66	0.47303	0.597E−14	196.6588	−66.2894	63 906	196.4442	−66.3509	0.2233
B1309−12	0.44752	0.151E−15	197.9692	−12.4671	64 356	197.8700	−13.0000	0.5420
B1309−12	0.44752	0.151E−15	197.9692	−12.4671	64 404	198.0075	−12.4026	0.0750
B1309−12	0.44752	0.151E−15	197.9692	−12.4671	64 526	198.3704	−12.2247	0.4688
B1310+18	0.03316	0.100E+01	198.2292	18.1667	64 429	198.0883	18.7133	0.5645
B1309−53	0.72815	0.148E−15	198.0192	−54.0450	64 233	197.4779	−53.4124	0.8325
B1309−53	0.72815	0.148E−15	198.0192	−54.0450	64 290	197.6400	−54.9481	0.9795
B1309−53	0.72815	0.148E−15	198.0192	−54.0450	64 676	198.8433	−53.6933	0.8961
B1309−55	0.84924	0.571E−14	198.2242	−55.2798	64 290	197.6400	−54.9481	0.6717
B1309−55	0.84924	0.571E−14	198.2242	−55.2798	64 673	198.8362	−55.3412	0.6152
J1313+0931	0.84893	0.800E−15	198.3458	9.5322	64 262	197.5700	9.5365	0.7758
J1313+0931	0.84893	0.800E−15	198.3458	9.5322	64 566	198.5150	9.7739	0.2950
J1313+0931	0.84893	0.800E−15	198.3458	9.5322	64 698	198.9046	9.0163	0.7605
J1313+0931	0.84893	0.800E−15	198.3458	9.5322	64 707	198.9337	10.2504	0.9282
J1314−6101	2.94839	0.117E−13	198.5975	−61.0211	64 441	198.1208	−60.1938	0.9548
J1314−6101	2.94839	0.117E−13	198.5975	−61.0211	64 446	198.1400	−60.2230	0.9200
J1314−6101	2.94839	0.117E−13	198.5975	−61.0211	64 494	198.2946	−61.8920	0.9221
J1314−6101	2.94839	0.117E−13	198.5975	−61.0211	64 877	199.4808	−61.0107	0.8834
J1317−6302	0.26127	0.102E−15	199.4359	−63.0478	65 010	199.8875	−63.7554	0.8395
B1316−60	0.28435	0.153E−14	199.8342	−60.9463	64 877	199.4808	−61.0107	0.3592
B1316−60	0.28435	0.153E−14	199.8342	−60.9463	65 034	199.9612	−61.5133	0.5811
B1316−60	0.28435	0.153E−14	199.8342	−60.9463	65 146	200.2454	−60.0874	0.9523
J1319−6105	0.42112	0.150E−14	199.8596	−61.0906	64 877	199.4808	−61.0107	0.3871
J1319−6105	0.42112	0.150E−14	199.8596	−61.0906	65 034	199.9612	−61.5133	0.4348
B1317−53	0.27973	0.925E−14	200.2246	−53.9851	64 957	199.7213	−53.2216	0.9145
B1317−53	0.27973	0.925E−14	200.2246	−53.9851	65 167	200.3138	−53.3572	0.6342
B1322+83	0.67004	0.566E−15	200.4421	83.3941	65 429	201.1612	83.3083	0.7243
J1322−6241	0.50606	0.259E−14	200.6338	−62.6982	65 317	200.8067	−62.8714	0.2447
J1322−6329	2.76421	0.111E−13	200.5750	−63.4936	65 010	199.8875	−63.7554	0.7357
J1322−6329	2.76421	0.111E−13	200.5750	−63.4936	65 176	200.3479	−64.0496	0.6006
J1322−6329	2.76421	0.111E−13	200.5750	−63.4936	65 317	200.8067	−62.8714	0.6640
J1324−6302	2.48380	0.979E−15	201.0567	−63.0392	65 317	200.8067	−62.8714	0.3011
B1323−58	0.47799	0.324E−14	201.7425	−58.9914	65 617	201.8008	−59.6373	0.6485
B1323−58	0.47799	0.324E−14	201.7425	−58.9914	65 875	202.5375	−58.4845	0.9428
B1323−63	0.79267	0.310E−14	201.6358	−64.1456	65 383	200.9933	−64.9031	0.9933
B1322−66	0.54301	0.531E−14	201.5133	−67.0142	65 384	200.9967	−66.8506	0.5420
B1323−627	0.19648	0.153E−14	201.7808	−63.0209	65 317	200.8067	−62.8714	0.9856
B1325−43	0.53270	0.301E−14	202.0267	−43.9623	65 870	202.5171	−44.7126	0.8963
B1325−49	1.47872	0.610E−15	202.1396	−49.3593	65 584	201.6908	−49.5776	0.4991
J1334−5839	0.10772	0.216E−16	203.6254	−58.6546	66 041	203.0858	−57.8519	0.9671
J1334−5839	0.10772	0.216E−16	203.6254	−58.6546	66 285	203.7837	−58.3664	0.3288
J1335−3642	0.39919	0.100E+01	203.9000	−36.7000	66 144	203.3817	−35.9115	0.9436
J1335−3642	0.39919	0.100E+01	203.9000	−36.7000	66 568	204.6800	−36.9476	0.8184
J1339−6618	0.55818	0.350E−15	204.9858	−66.3022	66 678	205.0350	−66.3395	0.0617
J1339−6618	0.55818	0.350E−15	204.9858	−66.3022	66 970	205.8867	−66.4919	0.9206
B1336−64	0.37862	0.505E−14	205.0013	−64.9453	66 418	204.2467	−64.6376	0.8149
B1336−64	0.37862	0.505E−14	205.0013	−64.9453	66 721	205.1567	−64.0696	0.8894
J1341−6023	0.62729	0.195E−13	205.2804	−60.3930	66 557	204.6517	−59.8422	0.8359
J1341−6023	0.62729	0.195E−13	205.2804	−60.3930	66 676	205.0317	−60.5567	0.2978
J1341−6023	0.62729	0.195E−13	205.2804	−60.3930	66 693	205.0700	−60.2660	0.2457
J1341−6023	0.62729	0.195E−13	205.2804	−60.3930	66 752	205.2271	−60.5988	0.2127
J1347−5947	0.60996	0.142E−13	206.8304	−59.7944	67 367	207.1117	−60.4645	0.7267
J1347−5947	0.60996	0.142E−13	206.8304	−59.7944	67 432	207.3029	−60.4681	0.8229
J1348−6307	0.92777	0.379E−14	207.1767	−63.1178	67 572	207.7021	−62.9046	0.5670
J1350−5115	0.29570	0.753E−15	207.5671	−51.2569	67 742	208.1517	−50.9216	0.6739
J1354−6249	2.95194	0.148E−13	208.6458	−62.8250	67 572	207.7021	−62.9046	0.9471
B1352−51	0.64430	0.281E−14	208.9942	−51.8983	68 335	209.8250	−51.8928	0.8309
J1356−5521	0.50738	0.724E−15	209.2104	−55.3536	68 363	209.9046	−55.7401	0.7945

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1358−2533	0.91297	0.100E+01	209.6750	−25.5500	68 434	210.1504	−26.2660	0.8595
B1358−63	0.84279	0.167E−13	210.4683	−63.9626	68 427	210.1317	−64.1169	0.3703
B1358−63	0.84279	0.167E−13	210.4683	−63.9626	68 625	210.7121	−63.5679	0.4640
B1358−63	0.84279	0.167E−13	210.4683	−63.9626	68 804	211.2925	−64.3528	0.9118
B1359−51	1.38018	0.100E+01	210.7375	−51.4000	68 852	211.4854	−51.1573	0.7863
J1403−6310	0.39917	0.900E−16	210.8083	−63.1742	68 625	210.7121	−63.5679	0.4053
J1410−7404	0.27873	0.674E−17	212.5304	−74.0815	69 090	212.1154	−74.8507	0.8740
J1410−7404	0.27873	0.674E−17	212.5304	−74.0815	69 095	212.1496	−73.4079	0.7738
J1415−66	0.39248	0.100E+01	213.8542	−66.3167	69 796	214.2721	−66.3155	0.4179
J1418−3921	1.09681	0.889E−15	214.7092	−39.3551	69 967	214.7600	−39.9050	0.5522
J1424−6438	1.02350	0.240E−15	216.2467	−64.6361	70 459	216.1929	−63.7062	0.9314
J1424−6438	1.02350	0.240E−15	216.2467	−64.6361	70 773	217.1196	−65.0445	0.9637
J1424−69	0.33342	0.100E+01	216.0625	−69.9333	70 239	215.5713	−69.0852	0.9802
J1424−69	0.33342	0.100E+01	216.0625	−69.9333	70 367	215.9554	−69.3122	0.6303
J1425−5723	0.35326	0.220E−16	216.4021	−57.3919	70 648	216.7512	−57.2884	0.3642
J1425−5759	0.70787	0.742E−15	216.4962	−57.9862	70 648	216.7512	−57.2884	0.7429
J1429−5935	0.76392	0.428E−13	217.3579	−59.5997	70 758	217.0608	−60.1291	0.6071
B1426−66	0.78544	0.277E−14	217.6700	−66.3847	70 853	217.3350	−65.5500	0.8994
B1436−63	0.45961	0.112E−14	220.1304	−63.7466	71 645	219.8162	−64.4154	0.7390
J1441−6137	1.17584	0.360E−15	220.4346	−61.6233	71 858	220.4800	−61.7639	0.1478
B1449−64	0.17948	0.275E−14	223.3863	−64.2210	72 822	223.2729	−65.1709	0.9567
J1455−3330	0.00799	0.243E−19	223.9496	−33.5129	72 761	223.1212	−33.2672	0.8640
J1455−3330	0.00799	0.243E−19	223.9496	−33.5129	72 991	223.7429	−34.4454	0.9552
J1455−3330	0.00799	0.243E−19	223.9496	−33.5129	73 140	224.2038	−34.2465	0.7764
J1455−3330	0.00799	0.243E−19	223.9496	−33.5129	73 221	224.4650	−33.2740	0.5681
B1451−68	0.26338	0.983E−16	224.0004	−68.7276	73 244	224.5404	−68.5906	0.5571
B1503−51	0.84074	0.637E−14	226.6646	−51.9694	73 772	226.1954	−51.2513	0.8578
B1504−43	0.28676	0.160E−14	226.8921	−43.8676	73 804	226.2725	−43.1328	0.9611
B1504−43	0.28676	0.160E−14	226.8921	−43.8676	74 043	226.9804	−44.8239	0.9604
B1508+55	0.73968	0.500E−14	227.3567	55.5257	73 994	226.8225	54.8966	0.8253
B1508+55	0.73968	0.500E−14	227.3567	55.5257	74 095	227.1425	54.7636	0.7917
J1509−5850	0.08892	0.917E−14	227.3629	−58.8489	74 339	227.8987	−59.4207	0.7836
J1509−6015	0.33904	0.212E−14	227.2812	−60.2552	74 438	228.1896	−60.3935	0.9188
B1507−44	0.94387	0.610E−15	227.7038	−44.3686	74 043	226.9804	−44.8239	0.8547
J1511−5835	0.30151	0.344E−15	227.7792	−58.5911	74 339	227.8987	−59.4207	0.8382
B1509−58	0.15066	0.154E−11	228.4817	−59.1358	74 339	227.8987	−59.4207	0.6488
B1510−48	0.45484	0.925E−15	228.5604	−48.5721	74 285	227.7225	−48.5073	0.8404
J1514−5925	0.14880	0.288E−14	228.7462	−59.4287	74 339	227.8987	−59.4207	0.8475
B1516+02B	0.00795	−0.333E−20	229.6308	2.0876	74 907	229.6304	1.7697	0.3179
B1516+02B	0.00795	−0.333E−20	229.6308	2.0876	75 222	230.5779	2.0069	0.9505
B1516+02A	0.00555	0.412E−19	229.6387	2.0910	74 907	229.6304	1.7697	0.3213
B1516+02A	0.00555	0.412E−19	229.6387	2.0910	75 222	230.5779	2.0069	0.9429
J1518+4904	0.04093	0.273E−19	229.5696	49.0762	74 882	229.5488	49.3055	0.2303
J1518+4904	0.04093	0.273E−19	229.5696	49.0762	74 964	229.7825	48.6227	0.5009
B1524−39	2.41758	0.191E−13	231.9954	−39.5264	75 490	231.3121	−39.3348	0.7097
B1524−39	2.41758	0.191E−13	231.9954	−39.5264	75 808	232.2950	−40.1059	0.6523
J1528−4109	0.52656	0.396E−15	232.0333	−41.1580	75 628	231.7846	−41.6588	0.5591
J1528−4109	0.52656	0.396E−15	232.0333	−41.1580	75 950	232.6883	−41.6526	0.8208
J1531−4012	0.35685	0.963E−16	232.7833	−40.2086	75 808	232.2950	−40.1059	0.4990
B1530+27	1.12484	0.780E−15	233.0429	27.7637	75 880	232.4883	27.2121	0.7822
J1535−4114	0.43287	0.407E−14	233.8208	−41.2342	76 074	233.0575	−41.2731	0.7643
J1535−4114	0.43287	0.407E−14	233.8208	−41.2342	76 095	233.1175	−41.5646	0.7771
J1537−49	0.30131	0.100E+01	234.3750	−49.1500	76 482	234.3104	−48.6548	0.4994
J1548−4821	0.14566	0.800E−18	237.0967	−48.3638	77 518	237.4092	−47.6085	0.8174
J1548−4927	0.60274	0.405E−14	237.0808	−49.4612	77 421	237.0846	−49.7632	0.3020
J1548−4927	0.60274	0.405E−14	237.0808	−49.4612	77 517	237.4079	−49.9633	0.5992
J1549−4848	0.28835	0.141E−13	237.3379	−48.8104	77 421	237.0846	−49.7632	0.9859
J1550−5242	0.74966	0.178E−13	237.5121	−52.7019	77 477	237.2892	−51.9551	0.7794
B1552−23	0.53258	0.694E−15	238.8879	−23.6860	77 905	238.6525	−23.9429	0.3484
B1552−23	0.53258	0.694E−15	238.8879	−23.6860	78 251	239.6492	−23.9079	0.7929
B1552−31	0.51811	0.622E−16	238.8246	−31.5723	77 870	238.5225	−32.0661	0.5789
J1556−5358	0.99468	0.104E−13	239.2146	−53.9819	77 944	238.7583	−53.1377	0.9597
J1557−4258	0.32919	0.330E−15	239.2508	−42.9702	78 085	239.1633	−42.5631	0.4164

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1557−4258	0.32919	0.330E−15	239.2508	−42.9702	78 170	239.4204	−42.6238	0.3857
J1557−4258	0.32919	0.330E−15	239.2508	−42.9702	78 186	239.4629	−43.7248	0.7838
B1556−44	0.25706	0.102E−14	239.9229	−44.6461	78 264	239.7104	−44.9576	0.3771
B1556−44	0.25706	0.102E−14	239.9229	−44.6461	78 408	240.0963	−45.4524	0.8247
B1556−44	0.25706	0.102E−14	239.9229	−44.6461	78 521	240.4600	−44.4342	0.5774
B1555−55	0.95724	0.205E−13	239.8387	−55.7611	78 393	240.0654	−55.5632	0.3009
B1557−50	0.19260	0.506E−14	240.2208	−50.7391	78 697	240.9733	−50.9428	0.7795
B1556−57	0.19445	0.213E−14	240.0829	−57.8541	78 698	240.9738	−58.1164	0.9287
J1602−4957	0.81999	0.159E−13	240.5758	−49.9589	78 831	241.3796	−49.7986	0.8196
B1558−50	0.86423	0.696E−13	240.5783	−51.0006	78 697	240.9733	−50.9428	0.3992
B1600−27	0.77831	0.301E−14	240.7833	−27.2243	78 647	240.8171	−26.7167	0.5088
B1600−27	0.77831	0.301E−14	240.7833	−27.2243	78 912	241.6217	−27.7086	0.9682
J1603−3539	0.14191	0.124E−15	240.9733	−35.6659	78 711	241.0296	−35.1768	0.4923
J1603−5657	0.49608	0.279E−14	240.8808	−56.9622	78 562	240.6188	−56.8542	0.2835
B1600−49	0.32742	0.102E−14	241.0954	−49.1662	78 791	241.2729	−48.8277	0.3822
B1600−49	0.32742	0.102E−14	241.0954	−49.1662	78 831	241.3796	−49.7986	0.6933
B1600−49	0.32742	0.102E−14	241.0954	−49.1662	78 926	241.6796	−49.9182	0.9523
B1600−49	0.32742	0.102E−14	241.0954	−49.1662	78 938	241.7158	−48.4403	0.9549
B1604−00	0.42182	0.306E−15	241.8004	−0.5447	78 636	240.8012	−0.5538	0.9992
B1604−00	0.42182	0.306E−15	241.8004	−0.5447	79 008	241.9067	0.0327	0.5871
B1604−00	0.42182	0.306E−15	241.8004	−0.5447	79 170	242.3787	−0.6092	0.5819
B1607−13	1.01839	0.230E−15	242.6779	−13.3673	79 059	242.0692	−13.7688	0.7292
B1607−13	1.01839	0.230E−15	242.6779	−13.3673	79 066	242.1021	−13.1348	0.6210
B1607−13	1.01839	0.230E−15	242.6779	−13.3673	79 432	243.1746	−13.3155	0.4994
J1610−5006	0.48112	0.136E−13	242.6846	−50.1117	79 336	242.8737	−50.3653	0.3163
J1611−4811	1.29685	0.195E−14	242.7612	−48.1844	79 092	242.1654	−48.5783	0.7143
J1611−4811	1.29685	0.195E−14	242.7612	−48.1844	79 240	242.5729	−47.9141	0.3295
J1611−4949	0.66644	0.540E−15	242.9442	−49.8326	79 336	242.8737	−50.3653	0.5374
B1609−47	0.38238	0.632E−15	243.3708	−47.2405	79 202	242.4779	−46.9259	0.9467
B1609−47	0.38238	0.632E−15	243.3708	−47.2405	79 456	243.2183	−47.1091	0.2013
B1609−47	0.38238	0.632E−15	243.3708	−47.2405	79 745	244.1258	−46.9717	0.8014
J1613−5211	0.45750	0.192E−13	243.4267	−52.1892	79 715	244.0271	−52.8145	0.8669
J1613−5234	0.65522	0.663E−14	243.4892	−52.5671	79 715	244.0271	−52.8145	0.5921
B1612+07	1.20680	0.236E−14	243.6704	7.6253	79 586	243.5671	8.4984	0.8792
B1612+07	1.20680	0.236E−14	243.6704	7.6253	79 792	244.2550	7.1519	0.7522
J1614−3937	0.40729	0.159E−15	243.6300	−39.6247	79 495	243.3325	−39.3119	0.4317
J1614−3937	0.40729	0.159E−15	243.6300	−39.6247	79 640	243.7817	−40.5774	0.9647
B1610−50	0.23169	0.495E−12	243.5467	−50.8010	79 336	242.8737	−50.3653	0.8017
B1612−29	2.47757	0.158E−14	243.9700	−29.6671	79 520	243.4092	−29.0568	0.8289
B1612−29	2.47757	0.158E−14	243.9700	−29.6671	79 833	244.4304	−29.7987	0.4788
B1612−29	2.47757	0.158E−14	243.9700	−29.6671	79 982	244.8875	−29.9486	0.9597
B1611−55	0.79153	0.200E−14	243.9183	−55.6168	79 499	243.3513	−56.4145	0.9787
B1611−55	0.79153	0.200E−14	243.9183	−55.6168	79 559	243.5117	−55.7463	0.4268
B1611−55	0.79153	0.200E−14	243.9183	−55.6168	79 636	243.7679	−56.3740	0.7720
J1616−5208	1.02583	0.289E−13	244.0975	−52.1347	79 715	244.0271	−52.8145	0.6835
J1617−4216	3.42847	0.181E−13	244.3471	−42.2683	79 888	244.5983	−42.7421	0.5363
J1617−4216	3.42847	0.181E−13	244.3471	−42.2683	80 046	245.0854	−41.6680	0.9516
J1618−39	0.01199	0.100E+01	244.6250	−39.3167	79 742	244.1179	−38.7367	0.7704
J1618−39	0.01199	0.100E+01	244.6250	−39.3167	80 146	245.3917	−39.4313	0.7752
J1618−4723	0.20355	0.199E−14	244.5283	−47.3886	79 745	244.1258	−46.9717	0.5795
J1618−4723	0.20355	0.199E−14	244.5283	−47.3886	80 104	245.2788	−47.6605	0.7982
J1622−4332	0.91694	0.156E−14	245.6892	−43.5412	80 050	245.0912	−43.7291	0.6268
J1622−4332	0.91694	0.156E−14	245.6892	−43.5412	80 125	245.3296	−42.8802	0.7524
J1622−4802	0.26507	0.307E−15	245.6962	−48.0370	80 104	245.2788	−47.6605	0.5621
J1622−4802	0.26507	0.307E−15	245.6962	−48.0370	80 229	245.6725	−48.6544	0.6179
J1622−4802	0.26507	0.307E−15	245.6962	−48.0370	80 376	246.1054	−48.3840	0.5365
J1622−4802	0.26507	0.307E−15	245.6962	−48.0370	80 456	246.3454	−47.5284	0.8246
B1620−26	0.01108	0.671E−18	245.9091	−26.5316	80 400	246.1683	−26.8072	0.3783
B1620−42	0.36459	0.102E−14	245.9512	−42.9348	80 125	245.3296	−42.8802	0.6240
B1620−42	0.36459	0.102E−14	245.9512	−42.9348	80 397	246.1629	−42.2297	0.7362
J1624−4721	0.44872	0.415E−14	246.2283	−47.3507	80 104	245.2788	−47.6605	0.9988
J1624−4721	0.44872	0.415E−14	246.2283	−47.3507	80 456	246.3454	−47.5284	0.2128
J1625−4048	2.35528	0.443E−15	246.2929	−40.8060	80 428	246.2521	−41.5761	0.7712

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1625−4904	0.46034	0.168E−13	246.3250	−49.0760	80 229	245.6725	−48.6544	0.7769
J1625−4904	0.46034	0.168E−13	246.3250	−49.0760	80 376	246.1054	−48.3840	0.7260
J1625−4904	0.46034	0.168E−13	246.3250	−49.0760	80 621	246.9313	−49.4404	0.7074
J1626−4537	0.37014	0.828E−14	246.7038	−45.6238	80 424	246.2371	−46.0290	0.6180
J1626−4537	0.37014	0.828E−14	246.7038	−45.6238	80 680	247.0717	−46.3177	0.7854
J1626−4807	0.29393	0.175E−13	246.6771	−48.1182	80 376	246.1054	−48.3840	0.6304
J1626−4807	0.29393	0.175E−13	246.6771	−48.1182	80 456	246.3454	−47.5284	0.6766
J1627−4845	0.61233	0.364E−14	246.7929	−48.7502	80 376	246.1054	−48.3840	0.7790
J1627−4845	0.61233	0.364E−14	246.7929	−48.7502	80 621	246.9313	−49.4404	0.7040
J1627−5547	0.35246	0.738E−15	246.8375	−55.7979	80 363	246.0683	−56.0547	0.8109
J1628−4804	0.86597	0.124E−14	247.1117	−48.0683	80 456	246.3454	−47.5284	0.9374
J1628−4828	4.13754	0.175E−13	247.1288	−48.4678	80 621	246.9313	−49.4404	0.9925
J1629−6902	0.00600	0.100E−19	247.2863	−69.0459	80 733	247.2388	−68.4179	0.6297
J1632−4818	0.81345	0.650E−12	248.1654	−48.3146	81 229	248.8554	−48.6980	0.7894
B1630−44	0.43651	0.620E−14	248.4458	−44.8855	80 921	247.8683	−44.9288	0.5791
J1633−4805	0.71083	0.769E−13	248.2725	−48.0843	81 229	248.8554	−48.6980	0.8464
B1633+24	0.49051	0.119E−15	248.8571	24.3133	81 075	248.3933	24.8831	0.7347
B1633+24	0.49051	0.119E−15	248.8571	24.3133	81 524	249.7746	24.6964	0.9943
J1635−4944	0.67196	0.879E−14	248.9808	−49.7343	81 467	249.5867	−49.2258	0.7909
J1636−4803	1.20464	0.207E−13	249.1333	−48.0515	81 229	248.8554	−48.6980	0.7037
J1636−4803	1.20464	0.207E−13	249.1333	−48.0515	81 533	249.8017	−47.3099	0.9983
J1636−4803	1.20464	0.207E−13	249.1333	−48.0515	81 606	249.9867	−47.7834	0.8945
J1636−4933	0.43037	0.151E−14	249.2296	−49.5503	81 229	248.8554	−48.6980	0.9308
J1636−4933	0.43037	0.151E−14	249.2296	−49.5503	81 467	249.5867	−49.2258	0.4824
J1637−4335	0.77137	0.362E−14	249.4867	−43.5845	81 522	249.7692	−42.8147	0.8200
J1637−4642	0.15403	0.592E−13	249.3071	−46.7004	81 533	249.8017	−47.3099	0.7849
J1637−4721	1.16574	0.444E−14	249.2975	−47.3501	81 533	249.8017	−47.3099	0.5058
J1637−4721	1.16574	0.444E−14	249.2975	−47.3501	81 606	249.9867	−47.7834	0.8141
J1638−4344	1.12194	0.250E−16	249.7200	−43.7334	81 522	249.7692	−42.8147	0.9201
J1638−4344	1.12194	0.250E−16	249.7200	−43.7334	81 547	249.8300	−44.6520	0.9251
J1639−4359	0.58756	0.150E−16	249.7783	−43.9848	81 547	249.8300	−44.6520	0.6692
B1635−45	0.26456	0.289E−14	249.8383	−46.0759	81 746	250.4571	−45.3685	0.9398
J1640−4648	0.17835	0.806E−15	250.1983	−46.8013	81 533	249.8017	−47.3099	0.6450
B1636−47	0.51740	0.420E−13	250.0546	−47.2598	81 533	249.8017	−47.3099	0.2578
B1636−47	0.51740	0.420E−13	250.0546	−47.2598	81 606	249.9867	−47.7834	0.5280
J1640−4951	0.73910	0.334E−15	250.1812	−49.8506	81 467	249.5867	−49.2258	0.8625
J1641−2347	1.09101	0.411E−16	250.3250	−23.7843	81 908	250.9587	−23.1312	0.9101
J1643−4522	1.34790	0.828E−14	250.8350	−45.3667	81 746	250.4571	−45.3685	0.3779
J1643−4550	0.71751	0.300E−13	250.8063	−45.8485	81 746	250.4571	−45.3685	0.5936
B1641−45	0.45506	0.201E−13	251.2050	−45.9860	81 746	250.4571	−45.3685	0.9699
J1646−4308	0.84068	0.110E−15	251.7304	−43.1335	82 205	251.9104	−42.8349	0.3486
J1646−4308	0.84068	0.110E−15	251.7304	−43.1335	82 383	252.5142	−43.6394	0.9328
B1643−43	0.23160	0.113E−12	251.7137	−43.7677	82 205	251.9104	−42.8349	0.9533
B1643−43	0.23160	0.113E−12	251.7137	−43.7677	82 383	252.5142	−43.6394	0.8106
B1643−43	0.23160	0.113E−12	251.7137	−43.7677	82 434	252.7038	−43.7859	0.9902
J1648−3256	0.71946	0.353E−14	252.0250	−32.9447	82 201	251.9008	−33.6995	0.7650
J1648−4611	0.16495	0.237E−13	252.0917	−46.1838	82 284	252.2058	−46.4009	0.2453
J1649+2533	1.01526	0.600E−15	252.4342	25.5502	82 235	252.0187	25.5473	0.4155
J1649−4349	0.87071	0.440E−16	252.3350	−43.8228	82 383	252.5142	−43.6394	0.2564
J1649−4349	0.87071	0.440E−16	252.3350	−43.8228	82 434	252.7038	−43.7859	0.3706
J1649−4653	0.55702	0.497E−13	252.3521	−46.8836	82 284	252.2058	−46.4009	0.5044
J1649−4729	0.29769	0.655E−14	252.3259	−47.4848	82 106	251.5683	−47.9712	0.9003
J1649−5553	0.61357	0.170E−14	252.3796	−55.8844	82 490	252.8862	−55.2999	0.7736
J1650−1654	1.74955	0.320E−14	252.6133	−16.9115	82 260	252.1179	−16.3339	0.7610
J1650−4126	0.30892	0.198E−16	252.5546	−41.4427	82 227	251.9725	−40.9727	0.7482
J1650−4341	0.30940	0.167E−16	252.6858	−43.6919	82 383	252.5142	−43.6394	0.1795
J1650−4341	0.30940	0.167E−16	252.6858	−43.6919	82 434	252.7038	−43.7859	0.0957
J1650−4341	0.30940	0.167E−16	252.6858	−43.6919	82 613	253.3308	−44.3011	0.8872
B1648−42	0.84408	0.481E−14	252.9529	−42.7670	82 383	252.5142	−43.6394	0.9766
B1647−52	0.63506	0.181E−14	252.9288	−52.3828	82 599	253.2842	−51.7177	0.7541
B1647−52	0.63506	0.181E−14	252.9288	−52.3828	82 661	253.4592	−52.0788	0.6114
B1647−528	0.89053	0.207E−14	252.9217	−52.9180	82 237	252.0217	−53.0748	0.9136
B1647−528	0.89053	0.207E−14	252.9217	−52.9180	82 661	253.4592	−52.0788	0.9966

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1652+2651	0.91580	0.650E−15	253.0125	26.8611	82 713	253.6079	27.1514	0.6624
B1649−23	1.70374	0.316E−14	253.2438	−24.0514	82 370	252.4721	−24.4467	0.8670
J1653−4315	0.41928	0.150E−16	253.3737	−43.2500	82 383	252.5142	−43.6394	0.9436
J1653−4315	0.41928	0.150E−16	253.3737	−43.2500	82 434	252.7038	−43.7859	0.8579
J1653−4854	3.05951	0.345E−14	253.4863	−48.9014	82 567	253.1696	−48.5024	0.5094
J1654−2713	0.79182	0.168E−15	253.5979	−27.2183	82 697	253.5621	−28.1148	0.8972
J1655−3048	0.54294	0.366E−16	253.8521	−30.8012	82 682	253.5171	−30.1230	0.7564
J1655−3048	0.54294	0.366E−16	253.8521	−30.8012	82 732	253.6517	−31.3346	0.5698
J1657−4432	0.60961	0.820E−14	254.4029	−44.5339	83 001	254.4175	−45.3470	0.8132
J1658−4306	1.16645	0.428E−13	254.5692	−43.1014	83 288	255.3200	−43.6434	0.9260
J1659−4316	0.47438	0.171E−15	254.9846	−43.2668	83 288	255.3200	−43.6434	0.5043
J1659−4316	0.47438	0.171E−15	254.9846	−43.2668	83 415	255.7492	−43.1198	0.7786
J1659−4439	0.35329	0.250E−16	254.9142	−44.6500	83 001	254.4175	−45.3470	0.8558
J1700−3312	1.35831	0.471E−14	255.2208	−33.2125	83 227	255.1296	−33.1028	0.1427
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	83 241	255.1913	−30.5162	0.4226
J1701−3006A	0.00524	−0.132E−18	255.3021	−30.1084	83 522	256.0404	−30.6593	0.9212
J1701−3006B	0.00359	−0.350E−18	255.3025	−30.1136	83 241	255.1913	−30.5162	0.4176
J1701−3006B	0.00359	−0.350E−18	255.3025	−30.1136	83 522	256.0404	−30.6593	0.9178
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	83 241	255.1913	−30.5162	0.4151
J1701−3006C	0.00381	−0.320E−19	255.3033	−30.1165	83 522	256.0404	−30.6593	0.9154
J1701−3006D	0.00342	0.100E+01	255.3000	−30.1000	83 241	255.1913	−30.5162	0.4301
J1701−3006D	0.00342	0.100E+01	255.3000	−30.1000	83 522	256.0404	−30.6593	0.9279
J1701−3006E	0.00323	0.100E+01	255.3000	−30.1000	83 241	255.1913	−30.5162	0.4301
J1701−3006E	0.00323	0.100E+01	255.3000	−30.1000	83 522	256.0404	−30.6593	0.9279
J1701−3006F	0.00230	0.100E+01	255.3000	−30.1000	83 241	255.1913	−30.5162	0.4301
J1701−3006F	0.00230	0.100E+01	255.3000	−30.1000	83 522	256.0404	−30.6593	0.9279
J1701−3130	0.29134	0.560E−16	255.4312	−31.5102	83 177	254.9987	−31.5934	0.4404
J1701−3130	0.29134	0.560E−16	255.4312	−31.5102	83 251	255.2329	−31.7775	0.3328
B1657−45	0.32291	0.519E−15	255.3712	−45.5635	83 001	254.4175	−45.3470	0.9780
J1702−3932	0.39033	0.378E−15	255.5596	−39.5344	83 101	254.7242	−39.5591	0.8358
J1702−4128	0.18214	0.523E−13	255.7188	−41.4801	83 471	255.8983	−40.6609	0.8386
J1702−4128	0.18214	0.523E−13	255.7188	−41.4801	83 598	256.3042	−41.2318	0.6359
J1702−4310	0.24052	0.224E−12	255.6121	−43.1678	83 288	255.3200	−43.6434	0.5582
J1702−4310	0.24052	0.224E−12	255.6121	−43.1678	83 415	255.7492	−43.1198	0.1452
J1702−4310	0.24052	0.224E−12	255.6121	−43.1678	83 547	256.1279	−43.3094	0.5349
J1702−4428	2.12351	0.330E−14	255.7191	−44.4668	83 288	255.3200	−43.6434	0.9150
B1700−32	1.21178	0.660E−15	255.8438	−32.6967	83 227	255.1296	−33.1028	0.8216
B1659−60	0.30632	0.910E−15	256.0617	−60.2682	83 562	256.1629	−59.8817	0.3995
B1702−19	0.29899	0.414E−14	256.4004	−19.1107	83 761	256.7775	−19.5057	0.5461
J1705−3423	0.25543	0.108E−14	256.4262	−34.3957	83 766	256.7938	−34.5152	0.3865
J1705−3936	0.85448	0.193E−13	256.4046	−39.6008	83 709	256.6217	−39.3051	0.3669
J1705−3950	0.31894	0.606E−13	256.3742	−39.8350	83 471	255.8983	−40.6609	0.9532
J1705−3950	0.31894	0.606E−13	256.3742	−39.8350	83 709	256.6217	−39.3051	0.5849
J1705−4108	0.86107	0.347E−13	256.3350	−41.1346	83 471	255.8983	−40.6609	0.6442
J1705−4108	0.86107	0.347E−13	256.3350	−41.1346	83 598	256.3042	−41.2318	0.1020
J1705−4108	0.86107	0.347E−13	256.3350	−41.1346	83 843	257.0212	−41.2557	0.6968
J1705−4108	0.86107	0.347E−13	256.3350	−41.1346	83 846	257.0309	−41.7232	0.9114
J1706−3839	0.58629	0.300E−14	256.5887	−38.6514	83 709	256.6217	−39.3051	0.6545
J1706−4310	0.61698	0.651E−14	256.5187	−43.1673	83 415	255.7492	−43.1198	0.7710
J1706−4310	0.61698	0.651E−14	256.5187	−43.1673	83 547	256.1279	−43.3094	0.4159
J1706−4310	0.61698	0.651E−14	256.5187	−43.1673	83 783	256.8563	−43.8370	0.7500
B1703−40	0.58102	0.192E−14	256.8404	−40.8989	83 471	255.8983	−40.6609	0.9717
B1703−40	0.58102	0.192E−14	256.8404	−40.8989	83 598	256.3042	−41.2318	0.6312
B1703−40	0.58102	0.192E−14	256.8404	−40.8989	83 843	257.0212	−41.2557	0.4000
B1703−40	0.58102	0.192E−14	256.8404	−40.8989	83 846	257.0309	−41.7232	0.8460
B1703−40	0.58102	0.192E−14	256.8404	−40.8989	83 992	257.5458	−40.4413	0.8408
J1707−4341	0.89059	0.570E−14	256.9171	−43.6867	83 547	256.1279	−43.3094	0.8747
J1707−4341	0.89059	0.570E−14	256.9171	−43.6867	83 783	256.8563	−43.8370	0.1621
J1707−4729	0.26647	0.156E−14	256.8146	−47.4929	83 621	256.3504	−47.7010	0.5087
J1707−4729	0.26647	0.156E−14	256.8146	−47.4929	83 707	256.6204	−47.8457	0.4027
J1707−4729	0.26647	0.156E−14	256.8146	−47.4929	83 720	256.6667	−47.8518	0.3882
J1707−4729	0.26647	0.156E−14	256.8146	−47.4929	83 797	256.8804	−48.2482	0.7582
J1707−4729	0.26647	0.156E−14	256.8146	−47.4929	83 877	257.1479	−46.8931	0.6862

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1708−3426	0.69211	0.420E−14	257.2404	−34.4465	83 766	256.7938	−34.5152	0.4519
J1708−3426	0.69211	0.420E−14	257.2404	−34.4465	83 941	257.3608	−35.3911	0.9522
J1708−3827	1.22578	0.860E−14	257.0688	−38.4510	83 709	256.6217	−39.3051	0.9640
J1708−4008	10.99903	0.194E−10	257.1958	−40.1508	83 992	257.5458	−40.4413	0.4549
J1709+23	0.00463	0.100E+01	257.3333	23.2500	83 951	257.4071	23.5779	0.3360
B1706−16	0.65305	0.631E−14	257.3600	−16.6826	84 037	257.6904	−16.3551	0.4653
J1709−3626	0.44786	0.227E−14	257.4379	−36.4343	83 779	256.8425	−35.8928	0.8049
J1709−3626	0.44786	0.227E−14	257.4379	−36.4343	83 874	257.1362	−36.6428	0.3667
J1709−3841	0.58699	0.786E−14	257.3163	−38.6838	83 709	256.6217	−39.3051	0.9319
J1709−4342	1.73590	0.800E−15	257.3788	−43.7004	83 783	256.8563	−43.8370	0.5400
J1709−4342	1.73590	0.800E−15	257.3788	−43.7004	84 152	258.0738	−43.4945	0.7249
B1706−44	0.10246	0.930E−13	257.4279	−44.4856	83 783	256.8563	−43.8370	0.8646
J1710−4148	0.28656	0.102E−15	257.5988	−41.8005	83 843	257.0212	−41.2557	0.7940
J1710−4148	0.28656	0.102E−15	257.5988	−41.8005	83 846	257.0309	−41.7232	0.5731
B1709−15	0.86880	0.110E−14	257.9792	−15.1611	83 930	257.3329	−15.2022	0.6475
B1707−53	0.89922	0.155E−13	257.9712	−53.8338	83 934	257.3438	−53.3916	0.7676
J1713+0747	0.00457	0.854E−20	258.4563	7.7937	84 521	259.1713	8.0586	0.7625
J1717−3847	1.14950	0.820E−15	259.3267	−38.7834	84 694	259.7075	−39.5163	0.8259
J1717−5800	0.32179	0.196E−15	259.3983	−58.0015	84 777	259.9308	−58.6078	0.8070
B1715−40	0.18909	0.167E−14	259.7571	−40.1165	84 694	259.7075	−39.5163	0.6023
J1719−4302	0.23548	0.392E−15	259.9529	−43.0365	84 879	260.2029	−42.6584	0.4533
B1718−02	0.47771	0.828E−16	260.2383	−2.2066	84 676	259.6637	−1.5100	0.9030
B1718−02	0.47771	0.828E−16	260.2383	−2.2066	84 741	259.8350	−2.3500	0.4281
B1718−02	0.47771	0.828E−16	260.2383	−2.2066	85 042	260.7133	−2.3879	0.5084
B1717−16	1.56560	0.580E−14	260.1050	−16.5593	84 791	259.9713	−16.2619	0.3261
B1717−16	1.56560	0.580E−14	260.1050	−16.5593	84 870	260.1884	−16.5042	0.0999
B1717−29	0.62045	0.746E−15	260.1421	−29.5545	84 609	259.4246	−28.9383	0.9458
B1717−29	0.62045	0.746E−15	260.1421	−29.5545	84 665	259.6283	−29.5555	0.5138
B1717−29	0.62045	0.746E−15	260.1421	−29.5545	84 684	259.6829	−29.4899	0.4637
B1717−29	0.62045	0.746E−15	260.1421	−29.5545	84 806	260.0017	−30.4291	0.8858
B1718−19	1.00404	0.162E−14	260.2558	−19.6014	84 856	260.1433	−19.3334	0.2907
B1718−19	1.00404	0.162E−14	260.2558	−19.6014	85 017	260.6437	−19.6158	0.3882
J1721−1939	0.40404	0.128E−15	260.4442	−19.6514	84 856	260.1433	−19.3334	0.4377
J1721−1939	0.40404	0.128E−15	260.4442	−19.6514	85 017	260.6437	−19.6158	0.2027
J1721−2457	0.00350	0.590E−20	260.2725	−24.9517	84 907	260.2812	−24.6835	0.2683
B1718−35	0.28042	0.252E−13	260.3863	−35.5471	85 019	260.6579	−35.9109	0.4540
B1718−35	0.28042	0.252E−13	260.3863	−35.5471	85 088	260.8571	−35.1993	0.5854
B1718−35	0.28042	0.252E−13	260.3863	−35.5471	85 158	261.0363	−34.7980	0.9918
B1718−32	0.47716	0.646E−15	260.5121	−32.1292	84 718	259.7600	−32.6729	0.9280
B1718−32	0.47716	0.646E−15	260.5121	−32.1292	84 987	260.5562	−31.6579	0.4735
B1718−32	0.47716	0.646E−15	260.5121	−32.1292	85 126	260.9554	−32.2530	0.4603
B1718−36	0.39918	0.446E−14	260.5408	−36.5481	85 019	260.6579	−35.9109	0.6479
J1724−3505	1.22171	0.211E−13	261.1992	−35.0843	85 019	260.6579	−35.9109	0.9880
J1724−3505	1.22171	0.211E−13	261.1992	−35.0843	85 088	260.8571	−35.1993	0.3609
J1724−3505	1.22171	0.211E−13	261.1992	−35.0843	85 158	261.0363	−34.7980	0.3294
J1725−3546	1.03247	0.150E−13	261.4258	−35.7671	85 019	260.6579	−35.9109	0.7813
J1725−3546	1.03247	0.150E−13	261.4258	−35.7671	85 088	260.8571	−35.1993	0.8037
J1725−3848	2.06239	0.230E−13	261.2504	−38.8010	85 364	261.6562	−38.1688	0.7512
J1725−3848	2.06239	0.230E−13	261.2504	−38.8010	85 425	261.8417	−38.0614	0.9469
J1725−4043	1.46507	0.279E−14	261.4225	−40.7170	85 222	261.2108	−41.5006	0.8117
J1726−3530	1.11013	0.122E−11	261.5312	−35.4849	85 019	260.6579	−35.9109	0.9717
J1726−3530	1.11013	0.122E−11	261.5312	−35.4849	85 088	260.8571	−35.1993	0.7321
J1726−3530	1.11013	0.122E−11	261.5312	−35.4849	85 158	261.0363	−34.7980	0.8467
B1726−00	0.38600	0.112E−14	262.1450	−0.1292	85 416	261.8175	−0.2527	0.3500
J1728−3733	0.61554	0.720E−16	262.1925	−37.5502	85 364	261.6562	−38.1688	0.8187
J1728−3733	0.61554	0.720E−16	262.1925	−37.5502	85 425	261.8417	−38.0614	0.6200
J1728−3733	0.61554	0.720E−16	262.1925	−37.5502	85 478	262.0221	−38.0746	0.5514
J1730−2304	0.00812	0.202E−19	262.5900	−23.0754	85 561	262.2779	−23.8359	0.8221
J1730−2304	0.00812	0.202E−19	262.5900	−23.0754	85 642	262.5271	−22.9513	0.1391
B1729−41	0.62798	0.128E−13	263.2083	−41.4680	85 774	262.8971	−40.6034	0.9189
B1729−41	0.62798	0.128E−13	263.2083	−41.4680	85 848	263.1475	−41.4545	0.0623
B1729−41	0.62798	0.128E−13	263.2083	−41.4680	86 010	263.6742	−40.7650	0.8433
B1729−41	0.62798	0.128E−13	263.2083	−41.4680	86 091	263.9017	−41.5164	0.6950

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B1730−22	0.87168	0.427E−16	263.3600	−22.4677	85 642	262.5271	−22.9513	0.9631
J1733−3322	1.24592	0.410E−14	263.4800	−33.3667	86 001	263.6592	−33.6637	0.3468
B1732−02	0.83939	0.421E−15	263.6900	−2.2109	86 232	264.3358	−2.8740	0.9257
J1734−3333	1.16901	0.228E−11	263.6108	−33.5506	86 001	263.6592	−33.6637	0.1230
J1735−3258	0.35096	0.261E−13	263.9871	−32.9672	85 999	263.6529	−32.1790	0.8561
J1735−3258	0.35096	0.261E−13	263.9871	−32.9672	86 001	263.6592	−33.6637	0.7698
J1735−3258	0.35096	0.261E−13	263.9871	−32.9672	86 244	264.3596	−32.1847	0.8666
J1736+05	0.99924	0.100E+01	264.2250	5.8000	85 911	263.3396	5.7007	0.8910
J1736+05	0.99924	0.100E+01	264.2250	5.8000	86 135	264.0404	4.8436	0.9740
J1736−3511	0.50280	0.157E−14	264.0113	−35.1849	86 293	264.4813	−34.7965	0.6097
J1737−3102	0.76867	0.373E−13	264.3904	−31.0335	86 285	264.4625	−30.9094	0.1435
J1737−3102	0.76867	0.373E−13	264.3904	−31.0335	86 360	264.6975	−30.1313	0.9530
J1737−3102	0.76867	0.373E−13	264.3904	−31.0335	86 408	264.8441	−30.8196	0.5016
J1737−3137	0.45043	0.139E−12	264.2675	−31.6173	85 999	263.6529	−32.1790	0.8326
J1737−3137	0.45043	0.139E−12	264.2675	−31.6173	86 244	264.3596	−32.1847	0.5749
J1737−3137	0.45043	0.139E−12	264.2675	−31.6173	86 285	264.4625	−30.9094	0.7342
J1737−3137	0.45043	0.139E−12	264.2675	−31.6173	86 408	264.8441	−30.8196	0.9843
J1738−2955	0.44340	0.819E−13	264.7175	−29.9181	86 360	264.6975	−30.1313	0.2142
J1738−2955	0.44340	0.819E−13	264.7175	−29.9181	86 408	264.8441	−30.8196	0.9104
J1738−2955	0.44340	0.819E−13	264.7175	−29.9181	86 629	265.5150	−30.4922	0.9827
B1735−32	0.76850	0.795E−15	264.7254	−32.1982	86 244	264.3596	−32.1847	0.3661
B1736−29	0.32288	0.788E−14	264.8925	−29.0510	86 376	264.7529	−28.4124	0.6537
J1739−3023	0.11437	0.114E−13	264.9158	−30.3837	86 285	264.4625	−30.9094	0.6942
J1739−3023	0.11437	0.114E−13	264.9158	−30.3837	86 360	264.6975	−30.1313	0.3337
J1739−3023	0.11437	0.114E−13	264.9158	−30.3837	86 408	264.8441	−30.8196	0.4418
J1739−3023	0.11437	0.114E−13	264.9158	−30.3837	86 629	265.5150	−30.4922	0.6089
J1739−3049	0.23932	0.218E−14	264.8467	−30.8178	86 285	264.4625	−30.9094	0.3950
J1739−3049	0.23932	0.218E−14	264.8467	−30.8178	86 360	264.6975	−30.1313	0.7025
J1739−3049	0.23932	0.218E−14	264.8467	−30.8178	86 408	264.8441	−30.8196	0.0031
J1739−3049	0.23932	0.218E−14	264.8467	−30.8178	86 629	265.5150	−30.4922	0.7434
B1736−31	0.52944	0.186E−13	264.8513	−31.5209	86 244	264.3596	−32.1847	0.8260
B1736−31	0.52944	0.186E−13	264.8513	−31.5209	86 285	264.4625	−30.9094	0.7246
B1736−31	0.52944	0.186E−13	264.8513	−31.5209	86 408	264.8441	−30.8196	0.7014
J1739−3159	0.87756	0.197E−15	264.9525	−31.9847	86 244	264.3596	−32.1847	0.6257
B1737−30	0.60667	0.466E−12	265.1408	−30.2621	86 285	264.4625	−30.9094	0.9376
B1737−30	0.60667	0.466E−12	265.1408	−30.2621	86 360	264.6975	−30.1313	0.4622
B1737−30	0.60667	0.466E−12	265.1408	−30.2621	86 408	264.8441	−30.8196	0.6315
B1737−30	0.60667	0.466E−12	265.1408	−30.2621	86 629	265.5150	−30.4922	0.4393
J1740−3052	0.57031	0.255E−13	265.2083	−30.8678	86 285	264.4625	−30.9094	0.7470
J1740−3052	0.57031	0.255E−13	265.2083	−30.8678	86 360	264.6975	−30.1313	0.8963
J1740−3052	0.57031	0.255E−13	265.2083	−30.8678	86 408	264.8441	−30.8196	0.3674
J1740−3052	0.57031	0.255E−13	265.2083	−30.8678	86 629	265.5150	−30.4922	0.4849
J1740−5340	0.00365	0.168E−18	265.1854	−53.6780	86 347	264.6679	−54.4694	0.9455
B1738−08	2.04308	0.227E−14	265.3438	−8.6755	86 300	264.5046	−9.0300	0.9110
B1738−08	2.04308	0.227E−14	265.3438	−8.6755	86 661	265.6050	−9.0759	0.4781
J1741−2733	0.89296	0.148E−15	265.2554	−27.5514	86 376	264.7529	−28.4124	0.9969
J1741−2733	0.89296	0.148E−15	265.2554	−27.5514	86 385	264.7746	−26.9374	0.7799
J1741−2733	0.89296	0.148E−15	265.2554	−27.5514	86 803	266.0629	−27.7633	0.8349
J1741−2945	0.22356	0.634E−15	265.3100	−29.7510	86 360	264.6975	−30.1313	0.7210
J1741−2945	0.22356	0.634E−15	265.3100	−29.7510	86 629	265.5150	−30.4922	0.7691
J1741−3016	1.89375	0.899E−14	265.2791	−30.2675	86 360	264.6975	−30.1313	0.5974
J1741−3016	1.89375	0.899E−14	265.2791	−30.2675	86 408	264.8441	−30.8196	0.7028
J1741−3016	1.89375	0.899E−14	265.2791	−30.2675	86 629	265.5150	−30.4922	0.3258
B1737−39	0.51221	0.193E−14	265.3250	−39.4607	86 419	264.8725	−39.3442	0.4672
J1742−4616	0.41240	0.338E−16	265.6088	−46.2815	86 415	264.8654	−45.8862	0.8419
B1740−03	0.44464	0.156E−14	265.7838	−3.6532	86 765	265.9346	−3.9173	0.3041
B1740−13	0.40534	0.478E−15	265.9067	−13.8606	86 938	266.4721	−13.3064	0.7917
B1740−31	2.41458	0.121E−12	265.9025	−31.8394	86 953	266.5258	−32.4037	0.8408
J1743−3153	0.19310	0.106E−13	265.8146	−31.8848	86 953	266.5258	−32.4037	0.8804
J1743−4212	0.30617	0.783E−15	265.7717	−42.2007	86 767	265.9442	−42.1516	0.1793
J1744−1134	0.00408	0.894E−20	266.1221	−11.5818	86 702	265.7284	−10.7948	0.8800
J1744−1610	1.75721	0.238E−14	266.0688	−16.1766	87 035	266.7441	−16.5909	0.7923
B1742−30	0.36743	0.107E−13	266.4846	−30.6732	86 629	265.5150	−30.4922	0.9863

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B1742−30	0.36743	0.107E−13	266.4846	−30.6732	87 162	267.1092	−30.2994	0.7279
J1747−2802	2.78008	0.237E−14	266.8604	−28.0344	86 803	266.0629	−27.7633	0.8423
J1747−2958	0.09881	0.614E−13	266.8171	−29.9669	87 038	266.7654	−29.2484	0.7204
J1747−2958	0.09881	0.614E−13	266.8171	−29.9669	87 162	267.1092	−30.2994	0.4426
B1745−12	0.39413	0.121E−14	267.0725	−13.0144	86 938	266.4721	−13.3064	0.6676
J1748−2444	0.44284	0.111E−15	267.2021	−24.7344	87 378	267.7925	−23.9618	0.9724
B1746−30	0.60987	0.787E−14	267.3058	−30.0343	87 038	266.7654	−29.2484	0.9538
B1746−30	0.60987	0.787E−14	267.3058	−30.0343	87 162	267.1092	−30.2994	0.3301
J1750−2438	0.71279	0.108E−13	267.7487	−24.6349	87 378	267.7925	−23.9618	0.6746
B1747−31	0.91036	0.197E−15	267.6971	−31.9623	87 438	268.0071	−32.0539	0.3233
J1751−2516	0.39484	0.264E−14	267.9691	−25.2679	87 661	268.5762	−25.9621	0.9223
J1751−3323	0.54822	0.890E−14	267.8863	−33.3844	87 664	268.6004	−33.6184	0.7515
B1749−28	0.56256	0.813E−14	268.2442	−28.1104	87 369	267.7804	−27.3961	0.8516
B1750−24	0.52834	0.141E−13	268.3775	−25.0007	87 661	268.5762	−25.9621	0.9818
J1755−2521	1.17597	0.902E−13	268.9987	−25.3507	87 661	268.5762	−25.9621	0.7432
J1755−2725	0.26195	0.140E−16	268.9242	−27.4179	87 679	268.6250	−26.6318	0.8412
J1755−2725	0.26195	0.140E−16	268.9242	−27.4179	87 824	269.1017	−26.7732	0.6687
J1757−2223	0.18531	0.782E−15	269.4613	−22.3847	87 925	269.4204	−21.7193	0.6666
J1757−5322	0.00887	0.263E−19	269.3129	−53.3740	87 793	269.0179	−53.5824	0.3613
J1758−2206	0.43028	0.956E−15	269.6850	−22.1012	87 925	269.4204	−21.7193	0.4646
J1758−2630	1.20289	0.517E−14	269.6425	−26.5003	87 824	269.1017	−26.7732	0.6058
J1759−1940	0.25472	0.934E−16	269.9875	−19.6675	88 235	270.2746	−19.9671	0.4150
J1759−1956	2.84339	0.186E−13	269.8975	−19.9336	88 235	270.2746	−19.9671	0.3786
B1756−22	0.46097	0.109E−13	269.8504	−22.0925	87 925	269.4204	−21.7193	0.5694
J1801−1909	1.10872	0.703E−15	270.4442	−19.1510	88 235	270.2746	−19.9671	0.8336
B1758−29	1.08191	0.329E−14	270.4450	−29.3441	88 414	270.7787	−28.5606	0.8516
J1803−1857	2.86434	0.152E−13	270.9958	−18.9505	88 704	271.6296	−19.0676	0.6445
B1800−21	0.13362	0.134E−12	270.9637	−21.6008	88 595	271.3446	−21.6729	0.3876
B1800−27	0.33441	0.171E−16	270.8817	−27.2002	88 354	270.6383	−27.7796	0.6284
B1800−27	0.33441	0.171E−16	270.8817	−27.2002	88 465	270.9533	−26.8398	0.3674
B1800−27	0.33441	0.171E−16	270.8817	−27.2002	88 683	271.5571	−27.4926	0.7360
B1800−27	0.33441	0.171E−16	270.8817	−27.2002	88 746	271.7567	−27.1020	0.8805
B1802−07	0.02310	0.467E−18	271.2075	−7.5902	88 392	270.7450	−6.9121	0.8209
B1802−07	0.02310	0.467E−18	271.2075	−7.5902	88 665	271.5217	−8.0574	0.5630
J1804−2228	0.57051	0.143E−15	271.1171	−22.4672	88 595	271.3446	−21.6729	0.8262
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	88 354	270.6383	−27.7796	0.6632
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	88 465	270.9533	−26.8398	0.4718
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	88 683	271.5571	−27.4926	0.5102
J1804−2717	0.00934	0.409E−19	271.0879	−27.2920	88 746	271.7567	−27.1020	0.6952
J1805−0619	0.45465	0.969E−15	271.3809	−6.3293	88 329	270.5950	−5.7353	0.9851
J1805−0619	0.45465	0.969E−15	271.3809	−6.3293	88 392	270.7450	−6.9121	0.8625
J1806+10	0.48428	0.100E+01	271.7083	10.4000	88 930	272.2942	11.0633	0.8849
B1804−12	0.52262	0.141E−14	271.5279	−11.9079	88 719	271.6904	−11.4819	0.4559
B1804−12	0.52262	0.141E−14	271.5279	−11.9079	88 962	272.3883	−12.0384	0.8702
J1806−1920	0.87979	0.170E−16	271.5275	−19.3340	88 704	271.6296	−19.0676	0.2853
J1806−2125	0.48179	0.121E−12	271.5813	−21.4178	88 595	271.3446	−21.6729	0.3480
J1807+07	0.46430	0.100E+01	271.9250	7.8833	88 644	271.4679	7.0909	0.9148
B1804−08	0.16373	0.288E−16	271.9083	−8.7953	88 665	271.5217	−8.0574	0.8331
B1804−08	0.16373	0.288E−16	271.9083	−8.7953	88 924	272.2779	−9.4470	0.7492
J1807−2459	0.00306	0.100E+01	271.8346	−24.9979	89 043	272.6104	−24.4367	0.9576
B1804−27	0.82778	0.122E−13	271.7850	−27.2508	88 465	270.9533	−26.8398	0.9277
B1804−27	0.82778	0.122E−13	271.7850	−27.2508	88 683	271.5571	−27.4926	0.3323
B1804−27	0.82778	0.122E−13	271.7850	−27.2508	88 739	271.7313	−26.2942	0.9581
B1804−27	0.82778	0.122E−13	271.7850	−27.2508	88 746	271.7567	−27.1020	0.1515
J1808+00	0.42511	0.100E+01	272.0792	0.5667	88 958	272.3792	0.3914	0.3474
J1808+00	0.42511	0.100E+01	272.0792	0.5667	88 961	272.3842	−0.3271	0.9444
J1808−0813	0.87604	0.124E−14	272.0392	−8.2171	88 665	271.5217	−8.0574	0.5416
B1805−20	0.91841	0.171E−13	272.0263	−20.9669	88 595	271.3446	−21.6729	0.9814
J1808−3249	0.36491	0.705E−14	272.0183	−32.8176	89 105	272.7800	−32.9907	0.7811
J1809−0743	0.31389	0.152E−15	272.3996	−7.7171	88 665	271.5217	−8.0574	0.9416
J1809−1917	0.08275	0.255E−13	272.4296	−19.2939	88 704	271.6296	−19.0676	0.8314
J1809−3547	0.86039	0.120E−15	272.3621	−35.7838	88 625	271.4275	−35.6798	0.9403
J1809−3547	0.86039	0.120E−15	272.3621	−35.7838	89 027	272.5442	−36.4124	0.6544

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B1806−53	0.26105	0.383E−15	272.6850	−53.6355	88 949	272.3504	−53.0573	0.6680
B1810+02	0.79390	0.360E−14	273.2213	2.4492	89 207	273.0754	1.8975	0.5706
B1810+02	0.79390	0.360E−14	273.2213	2.4492	89 412	273.6892	1.7584	0.8344
B1811+40	0.93109	0.255E−14	273.3050	40.2275	89 318	273.3763	39.7380	0.4946
J1814+1130	0.75126	0.166E−14	273.6779	11.5122	89 128	272.8492	11.5287	0.8289
B1813−26	0.59289	0.664E−16	274.1475	−26.8181	89 614	274.3125	−26.5753	0.2936
B1813−26	0.59289	0.664E−16	274.1475	−26.8181	89 673	274.5008	−26.1646	0.7430
B1814−23	0.62547	0.100E+01	274.2500	−23.1833	89 497	273.9542	−23.8156	0.6980
B1813−36	0.38702	0.205E−14	274.2737	−36.3011	89 784	274.8425	−36.7806	0.7439
B1813−36	0.38702	0.205E−14	274.2737	−36.3011	89 841	275.0104	−35.8911	0.8431
B1813−36	0.38702	0.205E−14	274.2737	−36.3011	89 879	275.1108	−36.2306	0.8401
J1817−3837	0.38449	0.580E−15	274.2508	−38.6332	89 531	274.0296	−38.7767	0.2637
J1817−3837	0.38449	0.580E−15	274.2508	−38.6332	89 632	274.3733	−38.4477	0.2223
B1815−14	0.29149	0.204E−14	274.5988	−14.3771	89 892	275.1300	−14.3611	0.5315
J1819+1305	1.06036	0.359E−15	274.9842	13.0876	89 924	275.2346	12.5328	0.6087
J1819−1408	1.78849	0.259E−14	274.9867	−14.1338	89 892	275.1300	−14.3611	0.2688
J1819−1510	0.22654	0.790E−17	274.9734	−15.1724	89 892	275.1300	−14.3611	0.8263
B1817−13	0.92146	0.450E−14	275.0821	−13.7709	89 892	275.1300	−14.3611	0.5921
J1821+17	1.36668	0.870E−15	275.3058	17.2512	89 802	274.9117	16.6523	0.7170
J1822+0705	1.36282	0.175E−14	275.5767	7.0886	90 036	275.5750	7.5491	0.4604
J1822+0705	1.36282	0.175E−14	275.5767	7.0886	90 330	276.4587	7.1017	0.8821
B1820−14	0.21477	0.907E−15	275.7250	−14.0007	89 892	275.1300	−14.3611	0.6957
J1822−4209	0.45651	0.459E−15	275.5471	−42.1530	90 109	275.8292	−42.7795	0.6870
J1822−4209	0.45651	0.459E−15	275.5471	−42.1530	90 152	275.9625	−42.4222	0.4950
J1822−4209	0.45651	0.459E−15	275.5471	−42.1530	90 233	276.1642	−42.0281	0.6296
J1822−4209	0.45651	0.459E−15	275.5471	−42.1530	90 292	276.3433	−41.7425	0.8958
J1823−0154	0.75978	0.113E−14	275.9671	−1.9013	89 986	275.3987	−1.5373	0.6749
J1823−0154	0.75978	0.113E−14	275.9671	−1.9013	90 272	276.2883	−1.7165	0.3706
B1820−11	0.27983	0.138E−14	275.9179	−11.2503	90 004	275.4575	−11.9225	0.8148
J1823−1347	0.61711	0.960E−14	275.8508	−13.7848	89 892	275.1300	−14.3611	0.9229
B1820−30A	0.00544	0.338E−17	275.9183	−30.3611	90 011	275.5000	−30.2413	0.4351
B1820−30A	0.00544	0.338E−17	275.9183	−30.3611	90 158	275.9817	−30.3172	0.0770
B1820−30A	0.00544	0.338E−17	275.9183	−30.3611	90 397	276.6700	−30.3932	0.7523
B1820−30A	0.00544	0.338E−17	275.9183	−30.3611	90 450	276.8404	−30.1243	0.9520
B1820−30B	0.37860	0.322E−16	275.9229	−30.3616	90 011	275.5000	−30.2413	0.4397
B1820−30B	0.37860	0.322E−16	275.9229	−30.3616	90 158	275.9817	−30.3172	0.0736
B1820−30B	0.37860	0.322E−16	275.9229	−30.3616	90 397	276.6700	−30.3932	0.7477
B1820−30B	0.37860	0.322E−16	275.9229	−30.3616	90 450	276.8404	−30.1243	0.9477
B1820−31	0.28405	0.293E−14	275.9446	−31.1138	90 011	275.5000	−30.2413	0.9792
B1820−31	0.28405	0.293E−14	275.9446	−31.1138	90 158	275.9817	−30.3172	0.7974
B1820−31	0.28405	0.293E−14	275.9446	−31.1138	90 391	276.6570	−31.7676	0.9670
B1821−11	0.43576	0.355E−14	276.1229	−11.3118	90 004	275.4575	−11.9225	0.9031
J1824−1159	0.36249	0.538E−14	276.2337	−11.9982	90 004	275.4575	−11.9225	0.7799
J1828+1359	0.74164	0.729E−15	277.2221	13.9931	90 618	277.3642	13.8551	0.1981
J1828+1359	0.74164	0.729E−15	277.2221	13.9931	90 864	278.0433	13.7363	0.8605
B1826−17	0.30713	0.555E−14	277.4296	−17.8511	90 788	277.8279	−17.7820	0.4043
B1828−10	0.40504	0.600E−13	277.6979	−10.9911	90 979	278.3708	−11.6355	0.9317
J1830−1135	6.22155	0.477E−13	277.5071	−11.5842	90 979	278.3708	−11.6355	0.8653
J1831−1223	2.85794	0.550E−14	277.8033	−12.3842	90 979	278.3708	−11.6355	0.9395
J1832−28	0.19930	0.100E+01	278.1250	−28.7167	91 085	278.6817	−28.0721	0.8517
J1833−1055	0.63364	0.527E−15	278.4933	−10.9175	90 979	278.3708	−11.6355	0.7283
B1828−60	1.88944	0.270E−15	278.3116	−60.3834	91 189	279.0425	−60.0698	0.7953
B1831−00	0.52095	0.143E−16	278.5717	−0.1814	91 044	278.5842	−0.6737	0.4925
B1831−04	0.29011	0.719E−16	278.6067	−4.4377	91 215	279.1138	−4.5747	0.5253
B1832−06	0.30583	0.405E−13	278.7729	−6.7184	91 332	279.4271	−7.3365	0.9000
B1832−06	0.30583	0.405E−13	278.7729	−6.7184	91 360	279.4950	−6.8045	0.7272
J1835−1106	0.16591	0.206E−13	278.8259	−11.1042	90 979	278.3708	−11.6355	0.6995
B1834−04	0.35424	0.166E−14	279.2154	−4.6104	91 215	279.1138	−4.5747	0.1078
J1837+1221	1.96353	0.620E−14	279.2796	12.3650	91 019	278.5196	12.5038	0.7726
J1837−0045	0.61704	0.168E−14	279.3838	−0.7529	91 044	278.5842	−0.6737	0.8035
J1837−0559	0.20106	0.330E−14	279.3483	−5.9912	91 360	279.4950	−6.8045	0.8264
J1837−0604	0.09629	0.452E−13	279.4312	−6.0680	91 360	279.4950	−6.8045	0.7392
B1834−06	1.90581	0.772E−15	279.3108	−6.8839	91 332	279.4271	−7.3365	0.4673

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Table A2 (*cont.*)

Pulsar details					Habstar details			
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B1834−06	1.90581	0.772E−15	279.3108	−6.8839	91 360	279.4950	−6.8045	0.2006
J1838−0453	0.38083	0.116E−12	279.5463	−4.8840	91 215	279.1138	−4.5747	0.5317
J1838−1046	1.21835	0.308E−14	279.6100	−10.7682	91 530	279.9850	−11.1070	0.5053
J1839−0459	0.58532	0.331E−14	279.9275	−4.9997	91 215	279.1138	−4.5747	0.9180
J1839−0627	0.48491	0.132E−15	279.8350	−6.4509	91 332	279.4271	−7.3365	0.9750
J1839−0627	0.48491	0.132E−15	279.8350	−6.4509	91 360	279.4950	−6.8045	0.4905
J1839−0643	0.44955	0.364E−14	279.7908	−6.7292	91 332	279.4271	−7.3365	0.7079
J1839−0643	0.44955	0.364E−14	279.7908	−6.7292	91 360	279.4950	−6.8045	0.3053
B1839+56	1.65286	0.149E−14	280.1858	56.6821	91 935	281.1225	56.7786	0.9416
B1839+09	0.38132	0.109E−14	280.4829	9.2020	91 818	280.8154	9.0412	0.3693
J1842+1332	0.47160	0.229E−15	280.6246	13.5338	91 569	280.0912	13.3700	0.5579
J1842+1332	0.47160	0.229E−15	280.6246	13.5338	91 727	280.5696	14.4330	0.9009
J1842+1332	0.47160	0.229E−15	280.6246	13.5338	91 778	280.7242	13.8231	0.3060
J1842+1332	0.47160	0.229E−15	280.6246	13.5338	91 885	280.9721	13.1947	0.4854
J1843−0459	0.75496	0.854E−15	280.8650	−4.9918	91 999	281.2658	−5.5038	0.6502
J1844+00	0.46050	0.100E+01	281.0458	0.5833	91 920	281.0875	0.5374	0.0620
B1842+14	0.37546	0.187E−14	281.2283	14.9039	91 727	280.5696	14.4330	0.8098
B1842+14	0.37546	0.187E−14	281.2283	14.9039	91 955	281.1609	15.6332	0.7324
B1842+14	0.37546	0.187E−14	281.2283	14.9039	92 035	281.3933	14.4171	0.5140
J1844−0256	0.27300	0.100E+01	281.2209	−2.9333	92 200	281.8637	−3.6392	0.9547
J1844−0310	0.52505	0.101E−13	281.1892	−3.1770	92 200	281.8637	−3.6392	0.8177
B1841−04	0.99103	0.391E−14	281.1392	−4.5534	91 999	281.2658	−5.5038	0.9587
B1841−05	0.25570	0.971E−14	281.0213	−5.6428	91 999	281.2658	−5.5038	0.2813
J1845−0256	6.97127	0.100E+01	281.2375	−3.0000	92 200	281.8637	−3.6392	0.8948
J1845−0316	0.20764	0.886E−14	281.4704	−3.2668	92 200	281.8637	−3.6392	0.5416
B1842−04	0.48675	0.113E−13	281.3946	−4.5749	91 999	281.2658	−5.5038	0.9377
B1842−04	0.48675	0.113E−13	281.3946	−4.5749	92 278	282.0912	−4.9349	0.7841
J1846−0258	0.32360	0.710E−11	281.6021	−2.9674	92 200	281.8637	−3.6392	0.7209
B1844−04	0.59777	0.517E−13	281.8450	−4.0373	92 200	281.8637	−3.6392	0.3985
B1844−04	0.59777	0.517E−13	281.8450	−4.0373	92 278	282.0912	−4.9349	0.9309
J1847−0438	0.95799	0.109E−13	281.9079	−4.6376	92 200	281.8637	−3.6392	0.9994
J1847−0438	0.95799	0.109E−13	281.9079	−4.6376	92 278	282.0912	−4.9349	0.3493
J1847−0605	0.77816	0.464E−14	281.8375	−6.0873	91 999	281.2658	−5.5038	0.8169
J1848+12	0.75473	0.100E+01	282.1250	12.8333	92 388	282.4100	13.2191	0.4797
J1848−1414	0.29777	0.141E−16	282.1629	−14.2386	92 262	282.0491	−14.7083	0.4832
J1849+0127	0.54216	0.280E−13	282.4338	1.4506	92 183	281.8225	1.7354	0.6744
J1849+24	0.27500	0.100E+01	282.2500	24.0000	92 270	282.0679	23.5148	0.5183
J1849+24	0.27500	0.100E+01	282.2500	24.0000	92 379	282.3854	23.8972	0.1701
J1849−0317	0.66841	0.220E−13	282.4908	−3.2842	92 200	281.8637	−3.6392	0.7206
B1848+13	0.34558	0.149E−14	282.6475	13.5995	92 388	282.4100	13.2191	0.4484
B1848+04	0.28470	0.109E−14	282.7633	4.3033	92 566	282.9329	5.0441	0.7599
B1848+12	1.20530	0.115E−13	282.8050	12.9931	92 388	282.4100	13.2191	0.4551
J1852+0305	1.32615	0.100E−15	283.1358	3.0835	92 417	282.5038	3.0891	0.6321
J1852+0305	1.32615	0.100E−15	283.1358	3.0835	92 569	282.9517	3.0314	0.1914
J1853+0545	0.12640	0.611E−15	283.4933	5.7653	92 566	282.9329	5.0441	0.9133
B1852+10	0.57320	0.639E−15	283.6221	10.7784	92 638	283.1225	11.2107	0.6607
J1855−0941	0.34540	0.240E−15	283.8150	−9.6834	92 589	282.9979	−9.2709	0.9153
J1857+0526	0.34995	0.693E−14	284.3159	5.4413	93 101	284.5008	5.9111	0.5049
J1859+1526	0.93397	0.393E−14	284.9346	15.4364	93 252	284.9271	16.2529	0.8165
J1900+30	0.60223	0.100E+01	285.0750	30.8833	93 185	284.7121	30.1802	0.7913
B1859+03	0.65545	0.746E−14	285.3821	3.5183	93 364	285.2546	4.1072	0.6026
J1901+0413	2.66308	0.132E−12	285.2929	4.2181	93 364	285.2546	4.1072	0.1173
B1859+07	0.64400	0.229E−14	285.4121	7.2763	93 248	284.9096	7.9877	0.8709
B1859+07	0.64400	0.229E−14	285.4121	7.2763	93 406	285.3521	7.2795	0.0601
B1859+07	0.64400	0.229E−14	285.4121	7.2763	93 613	285.9529	8.0977	0.9834
B1900+05	0.74658	0.129E−13	285.6775	5.9405	93 744	286.3333	5.8938	0.6575
B1900+05	0.74658	0.129E−13	285.6775	5.9405	93 772	286.4488	6.5470	0.9812
B1900+06	0.67350	0.771E−14	285.7092	6.2759	93 744	286.3333	5.8938	0.7319
B1900+06	0.67350	0.771E−14	285.7092	6.2759	93 772	286.4488	6.5470	0.7877
J1902+0723	0.48781	0.210E−15	285.5562	7.3847	93 248	284.9096	7.9877	0.8841
J1902+0723	0.48781	0.210E−15	285.5562	7.3847	93 406	285.3521	7.2795	0.2297
J1902+0723	0.48781	0.210E−15	285.5562	7.3847	93 613	285.9529	8.0977	0.8158
J1903+2225	0.65118	0.445E−15	285.9704	22.4201	93 528	285.7358	23.3710	0.9794

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
J1903+2225	0.65118	0.445E−15	285.9704	22.4201	93 669	286.1092	22.6659	0.2823
J1903+2225	0.65118	0.445E−15	285.9704	22.4201	93 731	286.2804	23.0772	0.7266
B1900−06	0.43189	0.340E−14	285.9079	−6.5394	93 690	286.1879	−7.4555	0.9579
J1904+0412	0.07109	0.110E−18	286.1304	4.2016	93 364	285.2546	4.1072	0.8809
J1904+0800	0.26335	0.173E−13	286.0146	8.0146	93 406	285.3521	7.2795	0.9896
J1904+0800	0.26335	0.173E−13	286.0146	8.0146	93 613	285.9529	8.0977	0.1035
J1904+0800	0.26335	0.173E−13	286.0146	8.0146	93 871	286.7592	7.6177	0.8437
J1905+0616	0.98971	0.135E−12	286.2783	6.2710	93 744	286.3333	5.8938	0.3812
J1905+0616	0.98971	0.135E−12	286.2783	6.2710	93 772	286.4488	6.5470	0.3244
B1903+07	0.64804	0.494E−14	286.4733	7.1554	93 772	286.4488	6.5470	0.6089
B1903+07	0.64804	0.494E−14	286.4733	7.1554	93 871	286.7592	7.6177	0.5436
B1904+06	0.26728	0.214E−14	286.6467	6.6841	93 744	286.3333	5.8938	0.8502
B1904+06	0.26728	0.214E−14	286.6467	6.6841	93 772	286.4488	6.5470	0.2408
B1904+06	0.26728	0.214E−14	286.6467	6.6841	93 871	286.7592	7.6177	0.9404
J1907+0534	1.13840	0.315E−14	286.8471	5.5681	93 744	286.3333	5.8938	0.6082
J1907+0534	1.13840	0.315E−14	286.8471	5.5681	93 797	286.5287	5.2800	0.4294
J1907+0740	0.57470	0.671E−15	286.9338	7.6729	93 871	286.7592	7.6177	0.1831
J1908+0457	0.84679	0.980E−15	287.0671	4.9511	93 797	286.5287	5.2800	0.6308
J1908+0500	0.29102	0.259E−14	287.0212	5.0151	93 797	286.5287	5.2800	0.5592
J1908+0734	0.21235	0.825E−15	287.0708	7.5706	93 871	286.7592	7.6177	0.3152
J1909+1859	0.54245	0.970E−16	287.3275	18.9863	94 396	288.1871	18.8124	0.8770
J1910+0714	2.71242	0.612E−14	287.5771	7.2366	93 871	286.7592	7.6177	0.9023
B1907−03	0.50460	0.219E−14	287.6233	−3.1650	94 256	287.7912	−2.6382	0.5530
J1910−5959A	0.00327	0.307E−20	287.9279	−59.9741	94 410	288.2263	−59.6888	0.4128
J1910−5959B	0.00836	−0.799E−18	287.7166	−59.9836	94 410	288.2263	−59.6888	0.5887
J1910−5959C	0.00528	0.220E−20	287.7729	−60.0166	94 410	288.2263	−59.6888	0.5594
J1910−5959D	0.00903	0.963E−18	287.7183	−59.9848	94 410	288.2263	−59.6888	0.5879
J1910−5959E	0.00457	−0.437E−18	287.7171	−59.9839	94 410	288.2263	−59.6888	0.5885
J1911+1758	0.46041	0.131E−16	287.9804	17.9794	94 396	288.1871	18.8124	0.8583
J1911−1114	0.00363	0.142E−19	287.9550	−11.2395	94 017	287.1234	−11.1856	0.8334
J1912+2525	0.62198	0.225E−15	288.0775	25.4172	94 085	287.2996	25.3178	0.7843
J1913+0832	0.13441	0.457E−14	288.2521	8.5347	94 572	288.7029	8.0964	0.6288
B1911+13	0.52147	0.804E−15	288.3513	14.0146	94 718	289.1029	14.0978	0.7562
B1911−04	0.82594	0.407E−14	288.4754	−4.6799	94 370	288.1142	−5.4144	0.8186
J1915+07	2.05880	0.100E+01	288.7542	7.8833	94 572	288.7029	8.0964	0.2191
J1915+0738	1.54270	0.331E−14	288.8533	7.6421	94 572	288.7029	8.0964	0.4786
J1916+07	0.54218	0.100E+01	289.2250	7.8833	94 572	288.7029	8.0964	0.5639
B1914+13	0.28184	0.365E−14	289.2441	13.2139	94 718	289.1029	14.0978	0.8952
B1915+13	0.19463	0.720E−14	289.4154	13.8991	94 718	289.1029	14.0978	0.3703
B1915+13	0.19463	0.720E−14	289.4154	13.8991	95 025	290.0229	14.6368	0.9556
B1916+14	1.18102	0.212E−12	289.5983	14.7517	94 718	289.1029	14.0978	0.8203
B1916+14	1.18102	0.212E−12	289.5983	14.7517	95 025	290.0229	14.6368	0.4399
J1918+1541	0.37088	0.254E−14	289.5321	15.6876	94 991	289.9413	16.4984	0.9082
J1920+1110	0.50989	0.156E−15	290.0554	11.1683	94 999	289.9662	12.0295	0.8658
J1920+1110	0.50989	0.156E−15	290.0554	11.1683	95 088	290.1792	10.6528	0.5302
B1918+26	0.78552	0.344E−16	290.1596	26.8440	95 169	290.4188	26.6355	0.3326
B1919+14	0.61818	0.560E−14	290.3504	14.3214	95 025	290.0229	14.6368	0.4546
B1918+19	0.82104	0.896E−15	290.2658	19.8124	94 838	289.4600	20.2385	0.9116
B1919+21	1.33730	0.135E−14	290.4366	21.8839	95 165	290.4138	21.2303	0.6541
B1920+20	1.17276	0.649E−15	290.5333	20.2992	95 165	290.4138	21.2303	0.9387
B1920+21	1.07792	0.818E−14	290.7229	21.1783	95 165	290.4138	21.2303	0.3135
B1922+20	0.23779	0.209E−14	291.1667	20.6667	95 165	290.4138	21.2303	0.9404
B1923+04	1.07408	0.246E−14	291.6017	4.5254	95 421	291.1508	5.3996	0.9836
B1924+16	0.57982	0.180E−13	291.6887	16.8091	95 598	291.6612	16.0024	0.8071
B1924+19	1.34601	0.143E−14	291.5950	19.4699	95 633	291.7804	19.4247	0.1909
B1924+19	1.34601	0.143E−14	291.5950	19.4699	95 721	292.0500	18.9175	0.7157
B1925+18	0.48277	0.116E−15	291.7934	18.8690	95 633	291.7804	19.4247	0.5558
B1925+18	0.48277	0.116E−15	291.7934	18.8690	95 721	292.0500	18.9175	0.2612
B1925+188	0.29831	0.224E−14	291.8538	18.9436	95 633	291.7804	19.4247	0.4867
B1925+188	0.29831	0.224E−14	291.8538	18.9436	95 721	292.0500	18.9175	0.1980
J1929+00	1.16690	0.100E+01	292.3667	0.4333	95 829	292.3596	0.5287	0.0957
J1929+00	1.16690	0.100E+01	292.3667	0.4333	96 121	293.1571	0.5774	0.8034
B1926+18	1.22047	0.236E−14	292.3196	18.7499	95 633	291.7804	19.4247	0.8638

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B1926+18	1.22047	0.236E−14	292.3196	18.7499	95 721	292.0500	18.9175	0.3174
J1930+1852	0.13686	0.751E−12	292.6254	18.8706	95 721	292.0500	18.9175	0.5773
J1930+1852	0.13686	0.751E−12	292.6254	18.8706	96 191	293.3850	18.7056	0.7773
B1929+15	0.31435	0.501E−14	292.9821	15.6160	95 963	292.7217	16.4259	0.8508
B1929+15	0.31435	0.501E−14	292.9821	15.6160	96 078	293.0171	16.4743	0.8590
J1931+30	0.58213	0.100E+01	292.8667	30.5833	95 904	292.5604	30.4689	0.3269
J1931+30	0.58213	0.100E+01	292.8667	30.5833	96 182	293.3488	30.2861	0.5663
B1929+10	0.22652	0.116E−14	293.0575	10.9922	95 772	292.1929	11.0271	0.8653
B1929+10	0.22652	0.116E−14	293.0575	10.9922	96 308	293.7308	11.4241	0.7999
B1929+20	0.26822	0.422E−14	293.0333	20.3462	96 070	293.0000	19.8067	0.5405
B1930+22	0.14447	0.576E−13	293.0946	22.3476	95 890	292.5233	21.6766	0.8812
J1932−3655	0.57142	0.284E−15	293.0254	−36.9173	96 250	293.5729	−37.5369	0.8269
J1932−3655	0.57142	0.284E−15	293.0254	−36.9173	96 259	293.5833	−36.2496	0.8701
J1933+07	0.43745	0.100E+01	293.3333	7.8833	95 983	292.7629	8.3958	0.7668
J1933+07	0.43745	0.100E+01	293.3333	7.8833	96 339	293.7763	8.4609	0.7278
B1930+13	0.92832	0.318E−15	293.3438	13.0805	96 224	293.5092	12.6363	0.4740
B1933+16	0.35874	0.600E−14	293.9492	16.2778	96 078	293.0171	16.4743	0.9526
B1933+17	0.65441	0.378E−15	293.8746	17.7534	96 037	292.9075	17.7832	0.9676
B1933+17	0.65441	0.378E−15	293.8746	17.7534	96 490	294.2321	18.6410	0.9569
J1938+06	1.12156	0.100E+01	294.5000	6.8667	96 522	294.3387	6.1961	0.6897
J1939+10	2.31000	0.100E+01	294.7958	10.7500	96 842	295.2775	10.6802	0.4867
B1937+21	0.00156	0.105E−18	294.9104	21.5831	96 912	295.5025	22.2827	0.9166
B1937+24	0.64530	0.183E−13	294.7729	24.7154	96 886	295.4120	24.0841	0.8984
J1940−2403	1.85528	0.100E+01	295.1250	−24.0500	96 707	294.8942	−24.5837	0.5815
J1940−2403	1.85528	0.100E+01	295.1250	−24.0500	96 918	295.5146	−24.9133	0.9471
J1941+1026	0.90539	0.996E−15	295.3846	10.4404	96 842	295.2775	10.6802	0.2626
J1941+1026	0.90539	0.996E−15	295.3846	10.4404	97 051	295.8550	10.0893	0.5870
B1937−26	0.40286	0.956E−15	295.2516	−26.0349	96 605	294.6042	−26.3676	0.7280
B1937−26	0.40286	0.956E−15	295.2516	−26.0349	96 710	294.8996	−26.7513	0.7983
B1942+17	1.99690	0.730E−15	296.1325	17.9284	97 148	296.1862	18.7284	0.8018
B1942+17	1.99690	0.730E−15	296.1325	17.9284	97 317	296.6575	17.8030	0.5398
B1943+18	1.06871	0.242E−15	296.4004	18.5723	97 148	296.1862	18.7284	0.2651
B1943+18	1.06871	0.242E−15	296.4004	18.5723	97 317	296.6575	17.8030	0.8111
B1944+17	0.44062	0.241E−16	296.7208	18.0948	97 148	296.1862	18.7284	0.8290
B1944+17	0.44062	0.241E−16	296.7208	18.0948	97 317	296.6575	17.8030	0.2985
B1944+22	1.33445	0.889E−15	296.6033	22.7498	97 003	295.7396	23.1931	0.9708
B1943−29	0.95945	0.149E−14	296.7154	−29.2297	97 338	296.7450	−29.8113	0.5823
B1943−29	0.95945	0.149E−14	296.7154	−29.2297	97 405	296.9629	−29.1593	0.2573
J1947−4215	1.79807	0.100E+01	296.7750	−42.2500	97 205	296.3433	−42.1001	0.4570
B1946+35	0.71731	0.706E−14	297.1042	35.6697	97 744	297.9442	35.6117	0.8420
B1946−25	0.95762	0.327E−14	297.3558	−25.4002	97 294	296.6058	−24.8784	0.9137
J1951+1123	5.09408	0.303E−14	297.7842	11.3903	97 767	298.0150	11.6291	0.3321
B1949+14	0.27503	0.128E−15	298.0254	14.1248	97 908	298.4475	13.9818	0.4457
B1949+14	0.27503	0.128E−15	298.0254	14.1248	97 941	298.5646	13.7492	0.6571
J1953+1149	0.85189	0.287E−14	298.4475	11.8285	97 767	298.0150	11.6291	0.4763
B1952+29	0.42668	0.171E−17	298.5938	29.3881	98 151	299.2021	29.5309	0.6248
B1952+29	0.42668	0.171E−17	298.5938	29.3881	98 185	299.2938	29.9269	0.8834
B1953+29	0.00613	0.297E−19	298.8658	29.1454	98 151	299.2021	29.5309	0.5115
B1953+29	0.00613	0.297E−19	298.8658	29.1454	98 185	299.2938	29.9269	0.8910
J1957+2831	0.30768	0.311E−14	299.3304	28.5288	98 386	299.8517	28.2416	0.5952
J2002+30	0.42179	0.100E+01	300.7417	30.5833	98 981	301.4262	30.3279	0.7307
J2005−0020	2.27966	0.257E−13	301.4321	−0.3394	98 750	300.8612	0.0890	0.7137
J2005−0020	2.27966	0.257E−13	301.4321	−0.3394	99 100	301.7879	−0.8741	0.6423
B2003−08	0.58087	0.460E−16	301.5679	−8.1172	98 720	300.7654	−7.6972	0.9058
J2007+0809	0.32572	0.137E−15	301.8062	8.1509	98 965	301.3908	7.3862	0.8703
J2007+0809	0.32572	0.137E−15	301.8062	8.1509	99 367	302.5325	8.4438	0.7831
J2008+2513	0.58920	0.540E−14	302.1475	25.2251	99 293	302.3429	26.2012	0.9955
J2016+1948	0.06494	0.100E+01	304.2363	19.8001	100 034	304.4325	19.2479	0.5860
J2016+1948	0.06494	0.100E+01	304.2363	19.8001	100 243	304.9633	20.4467	0.9730
J2017+2043	0.53714	0.996E−15	304.3704	20.7255	100 243	304.9633	20.4467	0.6552
B2016+28	0.55795	0.148E−15	304.5158	28.6651	100 275	305.0879	28.0814	0.8173
B2016+28	0.55795	0.148E−15	304.5158	28.6651	100 363	305.3134	28.1072	0.9733
B2016+28	0.55795	0.148E−15	304.5158	28.6651	100 402	305.4079	28.3802	0.9365

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Table A2 (*cont.*)

Pulsar details					Habstar details			
Name	P_{spin}	$\|dP/dt\|$	RA	Dec.	Index	RA	Dec.	Sep. (deg)
B2020+28	0.34340	0.189E−14	305.6542	28.9064	100 363	305.3134	28.1072	0.8688
B2020+28	0.34340	0.189E−14	305.6542	28.9064	100 402	305.4079	28.3802	0.5810
B2021+51	0.52920	0.306E−14	305.7075	51.9139	100 271	305.0792	52.2299	0.7033
B2034+19	2.07438	0.204E−14	309.3104	19.7151	101 864	309.6246	18.8697	0.9019
B2035+36	0.61871	0.450E−14	309.3642	36.3567	101 614	308.9109	36.4754	0.4686
J2038−3816	1.57729	0.413E−14	309.7254	−38.2700	101 791	309.4413	−37.6051	0.7231
J2038−3816	1.57729	0.413E−14	309.7254	−38.2700	101 898	309.7400	−39.2443	0.9745
J2038−3816	1.57729	0.413E−14	309.7254	−38.2700	102 168	310.5309	−38.6766	0.9023
J2040+16	0.86560	0.100E+01	310.0541	16.9000	102 283	310.8662	16.9450	0.8133
J2044+4614	1.39271	0.630E−15	311.2450	46.2348	102 189	310.5846	45.8239	0.7778
B2043−04	1.54694	0.147E−14	311.5004	−4.3572	102 394	311.2379	−3.5581	0.8411
J2048+2255	0.28390	0.152E−16	312.1908	22.9181	102 620	311.9200	22.6958	0.3504
B2045−16	1.96157	0.110E−13	312.1475	−16.2790	102 600	311.8925	−16.7326	0.5203
B2045−16	1.96157	0.110E−13	312.1475	−16.2790	102 659	312.0546	−16.7388	0.4690
J2050+13	1.22000	0.100E+01	312.5000	13.0167	102 610	311.9075	12.9862	0.5933
J2050+13	1.22000	0.100E+01	312.5000	13.0167	102 617	311.9175	13.6125	0.8333
J2050+13	1.22000	0.100E+01	312.5000	13.0167	102 972	312.9354	13.5613	0.6973
B2048−72	0.34134	0.196E−15	313.4462	−72.0117	103 374	314.1566	−71.5314	0.8575
B2053+21	0.81518	0.134E−14	313.9129	22.1576	102 981	312.9575	21.8687	0.9981
B2053+21	0.81518	0.134E−14	313.9129	22.1576	103 122	313.4117	22.7258	0.7577
B2053+21	0.81518	0.134E−14	313.9129	22.1576	103 441	314.3534	22.3633	0.4861
B2053+36	0.22151	0.369E−15	313.8804	36.5059	103 131	313.4237	36.1302	0.5913
B2106+44	0.41487	0.862E−16	317.0850	44.6969	104 344	317.0708	43.7476	0.9494
J2108−3429	1.42310	0.350E−14	317.1266	−34.4939	104 460	317.3987	−35.3152	0.8652
J2108−3429	1.42310	0.350E−14	317.1266	−34.4939	104 544	317.6533	−34.8118	0.6152
B2113+14	0.44015	0.289E−15	319.0571	14.2392	104 780	318.3992	14.6894	0.7972
B2113+14	0.44015	0.289E−15	319.0571	14.2392	104 815	318.5242	14.9498	0.8883
B2122+13	0.69405	0.768E−15	321.1938	14.1220	105 744	321.2675	13.1998	0.9251
J2129−5721	0.00373	0.207E−19	322.3446	−57.3539	105 838	321.5550	−57.9499	0.9894
J2139+00	0.31247	0.100E+01	324.9250	0.6000	107 072	325.2808	1.3084	0.7927
J2144−3933	8.50983	0.496E−15	326.0504	−39.5653	107 035	325.1621	−39.7909	0.9165
B2152−31	1.03000	0.124E−14	328.8067	−31.3152	108 504	329.7209	−31.0819	0.9435
B2151−56	1.37365	0.423E−14	328.7558	−56.6849	107 882	327.8808	−57.0181	0.9363
J2156+2618	0.49815	0.142E−16	329.0988	26.3084	108 221	328.8641	25.9327	0.4429
J2156+2618	0.49815	0.142E−16	329.0988	26.3084	108 423	329.4637	27.2155	0.9777
B2154+40	1.52527	0.343E−14	329.2575	40.2961	108 071	328.4396	40.4194	0.8272
B2210+29	1.00459	0.495E−15	333.0971	29.5516	109 600	333.0254	29.0656	0.4913
J2215+1538	0.37420	0.237E−14	333.9150	15.6430	109 950	334.0246	16.0209	0.3935
J2222+2923	0.28140	0.617E−17	335.7633	29.3996	110 276	335.0529	29.5188	0.7203
J2229+2643	0.00298	0.146E−20	337.4617	26.7327	110 946	337.1808	26.7257	0.2809
J2234+2114	1.35874	0.222E−15	338.7358	21.2386	111 463	338.7417	22.1043	0.8658
J2234+2114	1.35874	0.222E−15	338.7358	21.2386	111 630	339.2154	21.7484	0.7000
J2240+58	0.13900	0.100E+01	340.0000	58.0000	111 854	339.8579	57.3242	0.6906
J2248−0101	0.47723	0.659E−15	342.1117	−1.0299	112 319	341.2513	−0.7319	0.9105
J2248−0101	0.47723	0.659E−15	342.1117	−1.0299	112 845	342.7904	−1.4473	0.7968
J2253+1516	0.79224	0.665E−16	343.3104	15.2772	112 695	342.3221	15.2757	0.9883
J2253+1516	0.79224	0.665E−16	343.3104	15.2772	113 220	343.9308	15.7793	0.7981
J2301+5852	6.97895	0.484E−12	345.2863	58.8679	113 755	345.5533	58.2547	0.6688
J2301+5852	6.97895	0.484E−12	345.2863	58.8679	113 789	345.6525	58.8762	0.3663
J2317+1439	0.00344	0.242E−20	349.2883	14.6587	114 739	348.6388	15.2118	0.8531
B2315+21	1.44465	0.105E−14	349.4908	21.8300	115 239	350.1204	22.1570	0.7094
J2322+2057	0.00481	0.970E−20	350.5929	20.9508	115 417	350.7017	20.5590	0.4066
B2321−61	2.34749	0.260E−14	351.1121	−60.9001	115 792	351.8717	−61.1872	0.8120
B2321−61	2.34749	0.260E−14	351.1121	−60.9001	115 802	351.9050	−60.3979	0.9386
B2327−20	1.64362	0.463E−14	352.6117	−20.0916	115 812	351.9308	−19.8875	0.7107
B2327−20	1.64362	0.463E−14	352.6117	−20.0916	116 236	353.2725	−20.0889	0.6608
J2346−0609	1.18146	0.136E−14	356.7100	−6.1665	117 056	355.9608	−6.2733	0.7567
J2346−0609	1.18146	0.136E−14	356.7100	−6.1665	117 364	356.9625	−5.2438	0.9566

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